Roman Frontier Signalling and the
Order of the *fuþark*

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The order of the runes in the *fuþark* has long puzzled scholars. The order *f u þ a r k g w / h n i j ï p z s / t b e m l ŋ o d* is, however, relatively secure. Using evidence from the Roman frontiers and Roman signalling during the period when the runes are thought to have been created, a solution can be suggested. The *Histories* of Polybius, written in the mid-second century BC, and the *Kestoi* of Sextus Julius Africanus, written in the early third century AD, describe signalling systems which have remarkable parallels with the *fuþark*. Both signalling systems would have been used in some form during the Roman Empire using the 23 letters of the Latin alphabet. Africanus' system uses three groups of eight letters which matches the division of the *fuþark* into three *ættir*. Polybius' system matches closely the cryptographical methods of encoding the runes themselves found in the *Isruna Tract*. Using this evidence, a suggestion can be made as to how the order of the runes was arrived at.

The reason for the order of the runes in the *fuþark* has long puzzled scholars. The order of the runes for *f u þ a r k g w / h n i j ï p z s / t b e m l ŋ o d* does not follow any of the traditional rules of alphabet adoption but the order occurs often enough to be secure.[1] The suggestion below offers an explanation of how that order came into existence. For what follows, I follow Henrik Williams' theory that "shape alone determines the formal origin of the runes" (Williams 1996: 214) and his derivation of 23 of the 24 runes from the form of Latin epigraphic capitals (Williams 1996: 211-21 and Williams 2004: 262-273). I also accept that the rune ᛗ was an invention. The exact derivation of individual runes from individual Latin letters

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[1]There are minor variations in the order of *o* and *d* and *ï* and *p*.

is not strictly important for what follows although Williams'
derivation of all but the one (invented) rune from the
form of Latin epigraphic capitals is persuasive. I also assume
that the creator of the *fuþark* was a single individual who
had relatively extensive contact with the Roman Empire
and with Latin and that the *fuþark* was created in the order
in which we find it on the earliest surviving inscriptions.
The changes in sound value from their Latin original in
the case of various runes, could have occurred at a later
time (Williams 1996: 214).

The *fuþark* was probably created beyond the borders
of the Roman Empire but, with the extreme likelihood
that the Latin alphabet was its parent, it is also intimately
tied to Roman culture. Contact with the Roman Empire
was, however, widespread and we do not need to argue at
length regarding how ancient Germanic peoples might
have come into contact with Latin or Roman culture in the
early centuries AD.[2] Along the borders of the Roman
Empire were the *limites,* the systems of defence and
communication that encompassed all forms of Roman
border control. In Roman Britain the remains of one such
border can be seen in Hadrian's Wall. In other provinces,
where no natural barrier existed, palisades and
fortifications were also constructed. Two examples of this
were on the borders of the provinces of Raetia and
Germania. Both of these, along with Hadrian's Wall, may
well be relevant to the origins of the *fuþark*; Raetia and
Germania because they bordered (roughly) on the areas
where the *fuþark* was created, and Hadrian's Wall because
various sections of it were manned by auxiliaries of
Germanic extraction (see Breeze and Dobson 2000: 256-
276) who may well have returned 'home' after their term
of service in the Roman army.[3] The Roman frontiers
included fortifications and networks of signalling towers

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[2]One simple proof is the extensive system of trade routes to and from the
Roman Empire and the passion within the empire for commodities such
as amber, the source for which was predominately the Baltic, and its
trade route along the River Elbe. See for instance Wheeler (1954) and
Spekke (1957).
[3]These are merely suggestions as to how someone may have come into
(enough) contact with Latin and the Roman Empire to transport its
letter forms.

which had the capability of transmitting messages back into the interior of the Roman Empire as well as along the frontier itself (Wooliscroft 2001).

Unfortunately we know relatively little about signalling systems in the Roman Empire although we can be sure they were closely guarded military secrets. Given this secrecy, our lack of information should come as no surprise. The first signalling systems about which we are reliably informed come from the Greek world. We have evidence of messages transmitted and, occasionally, actual methods of transmission in authors such as Herodotus and Thucydides and others. For more in depth information on signalling systems we rely on only a few sources. Aeneas Tacticus provides several possible ways of transmitting messages in his treatise *How to Survive Under Siege* written in the fourth century BC and the historian Polybius, writing in the second century BC, also provides a summary of the state of fire signalling in his own day. Polybius also provides evidence of two different methods of sending messages via fire and/or smoke signals (*Histories* 10.43-46). Before we examine his systems, however, there is one from later in the Roman Empire which should be addressed first.

Sextus Julius Africanus refers to a Roman signalling system in his *Kestoi*, a collection of miscellaneous information relating chiefly to magic but also on other subjects. His description contains remarkable possibilities for the *fuþark*. Africanus' *Kestoi* was dedicated to the emperor Severus Alexander (reigned AD 222-245). In chapter 77 Africanus includes this observation (translation by J. P. Wild (Wooliscroft 2001, 168):

> "The Romans have the following technique which seems to me to be amazing. If they want to communicate something by fire signal, they make the signals so: they select places that are suitable for making fire signals. They divide the fires into a right, a left and a middle fire so that they read *alpha* to *theta* from the left-hand one, *iota* to *pi* from the middle one and *rho* to *omega* from the right-hand fire. If they signal *alpha*, they raise up the fire signal on the left once, for *beta* twice and for *gamma* three times. If they signal *iota* they raise the middle fire once, for *kappa* twice and for *lambda* thrice, and if they want to signal *rho*, *sigma* or

tau, they raise the right-hand signal once, twice or three times. In this way should you want to signal *rho* you do not need to raise hundreds of fire signals, but only one with the right-hand torch. Those who receive the signals then de-code them in the same way, or pass them on to the next station."

Africanus is the only ancient author to refer to such a system. The sources of Roman signalling are often difficult to interpret but Africanus' represents a fully cohesive system. Africanus' system would thus have divided the Greek alphabet in the following manner:

	Left	*Middle*	*Right*
1	A	I	P
2	B	K	Σ
3	Γ	Λ	T
4	Δ	M	Υ
5	E	N	Φ
6	Z	Ξ	X
7	H	O	Ψ
8	Θ	Π	Ω

Table 1: Africanus' letter grid.

For the remainder of this paper I have rendered this table so that row 1 equals the left column, row 2 the middle, and row 3 the right:

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	A	B	Γ	Δ	E	Z	H	Θ
2	I	K	Λ	M	N	Ξ	O	Π
3	P	Σ	T	Υ	Φ	X	Ψ	Ω

Table 2: Africanus' letter grid re-rendered.

Even though Africanus does not describe the system as a military one, a Roman signalling system, and a fire signalling system at that, should be considered in a predominately military context. Roughly 400 years before Africanus, one of the signalling systems Polybius described also used a letter grid (*Histories* 10.45.6-46.11). This divided the 24 letter Greek alphabet into five groups of

five letters, thus:

	1	2	3	4	5
Group 1	A	B	Γ	Δ	E
Group 2	Z	H	Θ	I	K
Group 3	Λ	M	N	Ξ	O
Group 4	Π	P	Σ	T	Υ
Group 5	Φ	X	Ψ	Ω	

Table 3: Polybius' Letter Grid

Polybius noted that there would be a blank space in the last group but it presented him with no problems. He simply stated (10.45.7) that "there is one letter less in the last division, but this makes no practical difference." Polybius' practical experience as a commander (he had been Hipparch of the Achaean Confederacy prior to their defeat at the hands of the Romans at the battle of Pydna in 168 BC) gives his account great weight. Polybius describes this signalling system as the latest development (in the mid-second century BC), and one which he had refined, presumably in practice in the field. The system used 10 torches (divided into two groups of five; a left and a right) and dividing the alphabet into five groups as above. The torch on the left was lifted first to signal which letter group and then that on the right to signal which letter in the group was to be transmitted. Thus if the first letter was *kappa*, it belongs to the second group so two torches are raised on the left. Five torches are then raised on the right since it is the fifth letter in the group.

In the centuries between the systems described by Polybius (*c.*167 BC) and Africanus (*c.* AD 230) there would have been different systems and refinements. Aspects of Polybius' system may have survived into subsequent centuries. It is possible that the reduction from five groups of letters down to three was a refinement to Polybius' or a similar system. For instance, a three-letter-group system that operated along the lines of Polybius' system would be perfectly sound and operable. Unfortunately, direct evidence for such a system is lacking.

The system Africanus describes can equally well be applied to the Latin alphabet. Indeed, whilst it is natural

that, since Africanus wrote in Greek, he would describe a
system using the Greek alphabet, no Roman military
signalling system would have used anything other than
Latin. Latin was the language of the Roman army even in
non-Latin speaking provinces. As Yann Le Bohec argues
(Le Bohec (1994): 231), only Latin could express
commands for all units of the Roman army and 'no orders
were given in Greek, Egyptian or Aramaic, the languages
of defeat.' This was despite the fact that recruits could be
of Greek, Semitic or other non-Roman stock who used
their own languages among themselves. A Roman military
signalling system would have only used the 23 letters of
the Latin alphabet.[4] And thus there would be one blank
space in Africanus' grid but, just as this posed no problems
for Polybius's system, it should pose no problems for
Africanus'. If a system similar to Polybius' continued to be
used in the Roman world, it too would have been adapted
to the Latin alphabet.[5] Practicable and operational systems
with blank spaces do not, therefore, present any problem.
Indeed, the blank space in a 24 letter grid for the 23
letters of the Latin alphabet may have proved crucial for
the *fuþark* and the invention of only one rune (ᚺ). Using
the Latin alphabet, Africanus' system would have appeared
like this:

	1	2	3	4	5	6	7	8
1	A	B	C	D	E	F	G	H
2	I	K	L	M	N	O	P	Q
3	R	S	T	V	X	Y	Z	

Table 4: Africanus' letter grid using Latin letters.

It is interesting to note that this system simply divides
the alphabet into three groups of eight letters and makes
no attempt to assign the least number of torch flashes to
the most common letters or to encode the alphabet in any
more complex way. The dividing of the alphabet into three
groups of eight, however, has immediate resonance for the
fuþark. Firstly, it matches the division of the *fuþark* into

[4]In Latin epigraphic capitals 'u' is always represented as 'V' as it is in the
tables of Latin epigraphic capitals below.
[5]Using the Latin alphabet, Polybius' system would have had two blanks.

three *ættir* of eight runes each. The earliest division of the *fuþark* into *ættir* seems to occur in the fifth or sixth century (Page 1999: 82) but may reflect an earlier practice. Polybius' five-group system closely matches the cryptographical encoding of the *fuþark* where each rune can be represented by its group (1, 2 and 3) and its position in that group (1, 2, 3, 4, 5, 6, 7 and 8). Thus *c* can be represented as 1/6 as the sixth rune in the first *ætt*. The various methods used to represent the runes in a cryptographical code found in the *Isruna Tract* and elsewhere (the methods known as *isruna*, *lagoruna*, *stopfruna*, *hahalruna*, 'fish-runes', 'pig-runes' and so on) all share the group number/rune number method (Page 1999: 82-83 and Elliott 1959: 84-86). Again these cryptographical systems of encoding the runes may have come later but may equally reflect an early practice. Using Africanus' division of the alphabet into three groups of eight the match is even closer. A perfect match could be obtained by using the hypothetical three-group Polybian system mentioned above.

Woolliscroft has suggested that, in Africanus' system, the most common letters could be assigned the least number of flashes as in the Morse standard (Wolliscroft 2001: 45). While such an exact parallel may be considered unlikely, it is certainly possible that the letter 'e' for instance, the most common letter in Latin usage (Mahoney and Rydberg 2001: 58-59), would not continue to be signalled using five flashes of the left-most beacon. Using Mahoney and Rydberg's arguments for the frequency at which letters occur in Latin and then assigning the least number of flashes to the most common letters, Africanus' system would appear thus:

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	E	A	R	O	D	B	H	K
2	I	T	N	C	P	G	X	Z
3	V	S	M	L	Q	F	Y	

Table 5: Grid assigning most frequently used Latin letters to least number of flashes.

More than simply assigning the most common letters to the least number of flashes, however, it is probable that

Roman messaging systems underwent more complex encoding. Codes and ciphers were common in the ancient world. For the complexity of ancient encoding systems there are ample examples. The Spartan cipher rod (Plutarch *Lysander* 19.5-7, Aristophanes *Lysistrata* 990-994, and Aulus Gellius *Noctes Atticae* 17.9.6-15) involved a leather strap wrapped around a rod of a particular diameter and a message then written upon the strap. The message could only be deciphered by wrapping the strap around a rod of the correct diameter. The Emperor Augustus used a personal cipher system when writing where he would write B for A and C for B and, AA for X (Suetonius *Augustus* 88). According to Suetonius, when Julius Caesar wanted to write anything confidential he would write in cipher so that 'not a word could be made out.' Suetonius himself offers the solution to this cipher of substituting the fourth letter (thus D for A) (Suetonius *Divus Julius* 56.6-7). Aulus Gellius (*Atticae Noctae* 17.9.1-5), however, considered Caesar's system un-deciphered and reported that a 'very careful' treatise had been written on it by the grammarian Probus. Aeneas Tacticus (*How to Survive Under Siege* 31.16-22) describes the Astragal, a sheep knuckle bone drilled with 24 holes (corresponding to the letters of the Greek alphabet). This was then threaded in such a manner so that the letters of a message could be deciphered (by someone who knew the letter order) in reverse as the thread was withdrawn.

It is therefore highly likely that a relatively complex encoding system was used on the frontiers of the Roman empire since the messages being transmitted contained, in all likelihood, highly sensitive information which could have proved disastrous if that information fell into the wrong hands or if Roman frontier codes were broken to be used by an enemy. We have evidence of the ramifications of codes being broken and signalling information falling into the wrong hands. During the siege of Plataea in 427 BC the Plataeans seem to have broken the Spartan signalling code and could then 'jam' Spartan signals by sending contradictory messages to the Spartan allies (see Thucydides 3.22 and Polyaenus *Strategemata* 6.19.2).

It is only a small step for Africanus' system from assigning the most common letters to the least number of

flashes to some kind of more complex encoding of the letters to attempt to ensure that the secrecy of the messages being transmitted was maintained. Such an encoding system would require that the sender and receiver had some way of ensuring that they were using the same code or cipher. The easiest method would have been a tablet or letter grid distributed to all who would use it (for signalling messages along the Roman frontier each signal station which was required to decode messages must have had one). This is a similar solution to the cipher rod of the Spartans where sender and receiver had the rod and the strap on which the message was written was sent from one to the other. Thus only the party which had the correct tool for decoding the message could read it. For the Roman system discussed here, such a tablet would presumably have been changed on a regular basis to avoid any problems with codes being broken or of them falling into the wrong hands. As such there may have been several decoding tablets each with a different order of letters. A theoretical letter grid using such an encoding method could easily have looked like this:

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	F	V	D	A	R	C	X	P
2	H	N	I	G	Z	K	Y	S
3	T	B	M	E	L	O	Q	

Table 6: Randomized Latin letter grid.

From this (deliberately chosen and provocative) 'random' letter grid it is then only a very small step to consider that the creator of the *fuþark* may have had access to such a grid or tablet. Since such letter grids would have been changed regularly, the tablet which the creator in question had did not need to be current. The steps from a letter grid tablet with the form above to the *fuþark* were relatively simple. If we follow Williams' formal origins theory for the shape of the runes, the Latin letters only need to be changed into runes according to the 'rules' of rune formation (Antonsen 1978: 287-297; Williams 1996: 213; Williams 2004: 267).[6] This transformation process

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[6] We can add to these rules the tendency to invert or reverse some

would provide:

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	ᚠ	ᚢ	ᚦ	ᚨ	ᚱ	ᚲ	ᚷ	ᚹ
2	ᚺ	ᚾ	ᛁ	ᛃ	ᛇ	ᛈ	ᛉ	ᛊ
3	ᛏ	ᛒ	ᛖ	ᛗ	ᛚ	ᛜ	ᛟ	

Table 7: *Futhark* rune grid.

All that would have been required, therefore, to transform this 24 letter grid into the *fuþark* is the invention of the ᛞ rune and its insertion into the blank space provided:

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	ᚠ	ᚢ	ᚦ	ᚨ	ᚱ	ᚲ	ᚷ	ᚹ
2	ᚺ	ᚾ	ᛁ	ᛃ	ᛇ	ᛈ	ᛉ	ᛊ
3	ᛏ	ᛒ	ᛖ	ᛗ	ᛚ	ᛜ	ᛟ	ᛞ

Table 8: *Futhark* rune grid with ᛞ

It should not be difficult to envisage a Roman soldier of Germanic extraction operating the system which Africanus describes or being familiar with other signalling systems which may have had similarities to Africanus' or Polybius' system. Various parts of Hadrian's Wall were operated by Germanic auxiliaries and they definitely operated signal stations along their parts of the wall. The various *limites* of the empire all had signalling stations and all would have had their systems. It is entirely possible that a system similar to the ones Africanus or Polybius describe was used in the period when the *fuþark* was created. The idea that the runes were invented in the second century AD (Williams 2004: 271) would mean that the possible time difference between the creation of the runes and the signalling system Africanus describes would be negligible. There is evidence to suggest that a signalling system similar to Africanus' using three beacons continued to be used into the fourth century (Dahm 2004: 17-25) and so it should come as no surprise if it was in use earlier, and used by an individual who took its secrets north and used it to

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symbols from their parent letter.

invent the *fuþark*. There is nothing to say that the system Africanus describes was new, indeed it could have been operating in various guises for some length of time. The parallels between the runes and the signalling system Polybius describes might also suggest the survival of a system similar to the one he describes for some considerable time. Nor is it beyond the realms of possibility that a soldier of Germanic extraction would have access to a 'decoding tablet' (even if it was a discarded one) which he may have taken with him beyond the frontiers of the Roman Empire. If such an individual was the commander of a signalling unit or an officer higher in the command chain, then his access to such tablets would have been a part of his duties. What is more, it should not be surprising that the system an author describes differed from one that operated in the field; either the author did not have access to such information or 'field modifications' altered the system. The system Africanus describes need not be the system which must have been used; its lack of any form of code should convince us that there must have been other systems even if they were similar to the ones Africanus or Polybius describe. The idea of encoding messages should not surprise us either since ancient history is full of ingenious methods of encoding messages, sending them, receiving them and decoding them. With a small amount of plausible tweaking, aspects of Africanus' or Polybius' systems and Roman military signalling in general offer a context in which the Latin alphabet could have been transferred to the area in which the *fuþark* was created and in the order in which the *fuþark* has come down to us. What is more, the system of its origin may have continued to be represented in the various ways in which runes were divided into three *ættir* and cryptographically encoded throughout their history.

References

Antonsen, Elmer
  1978   The graphemic system and the Germanic fuþark. In Rauch, I.
          and G. Carr (eds.) *Linguistic Method: Essays in Honor of Herbert
          Penzl*, 287-297. The Hague: Mouton Publishers.

Breeze, David J. and Dobson, Brian
    2000   *Hadrian's Wall.* Fourth Edition. Harmondsworth: Penguin
                Books.

Dahm, Murray K.
    2004   Campgate bronzes and Roman fire signalling. *CLASSICVM* 30:
                17-25.

Elliott, R. W. V.
    1959   *Runes.* Manchester: Manchester University.

Le Bohec, Yann
    1994   *The Imperial Roman Army.* London: B. T. Batsford Ltd.
                (Translation of *L'Armée Romaine, sous le Haut-Empire*, 1989).

Mahoney, Anne and Rydberg, Jeff
    2001   A note on scrabble in Latin. Classical Outlook 78: 58-59.

Page, R. I.
    1999   *An Introduction to English Runes.* Second Edition. Woodbridge:
                Boydell Press.

Spekke, Arnold S.
    1957   *Ancient Amber Routes and the Discovery of the Eastern Baltic.*
                Stockholm: M. Goppers.

Wheeler, Sir Mortimer
    1954   *Rome Beyond the Imperial Frontiers.* Harmondsworth: Penguin
                Books.

Williams, Henrik
    1996   The origin of the runes. *Amsterdamer Beiträge zur älteren
                Germanistik* 45: 211-218.

Williams, Henrik
    2004   Reasons for Runes. In Houston, Stephen D. (ed.) *The First
                Writing. Script Invention as History and Process,* 262-273.
                Cambridge: Cambridge University.

Woolliscroft, D. J.
    2001   *Roman Military Signalling.* Stroud: Tempus Publishing.

The Novilara Stele Revisited

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Poultney's suggestion that the first word of the Novilara inscription, *mimnis*, meant 'monument' can now be confirmed based on the parallel Oscan form *memnis* with the same meaning. In the next line, *rotnem* can reasonably be related to Latin *rota* and other Indo-European words for 'wheel,' especially considering the very prominent wheels on the stone. The second word, *erut*, matches an expected neuter form of the Sabellic root for 'this'; compare Umbrian *erek*. Together these connections suggest that the inscription is in a Sabellic dialect.

Thirty some years after James W. Poultney's important article in this journal on the inscriptions of northeast Italy (Poultney 1979), the most important inscription he examined, the Novilara stele, remains un-translated—discussions of it use phrases such as "not a single word in this inscription can be confidently translated" (Mallory 1989: 92). No substantial contribution has been made in this direction in the intervening thirty years. The aim of this article is to refocus scholarly attention on this important inscription, to reaffirm some of Poultney's tentative etymologies, and to point to some further connections and interpretations. Specifically, Poultney noted that the very first word of the text, *mimnis*, could be "very easily…analyzed as a noun meaning 'monument' consisting of a reduplicated and zero-grade stem from the root *men-* 'think' plus *–is*" (60). Surprisingly, Poultney, an accomplished scholar of Italic dialects and of Indo-European linguistics, missed a clear etymology connecting this first word, *mimnis,* with a form attested in Oscan, *memnim,* "monument, memorial" a self-referential word we would fully expect to find at the beginning of such a monumental inscription. A full examination of this word—one whose root at least can in fact be quite confidently

connected to an attested word in an Italic dialect—and a
review of Poultney's insights lead to conclusions about the
root etymologies of other connected words and a tentative
translation of the opening phrase *mimnis erut...rotnem* as
'[as a] memorial, this...wheel-monument.'

Figure 1. The Novilara inscription (PID 343).

     The text (PID 343; Fig. 1), on a sandstone stele from
an ancient necropolis just south of Ravenna on the
northeast coast of Italy, dating from the sixth or fifth
century BCE, in Poultney's transliteration, follows:

1   *mimnis . erut . gaarestades*
2   *rotnem . úvlin . parten . ús*
3   *polem . isairon . tet*
4   *sút . trat . neši . krúš*
5   *tenag . trút . ipiem . rotneš*
6   *lútuis . θalú . isperion . vúl*
7   *tes . rotem . teú . aiten . tašúr*
8   *soter . merpon . kalatne*
9   *nis . vilatos . paten. arn*

10   *úis . balestenag . ands . et*
11   *šút . i . akút . treten . teletaú*
12   *nem . polem . tišú . sotris . eús*

Poultney found that the phonological inventory, phonotactics and many apparent endings in the text were at least compatible with Indo-European, but that none of the roots could be convincingly identified, though many were suggestive. The range of vowels (*a, e, i, o, u*) and consonants (*p, t, k, b, d, g, s, θ, r, l, m, n, v*) that are generally transliterated for this text certainly look similar to those of other Indo-European languages, though also to those of many non-IE languages. Also, a language's phonological inventory can be as strongly influenced by areal pressures as by genetic relationship, so this criterion alone is not a particularly strong basis for such an identification. The same could be said for phonotactics—a limited number of final consonants such as *s, t, m, n* and consonant clusters fit well an Indo-European profile, but again these patterns alone cannot exclude the possibility that this is a non-Indo-European language (Poultney 1979: 57).

If the language of the text *could* be firmly identified as Indo-European from other evidence, then some other phonotactic patterns could be probative in excluding certain possibilities, such as which branch the language may belong to. For example, the fact that final -*m* and –*n* are clearly distinguished would, as Poultney points out, exclude from consideration those branches that have collapsed these two nasals in final position, notably Greek and Messapic, which permit only final –*n* (59). While the most frequent apparent endings— -*s, -m, -n, -t*—all look very Indo-European, the stems are less familiar: -*es* and –*em* could be connected with consonant stems or Latin fifth declension endings, but their high frequency in the text would seem odd at best. A more likely explanation, as Poultney points out, is that there was a change from –*ios* or –*yos* to –*es* (and perhaps of –*yom* to –*em*) for at least some of these forms, though this possibility raises questions of its own, as will be discussed below (Poultney 1979: 59-60). Poultney also notes that some final -*t*'s could represent a

third person singular ending, and -*n* could be a third plural verb ending (60). The ending -*ag* in *krúš/tenag* (lines 4-5, if this is a single word as seems probable) and *balestenag* (line 10) is reminiscent of Latin nomina agentis ending as in *remex, -igis* 'rower' (Poultney 1979: 59). Notably lacking is the –*al* ending ubiquitous in Etruscan as a genitive singular (Poultney 1979: 56 citing Rosenkranz 1935: 113). One might additionally note the lack of final -*ehhi,* the genitive singular ending so distinctive of the Messapic language, further evidence that the text as a whole is not in this language.

On the other hand, the apparent alternation between *et/šút* and *tet/sút* in lines 10-11 and 3-4 (and perhaps *us* and *eus* at the ends of the second and last lines) presents what looks like a morphological variation at the beginning of words that would seem quite non-Indo-European, and has been taken to be evidence of just that (H. Eichner, personal communication; I am indebted to Professor Eichner for first bringing this fascinating inscription to my attention). Of course, other explanations are possible: On the one hand, the line break may well correspond to a word boundary in one or both cases, so the alternation may simply represent two different words *et* and *tet*; and of course the second parts of the words, *šút* and *sút*, may be different words, especially if, as Poultney suggests, the distinction between *š* and *s* is phonemic in this text (53). On the other hand, this one apparent case of non-Indo-European morphology must be taken together with the other cases of apparent morphological alternations at the ends of words — *soter/sotris* in lines 8 and 12 (and perhaps *kesoteri* in PID 345), *rotnem/rotnes* in lines 2 and 5 — that would be consistent with an Indo-European identification. There are also alternations that look as though they may have derived from ablaut variations—*trat/trut/treten* in lines 4, 5 and 11—that also would speak in favor of an Indo-European origin.

The suggestions by Poultney (1979: 54-56) and others (those cited by Poultney, and more recently, Eichner 1993) that the text is metrical are intriguing, and a reliable metrical analysis would doubtless be helpful for interpretation. But, as Poultney himself points out, we do not in fact know whether the text is metrical, and if it is,

what kind of meter it employs, syllable counting, foot counting, or something else. Nor can we be sure of the length of vowels or syllables, the status of diphthongs and hiatus…too many unknowns to be of much use in shedding light on the main unknowns of the text at this point—its meaning, structure and linguistic connections. Going from unknown to unknown is not the best starting place in approaching a text that has resisted translation for over one hundred years. So a consideration of the metrical possibilities of the text will be set aside for now.

For clarity's sake, it is worth making a few obvious points here: Anyone with any familiarity with the very well attested languages Greek and Latin can see in an instant that the language of this inscription is not any known variety of either of those two languages. Messapic and Etruscan, though not as well known as Greek and Latin, are also well enough attested that they can fairly safely be excluded for reasons given and others. This is not to rule out borrowing of roots, endings, or entire words from (or into) any of these languages; borrowing may be involved, for example, in the word *isperion* on line six if it is connected, as Durante suggests, with Greek ἑσπέριον; and, as pointed out below, the first word in the text, *mimnis*, which we discuss here, could also be a loan. It is more difficult to rule out the possibility that the language is a Sabellic dialect (the term used here, following Rix, Meiser, Wallace and others, for the non-Latino-Faliscan Indo-European Italic dialects, the branch traditionally known as Osco-Umbrian) since these vary widely from each other and from Latin, and many are only scantily attested and are still poorly understood. It could also represent a new, separate branch of Italic, distinct from Latino-Faliscan and Sabellic. And, of course, it could be some other language, known or unknown, Indo-European or non-.

It is also worth noting that we cannot be completely certain that the inscription is in just one language, though nothing in the language or orthography suggests otherwise. Also unknown is whether there are any abbreviations, a common practice in later Latin and Sabellic inscriptions, though no single letters are isolated in such a way as to suggest that they are abbreviations or

initials except . *i* . in line 11 (which could possibly be an abbreviation of a cognate of Oscan **íním**, Umbrian *enem,* Latin *enim* 'and' especially given the parallel forms of the apparent words immediately following and preceding it—*et/šút̲ . i . akút̲*). The interpuncts are mostly quite clear and undoubtedly mostly accurately reflect word boundaries, but there may be some that have worn off and they may not all mark word boundaries—clitics may not be set off, compounds may be inconsistently treated. In at least one early transliteration, an interpunct was included between the -*s*- and -*t*- of *gaarestades* (Jacobsohn 26). Also, line ends may suggest word boundaries where none exists, as has been suggested for *krúš/tenag, et/sut,* and *tet/sut.* Of course, the interpuncts could have an entirely different function, but this seems doubtful.

Any serious approach to interpretation of parts of the text must lean heavily on what we do know for certain or with reasonable certainty. In this case, things known with reasonable certainty include: 1) the *script*; 2) the strong probability that we are dealing with a *monument*; 3) the curious *markings* on the monument; and 4) the *location* of the monument in time and place. The *script* is mostly a fairly straightforward type of northern Italic, Etruscan-based script with some innovations familiar from other north Italic inscriptions. (Some specific orthographic problems and possible ambiguities will be discussed below.) We also can be quite confident that it is some kind of *monument*—carefully crafted in stone and set in a necropolis as it is, it is highly unlikely to be ephemeral graffiti intended for only casual observers. This evident care of preparation, choice of durable material and location in a cemetery strongly suggest a funerary or commemorative function. We also have the other *markings* on the stone, most notably the very prominent *wheels* at the top of both sides of the monument. A most significant fact here is that there exists another monument, fragmentary in this case, with exactly the same wheel carving, again at the center of the top of the inscription—PID 344 (see Fig. 2)—suggesting that this is a special type of monument in this region (more on this below). The relevance of the awkwardly carved figures on the side of the stele opposite the inscription is a bit less certain. They

are certainly in a less artful hand than are the figures on the inscription side of the stele, and they could have been made earlier or later than the writing—perhaps even about a completely different subject, though this seems unlikely. Finally, the larger *geographic* (and *linguistic*) *location* of the inscription is clearly known: at the northern end of the attested Indo-European Italic dialect area, only some forty miles north of the site of the longest inscription in any Sabellic tongue—the Umbrian Iguvine Tablets—and a similar distance form the closest South Picene inscriptions. Its *location in time*, while less clearly fixed, is likely on archeological and orthographic grounds to be the sixth to fifth century BCE. It is the longest non-Etruscan text from north Italy dated to this early period.

Figure 2. PID 344 with image of wheel.

What is needed for a solid approach to the translation of this text is a strong connection between some of these known elements and specific forms in the text. A careful review of these elements shows there are two apparent lexical roots and a pronoun at the beginning of the inscription that seem to have both solid etymologies in Italic and clear connections to the immediate known context just described.

As mentioned, Poultney's conclusion that the language of the text (which he calls 'northern Picene') is "probably … Indo-European" (1979: 49) is based: on its phonological structure (57-8), on some apparent endings (58), and on some possible root etymologies (58-61). Of

the latter, he found the first word in the text, *mimnis*, to be "very easily…analyzed as a noun meaning 'monument' consisting of a reduplicated and zero-grade stem from the [Indo-European] root *men-* 'think' plus *-is*" (60). Given the funerary context of the stele (it is in an ancient necropolis), it is inherently likely that it would open with a self-referential word like "monument." Such self-reference is common in inscriptions on durable objects. Compare the Runic inscription in Proto-Norse on the Gallehus horn from about 400 CE Denmark: *ek hlewgastiz holtijaz <u>horna</u> tawido* "I H. H. made [this] <u>horn</u>." Closer to the neighborhood of our text, the Oscan iovila inscriptions regularly refer to themselves: <u>*ekas*</u> : *<u>iúvilas</u> : iuveí : flagiuí : stahínt* "<u>these *Iovilas*</u> (<u>memorials</u>) are set up for Juppiter Flagius" (Osc Cp 25, translation from Wallace 2007: 58). And then there are the items that refer to themselves touchingly with first personal pronouns as in this sixth century BCE Umbrian inscription on a ceramic vase: **setums** : **<u>míom</u> | face** "Septimus made <u>me</u>' (Um 4, translation again by Wallace 2007: 62, following Rix 2002). So on these general contextual grounds, and on the broad etymological grounds spelled out by Poultney, it would seem quite likely that this first word of the inscription does in fact mean something like "monument."

   Poultney's reasoning here is completely convincing, and surely only his scholarly reticence prevented him from stating unequivocally that this, at least, was a clearly Indo-European form, whether borrowed into the language of the text or inherited—the first clear indication that the language may be Indo-European in origin. But there is a further, very important piece of evidence that clinches and further narrows the argument in favor of Poultney's translation and Indo-European interpretation, one that he overlooked: There exists in Oscan a word *memnim* in an inscription on a lead plate from Capua (Vetter 1953: #4) that is generally also translated 'monument' or 'memorial.' This word from a curse written on a lead plate and found in the same necropolis as the famous "Curse of Vibia" (Buck 1904: 246) provides a clear and solid Italic cognate for our form.

The text and Buck's Latin translation follow:

1	Streni Klum. Vírriis	Stenius Clum. Verrius
	Tr. . apíu Vírriis	Tr. —— Verrius
	Plasis Bivellis	Plarius Bivellius
	Úppiis Helleviis	Oppius Helvius
5	Lúvikis Úhtavis	Lucius Octavius
6	Statiis Gaviis nep fatíum nep	Statius Gavius nec fari nec
	deíkum pútíans	dicere possint.
7	Lúvikis Úhtavis Núvellum	Lucius Octavius Novellum
	Velliam [see below]	Velliam *(reddat. Si non,)*
8	nep deíkum nep fatíum pútíad	nec dicere nec fari possit,
9	nep <u>memnim</u> nep úlam sífeí	nec <u>monumentum</u> nec ollam sibi
	heriiad.	capiat.

Though Untermann in his authoritative *Wörterbuch des Oskisch-Umbrischen* says the meaning of *memnim* is unknown on page 469, the only alternative given to the widely accepted meaning 'monument' is the infinitive 'to remember' proposed by Vetter (1953: 33; following him in this analysis were only Pisani 1964: 92 and Bottiglioni 1954: 214). This analysis is based on supposed coordination with the previous infinitives *deíkum* and *fatíum.* But these infinitives are in a different clause from *memnim,* so structural parallelism with these forms would not necessarily be expected. The element immediately coordinated with *memnim* is the demonstrative pronoun *úlam,* perhaps referring back to *velliam* if this is taken to mean 'claim, will' (rather than being interpreted as a name as in the Buck translation above). Untermann says of Vetter's interpretation, "angesichts der wortstellung wenig wahrscheinlich" ('hardly likely given the syntax'). Of the proposed etymology equating Oscan *memnim* with the Latin infinitive *meminī,* Untermann concludes "formal unmöglich" ('formally impossible'), -*im* not being an attested infinitive form in Sabellic (2000: 469).

On the other hand, Untermann expresses no such objections to the majority view that *memnim* means 'monument' and is: from *me-mn-iyo-;* or from **me-mn-yo-*, constructed like Latin *memoria* (perhaps with dissimilation of *n > r;* or from **me-men-yo-*); etymologies supported by the majority of scholars (469). By this analysis, *memnim* would be a member of the small group of Indo-European

reduplicated nouns whose most famous member, ironically, is *k^we-k^wl-o-* "wheel" (> OE *hwēol*, Gr. *kúklos*, Skt. *cakrá-*, etc.). Also in this group is *b^he-b^hr-* "beaver" which shows *-o-* stem in Latin *feber*, but *-u-* stems in Skt. *babhrú-* and Lith. *bebrùs* (Beekes 1995: 171).

So *mimnis* can be said to have a close cognate (or loan source) in an Italic dialect, Oscan *memnim*, the first clear Sabellic connection for this text that can be established strongly on multiple grounds: fit with the context (on a monument); fit with the expectation of self-reference; and fit with a clear, well established cognate in Italic, specifically Sabellic, the major language group closest to the geographic and temporal location of the inscription (following the dictum "Look for Latin cognates first along the Tiber").

Two formal problems remain, however: 1) in the first syllable, the difference between the *-i-* in the Novilara form *mimnis* versus the *-e-* in the Oscan form *memnim*; and 2) the final *-s* in the Novilara form versus the final *-m* in the Oscan. The first can be approached from two directions — phonological and morphological. Morphologically, the Indo-European reduplicated syllable may show either *-i-* or *-e-*, so the variation here may preserve an ancient morphophonoligical alternation (Beekes 1995: 171, 227). Phonologically, when a lexeme alternates between <e> and <i>, the sound value can be reconstructed as /I/ < PIE *i* (Meiser 1986: 42 ff. and thanks to the anonymous reviewer for bringing up this issue). This would suggest that the common Sabellic form inherited the *-i-* reduplication here, and Unterman's reconstructions would then need to be adjusted accordingly, if it is indeed a common Sabellic form and not a borrowing. Alternatively, the *-i-* here may indicate that there was a special phonological rule in this particular language that raises an original *e* to *i* here, perhaps in this strongly nasal context, since nasalization often raises vowels—no other *e*'s in the inscription are similarly flanked by nasals, though the very small data base makes this solution rather adhoc. On the other hand, umlaut-like influence from the *-i-* in the following syllable seemingly can be ruled out, since *neši* in line 4 and *isperion* in line 6 are apparent counterexamples.

   This leaves the more difficult problem of the ending. Poultney's analysis of the root etymology is surely correct here, but his discussion of the ending is limited to the very brief "…plus *-is.*" From an Indo-European/Italic perspective, three main possibilities for such an ending present themselves: 1) an *-i-* stem with the nominative masculine singular ending *-s*; 2) a *-yo-* stem with nom. masc. sing. *-s* and with the loss of short vowel in final syllables before *-s* seen elsewhere in Sabellic (see below); or 3) a nominative/accusative singular neuter *-s-* stem with a preceding vowel *-i-*.

   To start with the third possibility, from the standpoint of Italic the apparent cognate in Oscan with its final *-im* seems to speak against an *s*-stem analysis. Furthermore, in Italic itself there are no such neuter *-s-* stems in *-is-* (though there *are* some neuter *-s-* stems in Italic preceded by *other* vowels, c.f. **-ēs-* in *Cer<u>es</u>, *-ōs-* in Umbrian *vep<u>urus</u>*, **-ūs-* in Umbrian *er<u>us</u>*—von Planta 1897: 71-72). Furthermore, all of the extant Sabellic dialects show a consistent loss of non-*u* short vowels before final *–s*, so a new rule or a variant of this rule would have to be proposed to admit this approach (Buck 1904: 59; Wallace 2000: 22; Meiser 1986: 59). The same rule poses a similar problem for the first proposal of a nominative -i- stem. This leaves the second proposal, that this is a *-yo-* stem, which we must accept for the time as the best of the three. Note too that this approach connects our form most closely with Untermann's reconstruction of the Oscan stem.

   It must be admitted that the exact analysis of the stem remains the most problematic area for this and for other forms from this text. In general, we see here and in the forms discussed below that, as with other texts near the beginning of their accurate interpretation (and in contrast to Poultney's emphasis), the identification of certain roots poses fewer problems than the exact analysis of the stems and endings at this point. In any case, whether as an *-i-*, *-yo-* or *-is-* stem, the entire word should offer no major objections as an Indo-European—and, given the near-perfect Oscan match—Italic form. A reasonable working hypothesis, then, is either that the Northern Picene language itself is from the Italic branch of Indo-European, or that this word was borrowed from an Italic

language.

      While the context of the *location of the stele* in an area
adjacent to known Sabelic dialects and its identification as
a monument helps confirm the identity of the first word,
the more immediate context, the *carvings on the stele itself,*
assists in the interpretation of the first word in the second
line of this inscription: *rotnem.* The most prominent
features on this stele are the large *wheels,* one strikingly
carved at the middle of the top of each side. If one were to
imagine that this was a certain category of inscription, one
would guess that the name of the type of monument would
be "wheel monument." Indeed, there is another
monument, fragmentary in this case, that also has a
prominent wheel carved prominently at the top of the
center of the stone, PID 344 (mentioned above).

      Here in perhaps the second most prominent place in
the text is a word *rotnem*—matching the most salient
carved figure—that may very easily be analyzed as a noun
or adjective meaning "wheel." The most obvious and
immediate cognate is Latin *rota,* but further afield we have
Sanskrit *ratha-* "chariot" and Lithuanian *rãtas* "wheel" from
the well known Proto-Indo-European noun form generally
reconstructed as *$*rot$-H_2- from the verbal root *$*ret$- 'turn.'
Attractive as this root etymology seems, the ending, again,
is a bit more problematic. The *-n-* in particular is
unexpected and otherwise unattested for this root. But
nominal and adjectival derivatives that include *-n-* are quite
common both in Indo-European and Italic. For example,
Palmer includes *-no-* as one of the derivational suffixes for
forming material adjectives from substantives in Latin, e.g.
salignus 'willowy'*, ilignus* 'oaky' (1954: 238) and for forming
substantives from substantives, e.g. *dominus* 'lord' owner'
(236). As for the apparent ending *-em,* Poultney cites it
here and elsewhere in the text as morphology that points
to Indo-European morphology, specifically accusative
singular, though he leaves open the interpretation of
these as accusatives: of consonant stems; of the equivalent
of Latin fifth declension; or, more likely in at least some
cases, from forms in *-yom,* with phonological changes seen
in certain cases in the Italic dialects (1979: 59). Meiser,
however, proposes a rule that short vowels in final syllables
are lost in Sabellic after *y* and *w* and before *-m,* which would

require a special development here again (1986: 60). If it is an adjective or substantivized adjective, the *–m* could represent an accusative singular masculine ending, or a *nominative/accusative singular neuter ending*. The form *rotnes* at the end of the fifth line is presumably another form of the same word, presumably with a nominative singular masculine ending. The form *rotem* in line 7, on the other hand, seems to lack the problematic *-n-*, but this itself raises further problems: are these different forms of the same word? Or is one a derivation of the other? Or are we witnessing mere errors in writing? We may not be able to answer these questions, but the very fact that three apparent variations of this form occur on the monument, more than any other form, reinforces the claim that they are connected to the most prominent aspect of the carvings on the stele—the wheels.

If these etymologies can be accepted as connecting the inscription's language to its inscriptional context and its Italic environs (though, again, remembering the possibility of borrowing)—and since it is quite clearly not from the Latino-Faliscan side of that branch—it is a reasonable working hypothesis that the language is another of the Sabellic (or Osco-Umbrian) dialects (if not indeed an independent branch of Italic). As such, we can proceed to search out other roots with such connections, especially those that also connect with the immediate context of the monument or with the linguistic material we are beginning to establish. We can also start to look for sound patterns and sound changes (or variations thereof) familiar from these dialects.

One might expect a text beginning with the self-referential word *mimnis* "monument" to include an accompanying deictic demonstrative pronoun "this" next to this first word, as was seen in the Iovila inscription above. Can the second word *erut* be reasonably construed as such a word? Based on Latin and most Sabellic texts, we would expect the demonstrative to precede the noun; as Buck succinctly puts it in his section discussing Osco-Umbrian word order, "Demonstrative pronouns precede, possessives follow their nouns, as in Latin" (1904: 224). But in the second to last text included in Buck's work, the reverse order can be observed—Umbrian *cubrar matrer bio*

eso = Bonae Matris *sacellum* hoc (810). (This is Buck's Latin translation; Umbrian *bio* is now considered to mean 'fountain,' so Untermann 2000: 148.) And Wallace notes, "it is possible to find noun phrases in which the pronominal modifier followed its head, e.g., **trííbum ekak** 'this building' (2007: 48; Vetter 1953: 11; Poccetti 1979: 3). Word order, then, is no great barrier to considering *erut* a possible demonstrative pronoun. The barrier comes from our earlier rejection of *minmis* as a neuter –*s* stem. But if *rotnem* is a nom/acc singular neuter subtantivized adjective meaning 'wheel stele' or 'wheel monument' (just as Oscan *iovila* is a name for a type of monument, see above) *erut* may be agreeing with *it*, rather than with *mimnis,* the latter, then, perhaps serving as a predicate nominative, possibly after a verb such as "was made/erected/offered [as]."

Turning then from syntactic to formal considerations—the apparent root, *er-*, matches the demonstrative pronoun meaning 'this' in the geographically closest well-attested Sabellic dialect, Umbrian. The Oscan forms show the same root without rhotacism. Note that *er-* provides the root for most of the attested Umbrian forms in the paradigm (from Buck 1904: 141, italics indicate Latin rather than native alphabet).

Again, this is an exact root cognate in a neighboring dialect that also fits exactly what would be expected here in our text. And, again, what is apparently problematic is the stem and ending rather than the root. The origin generally accepted for these Sabellic forms is that it is a combination of the Indo-European pronominal root **ei-* and an -*s-* that spread from the genitive plural **ei-so:m,* seen in Sanskrit *eṣām* (fem. *āsām*) of the indefinite demonstrative *ayam* 'this' or 'that' (Whitney 1989: 192). (The same type of genitive plural ending with an -*ṣ-* or –*s-* immediately after the root is also seen in the common Sankrit demonstrative paradigm of *sas* 'that' which also serves as the third person pronoun: m./n. *teṣām,* f. *tāsām.* The variation in the quality of the medial -*s-* is due to the famous "ruki" rule that palatalizes the dental sibilant after the consonants *r, u, k,* and *i*—Sanskrit *e* is from **a + *i.*) From this genitive plural proto-form **ei-so:m* (preserved in the Oscan eisun-k)*,* the new demonstrative root **eis-*

developed by reanalysis in Proto-Sabellic, since most other genitive plurals ended in simple *-*ōm* or *-*om* (Buck 1904: 140). This new root (already **eyz-* in Proto-Sabellic, according to Meiser 1986: 16, 38 & 239), in turn, underwent the rhotacism common in Umbrian and elsewhere in northern Italy to yield the root *er-* seen in the Umbrian forms above.

Oscan

Singular

	M.	N.	F.
N.	*ízic*	*ídík*	*iiuk*
G.	*eíseís, eizeis*	*eizeis*	—
A.	*íonc*	*ídík, idic*	*íak*
Ab.	*eísúd, eizuc*	*eísak, eizac*	
L.	*eíseí, eizei*		*e]ísaí*

Plural

	M.	N.	F.
N.	*iusc*	—	
G.	*eisunk*		*eizazunc*
D.	*eizois*		*eiza(i)sc*
A.		*ioc*	—

Umbrian

Singular

	M.	N.	F.
N.	**ere**(k)	eřek, *erse*	—
G.	*erer, irer*		*erar*
A.	—	eřek	*eam*
Ab.	**eru-ku,** *eru-com* **erak**		
L.	—		

Plural

	M.	N.	F.
N.	—		—
G.	**eru,** *ero(m)*		
D.	—		
A.	*eu, eo*		*eaf, eaf*

One might question whether we should expect rhotacism in such an early inscription—generally dated from the fifth or sixth century B.C. But rhotacism spread as an areal feature from the north, affecting Etruscan, as well as Umbrian and Latin, so one might expect to see some rhotacism particularly *early* in this far northern location. Note also again that Meiser (following others) reconstructs voicing of intervocalic PIE -*s*- already in Proto-Sabellic (1986: 38). There is only one apparent un-rhotacized intervocalic -*s*- in our text: in *isairon* in line 3. But there are apparent exceptions to rhotaticism, even in late Umbrian texts. Buck, in a footnote on rhotacism, observes: "Nothing satisfactory can be said of **asa-**, *asa-* : O. aasai, L. *āra.* For *esono-* 'sacer', related to O. aisusis 'sacrificiis' etc., it is possible to assume an extension of an *s*-stem, i.e. **ais(e)s-ono-*" (1904: 74; for a more recent discussion of the form, see Meiser 1986: 252 ff.). Something similar may be going on here; in fact this last form may well be a related word. On the other hand, the -*s*- here could have been blocked from rhotacism by the following -*r*- (whatever *its* origin*).* The only other sibilants that occur between vowels are the distinctively written *š*'s that may derive, as Poultney suggests (1979: 53), "from *k* before a high front vowel" as it is sometimes written in Umbrian, and as such would not be eligible for rhotacism. Note also that a preceding morpheme boundary blocks rhotacism, if initial *i*- might represent some sort of prefix (Meiser 1986: 242).

The only other theory for the origin of this root is that it was generalized from the reduplicated genitive form *eis > *eis-eis* (Untermann 2000: 357). While this cannot be safely ruled out entirely, it is notable that languages with reduplicated genitives in other pronominal paradigms, such as Sanskrit with first person singular personal pronoun *mama*, did not generalize an entire paradigm based on this form, such reduplications presumably being transparent enough to resist the reanalysis necessary for such spread.

Again, while a fairly solid root etymology can be established here—with the meaning expected at this location of the text matching the root with that meaning in a neighboring dialect of Italic—the ending remains somewhat problematic. Note, for example, that none of the Umbrian forms ends in -*t.* Two possibilities initially

present themselves. The Oscan has ablative singular **eísúd**, which would correspond to an Umbrian **erud*, presumably the form behind the attested *eru-ku, eru-com.* So we could be dealing with an ablative singular form here.

Alternatively, this could be an adverb similar to Umbrian **esuk** 'thus' at the beginning of the *A* side of the fifth Iguvine Tablet. Untermann derives this and related forms (**esu,** *esoc, eso*) from a nominative/accusative neuter singular demonstrative pronoun **eks-od-k* or plural **eks-ā-k* from the other root for 'this,' **ek-/eks-* Oscan, Umbrian, Paelignian, and Marrucinian masculine nominative singular *ecuc*; nominative/ accusative neuter singular Oscan **ekík**, Paelignian *ecic* (Untermann 2000: 216, 221). The meaning 'thus,' however, seems more appropriate for instructions for carrying out rites than for what appears to be a commemorative or funerary monument.

These forms lead us to a third possibility that would seem to more closely fit the context. In his discussion of the etymology of the nominative/ accusative neuter singular Oscan **ekík** and Paelignian *ecic* forms just mentioned, Untermann presents the following: "O. **ekik** stat **ekok* < **eko-d-ke* ist nach *idik* (→*izic*) umgestaltet" (2000: 217). Removing the deictic *-k* familiar from Latin *hic, haec, hoc* …, we get a proto-Sabellic nom./acc. neuter sg. demonstrative pronominal form **ekod* 'this.' This form **ekod* could easily have influenced the other root for 'this' by extending the **-od* ending to the nom./acc. neuter sg. form of the root **eis-* (Umbrian **er-*) to yield exactly our form, *erut* (just as the *izic* form seems to have had an influence on the **ek-* pronouns).

This dental neuter singular nominative/accusative pronominal ending, is of course, widespread in Italic and Indo-European—seen in Latin *id, quid* and Sanskrit *id-am* (the nominative/accusative neuter singular form of the very demonstrative paradigm given above) and *tat* (the same form for the *sas* paradigm mentioned above), not to mention English *it* and *that*. Note also that in Oscan the nom./acc. singular neuter form is *ídík, idic* and that the parallel Umbrian forms *eřek, erse* are similarly from **idik*, *-ř-/-rs-* being the regular outcome of intervocalic *-d-* in Umbrian (Buck 1904: 82-3). So in these dialects, the *eis-/er*

root had not yet spread to the nominative/accusative singular neuter form. In the language of our text, it apparently has.

On the face of it, <u> in *erut* from **o* would seem to present no problem, since <u> is the regular representation of Sabellic **o* in the national alphabet (Meiser 1986: 27). But while the national alphabet has no separate letter <o>, our text does. So, if an <o> was available, why was a <u> used in this case? One approach to this dilemma would be to posit a sound change in our language that changes *o > u* in final syllables, a change seen, for example, in Latin. This would mean that the <o>'s that are documented in final syllables in the text would need special explanations, unless there was simply variation in representing this sound in writing in this position.

Finally there is the problem of the final voicing (thanks to Professor George Sheets for pointing out that this issue needed addressing and for help on many other points, small and large). While a full discussion of voicing in this text will require a separate article, note for now that <d> in this text is highly restricted in its occurrence and distribution, only occurring in medial position and only in two words *gaarestades* (if this is in fact one word) and *ands.* Also note that the letter that is represented in Poultney's transcription as 'd' <Я> is the letter whose value in this text is the least certain (1979: 52, 58). Since this early alphabet was clearly derived from an Etruscan alphabet, voicing distinctions may not have been completely sorted out at this early date (Etruscan lacked voicing distinctions in stops). Alternatively final devoicing of dentals (at least) may have occurred in this dialect. Also, note that -*s*- does not seem to rhotacize finally in this text.

So it may be possible to construe the above-examined three words of this seemingly impenetrable text as a phrase or part of a phrase 'this wheel stele [as a] monument' with *mimnis* as the predicate nominative of some verb such as "was made," "was dedicated," " was offered," or simply "stands." The likelihood that the three words, particularly the function word *erut*, were all borrowed would seem rather low. If the etymologies can be accepted,

this part of the text, at least, could be declared to be a Sabellic language. Of course, if the etymology of 'this' proposed here is rejected, *rotnem* and *mimnis* could instead be borrowings from the neighboring languages. If these suggestions prompt a vigorous scholarly debate that brings more attention and illumination to this dark inscription, a central aim of this article will have been achieved. Perhaps then this long mute stone will start to speak.

References

Beekes, R.
    1995   *Comparative Indo-European Linguistics*. Amsterdam: Benjamins.

Bottiglioni, G.
    1954   *Manuale dei dialetti Italici*. Bologna.

Buck, C.D.
    1904   *A Grammar of Oscan and Umbrian*. Boston: Ginn & Co.

Durante, M.
    1978   Nord Piceno: la lingua delle iscrizioni Novilara, in A. L. Prosdocimi and M. Cristofani (ed.) *Popolie civiltà dell' Italia antica: Lingue e dialetti dell' Italia antica*, 395-400. Rome.

Eichner, H.
    1993   Ein Heldendenkmal der Sabiner mit trochäischem Epigramm eines pikenischen Plautus des fünften Jahrhunderts v. Chr. *Die Sprache* 34, 198-208.

Jacobsohn, Hermann
    1927   *Altitalische Inschriften*. Berlin: de Guyter.

Mallory, J.P
    1989   *In Search of the Indo-Europeans: Language, Archaeology, and Myth*. New York: Thames and Hudson.

Meiser, G.
    1986   *Lautgeschichte der umbrische Sprache*. Innsbruck, Institut für Sprachwissenschaft der Universität Innsbruck.

Palmer, L. R.
    1954   *The Latin language* (reprinted 1977). London, Faber and Faber.

Pisani, V.
    1964   *Le lingue dell'Italia antica oltre il Latino*. Torino

Poccetti, P.
  1979   *Nuovi Documenti italici: a complemento del manuale di E. Vetter.*
            Pisa: Giardini

Poultney, James W.
  1979   The language of the Northern Picene Inscriptions. *Journal of
            Indo-European Studies* 7, 49-64.

Rix, H.
  2002   *Sabellische Texte.* Heidelberg: C. Winter

Rosenkranz, B
  1935   Studien zur vorindogermanischen Bevölkerung Europas.
            Indogermanische Forschungen 53, 109-113

Untermann, Jurgen
  2000   *Wörterbuch des Oskisch-Umbrischen*: Heidelberg: C. Winter

Vetter, E.
  1953   *Handbuch der italischen Dialekte* I. Heidelberg: Carl Winter

von Planta, Robert
  1897   *Grammatik der oskisch-umbrischen Dialekte*, zweiter Band.
            Strassburg: Trübner

Wallace, Rex
  2007   *The Sabellic Languages of Ancient Italy.* Muenchen: Lincom
            Europa

Whatmough, J.
  1933   *The Prae-Italic Dialects of Italy*, 2. Cambridge: Harvard UP

Whitney, W.D.
  1889   *Sanskrit Grammar.* Cambridge: Harvard UP

A note on Lesbian ἴμβηρις[*]

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The Lexicon of Hesychius is still of great importance as far as the exegesis of Classical texts is concerned, but the question of how far it can be considered a reliable source of dialectological data, and especially whether the glosses attest the real state of the vernacular spoken in the different regions of Greece, remains difficult to answer. The following article examines only one of its examples, namely the regional designation for the "eel", as attributed to the inhabitants of the city of Methymna on Lesbos, cf. Hsch. I 621 ἴμβηρις· ἔγχελυς. Μηθυμναῖοι. The article aims to cast some light on this obscure form, it focuses especially on the proposed etymological connection between the Lesbian form and Lith. *ungurỹs* "eel". The article discusses this problematic relation and concerns itself with the question of a possible alternative etymology for the Greek dialectal form under the assumption of tabooistic or folk-etymological influence.

In the course of research on the various dialects of Ancient Greek, the lexical system has not been studied in the same way as has been done with phonology and morphology. The same seems true of syntax. This situation, however, should not be considered an odd one. The

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[*]The Lexicon of Hesychius has been quoted according to the edition of Latte, K. 1953-1966. Hesychii Alexandrini lexicon. 1-2 (A-O). Hauniae: Ejnar Munksgaard editore and Schmidt, M. (Ed.) 1861-1862. Hesychii Alexandrini Lexicon. 3-4 (P-W). Halle a.d.S.: Max Niemeyer. (repr.Amsterdam: Hakkert 1965). The Lesbian inscriptions follow the standard edition in IG XII, 2 = *Inscriptiones Graecae* Vol. XII, fasc. 2: Inscriptiones Lesbi, Nesi, Tenedi. Consilio et auctoritate Academiae Litterarum regiae Borussicae edidit W. Paton. Berolini: apud Georgum Reimerum 1899, their abbreviations and numbers correspond to Hodot 1990. The ancient authors have been quoted according to the electronic editions of TLG (Packard Humanities Institute), the abbreviations follow the model of *LSJ*.

majority of forms attested both in inscriptions and in the other sources can be interpreted as "normal" Greek words, which may differ in their phonetic shape or (less frequently) their morphological features. It seems clear, however, that research into the Greek dialectal lexicon could contribute much to the question of the contacts between various dialects, as well as to their external history. The dialectal lexicon of Greek offers many interesting forms which may be used in Indo-European reconstruction: etymology, morphology, etc. It seems, however, that the dialectal data, especially from glosses and ancient grammatical entries, should be treated with extreme caution, especially due to their mostly problematic provenance.[1] On the other hand, the glosses are still one of the most important sources of our knowledge of the dialectal lexical systems (of course after the epigraphical sources), as they are for sure a certain source of new material, being sometimes the unique attestations of single formations in Greek.[2]

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[1]The most extensive source of them is the Lexicon of Hesychius of Alexandria, dated to the 5th/6th cent. A.D., the oldest manuscript however stems from the 15th. cent., Codex Marcianus Graecus 622. This Lexicon is based on earlier works, especially on a lexicon by Diogenianus from Heraklea "Παντοδαπὴ λέξεις" (quoted by Hesychius under the name "Περιεργοπένητας"), which has not been preserved; among others the glosses by Aristarchus, Apion, Heliodorus, Kyrillus and the orthographical works by Herodianus were also used (cf. Latte 1953, XLII-XLVII). The Lexicon of Hesychius is of great importance as far as the exegesis of Classical texts is concerned, but the question of how far it can be considered a reliable source of dialectological data, and especially whether the glosses attest the real state of the vernacular spoken in the different regions of Greece, remains difficult to answer.
[2]The lexical material attested in the glosses in many cases does not fit the epigraphical evidence, as it is often quoted from literary works and it makes the use of the same method as in the case of inscriptions impossible. The most important thing is first of all to examine the direct source of the gloss, and to place it in the tradition of the literary genre. Also, the historical-comparative method and interdisciplinary analysis are needed to explain these forms (for proposed methodological approach to the glosses and dialectal vocabulary see García Ramón 1997, 521-552, and above all García Ramón 2004. 235–264. For Lesbian glosses and problems of Lesbian dialectal vocabulary in general s. Sowa 2006, 233-258.

Lesbian ἴμβηρις

In his Lexicon Hesychius quotes the regional name for the "eel", and indicates its dialectal provenance from Methymna on Lesbos, cf. Hsch. I 621 ἴμβηρις· ἔγχελυς Μηθυμναῖοι, nom. sg. The form is not attested in any other grammatical or lexicographical sources, nor does it occur in Lesbian inscriptions or poetry.

This Hesychean *hapax legomenon* still remains obscure. From a synchronic perspective, it would appear to have a word-formation parallel in the form λεβηρίς "skin or slough of serpent, (of beans) shell", cf. Hsch. L 483 λεβηρίς· τὸ τοῦ ὄφεως γῆρας, ὅ ἀποδύεται τινὲς δὲ ἄνδρα Λέβηριν γενέσθαι πτωχόν. οἱ δὲ τὸ λέπος τοῦ κυάμου;[3] and it probably belongs to a group of feminina in –ις, which are mostly the names of animals, plants, armour and clothes derived from adjectives, e.g. νυκτερίς "bat" from νυκτερός "nightly, by night" (Risch 1974, 143f.; on the problem of the adjectives in -αρός, -ερός, -ηρός and –υρός see Risch, 1974, 69-73). According to Schwyzer λεβηρίς (*λεβεσ-ρ-) has to be connected with λοβός "lobe of the ear, of the liver, capsule or pod of leguminous plants" (LSJ) and would continue an unattested adjective *λεβηρός from *λεβος (to λοβός) in the same way as τριετηρίς "triennial festival" should be connected with τριετηρός "three years old" (Schwyzer 1914, 196). If this proposal is correct, we would have Lesb. ἴμβηρις which would continue an unattested Adj. *ιμβερος. The etymology, however, is still unclear.

De Saussure was the first to compare the form to the Lith. word *ungurỹs* "eel"; and he also stated that there was no etymological correspondence between Lesb. ἴμβηρις and the widely attested Greek ἔγχελυς.[4] According to de

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[3]Cf. also Suda Λ 218: Λεβηρίς: τὸ γῆρας, ὅ ἀποδύεται ὁ ὄφις. καὶ παροιμία· Τυφλότερος λεβηρίδος καὶ κινδάλου. ἔστι δὲ εἶδος ὀρνέου ἀσάρκου καὶ λεπτοῦ. ἄλλως δὲ γυμνότερος. καὶ ἑτέρα παροιμία Γυμνότερος ὑπέρου καὶ λεβηρίδος. φασὶ γὰρ ὅτι Λεβηρὶς πένης ἐγένετο ἐξ οὗ καὶ παροιμία μετ᾽ ἤχθη.

[4]"Wie viele Fischnamen dunkel, erinnert ἔγχελυς an andere Bezeichnungen des Aals: Lat. *anguilla* und damit verwandte balt. und slav.

Saussure, some other forms, like MHG. *unc, unkes* (and
perhaps Lat. *anguis, anguilla*) would confirm the
reconstruction with a non-aspirated labiovelar *$*g^w$* (de
Saussure 1889, 79), cf. Pokorny`s reconstruction *$*ang^{w(h)}i$*-
"Schlange, Wurm" (IEW 43ff.), *$*eng^w$*- in the etymological
dictionaries of Frisk (GEW I 725) and Fraenkel (1965,
1163).

As is well known, the Indo-European languages
possess many forms designating "snake", "water-snake" and
"eel", which could have influenced one another, so one
precise reconstruction cannot be made, even if the
semantics are the same (cf. *$*h_xVng^hel \sim *h_xVng^hur$* in EIEC
529f.).[5] For Schrijver Lat. "snake" and "eel" *anguis* and
anguilla would reflect *$*h_2(e)ng^wh$*-. OHG. *unc* "snake", on the
other hand, would rather reflect the zero grade *$*h_2ng^wh$*-;
and Lith. *angìs* "snake" would be considered as the
example of a full grade *$*h_2eng^wh$* or *$*h_2ong^wh$*. Many look-
alikes could have different origins, as e.g. Gr. ὄφις, ἔχις,
ἔγχελυς and ἴμβηρις (Schrijver 1991, 44f.). Katz points to
the fact that Latin *anguil(l)a*, Greek ἔγχελυς, Hitt.
illuyankas seem to continue one single proto-form, i.e. a
compound comprising the word for "snake" *$*ang^{wh}$*- and
$*(h_1)ell$-: *$*(h_1)ēl$* the I.E. "eel"-word, which survived only in
Germanic (Katz 1998, 318f.; 322; 328).

Lithuanian *ungurỹs* is generally considered to be
related to the Slavic forms as Russ. *ugorъ*, Czech *uhoř*, Pol.
węgorz and probably continues the older state *$*anguris$*, as
attested in OPruss. *angurgis* [anguris] "oel" (in *Elbing
Vocabulary* 565; cf. Toporov 1975, 88). Lith. *ungurỹs* is allied
to *angìs* "serpent" (through an intermediary form *$*ang-ur$*-),
the Prussian sequence of Proto-Baltic *$*aNC$*- regularly
developed in Eastern Lithuanian to *uNC*-; cf. OPruss. *dantis*
"tooth" and ELith. *duntìs* (Smoczyński 2000, 18). The
Slavic *$*ǫgorъ$*, Polish *węgorz* has a nasal vowel from *$*anC$*, and

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Wörter, ohne daß man eine idg. Grundform aufstellen kann..." (Frisk
GEW I 439f.). For the cultural context for an "eel" in Greek see
Thompson 1947, 58ff..
[5]The name of an "eel" is according to the authors of EIEC "at least of the
west and center of the IE world", it "cannot be shown to be of PIE status
but has both a restricted linguistic and geographical range" (EIEC 529f.).

not from the **unC-* sequence then (Smoczyński 2001, 113). The Lithuanian form could be synchronically interpreted as containing the suffix *–urỹs* (< Proto-Baltic *-*ur-iịo-*, cf. *gomurỹs* "roof of an oven" < **gʷeh₂m-ur-iịo* to Arm. *kamowrǰ* "bridge" with a question mark in Ritter 1996, 17) and in the light of Finn. *ankerias* "eel" (a Baltic loan-word in Finnish), could be reconstructed to the Proto-Baltic form **ang-ur-iịa-s* (cf. also Finn. *nukero* ~ Lith. *nugarà*; Finn. *perkele* ~ Lith. *perkúnas*),[6] and not to **angariịas* or **angeriịas* which in that case should develop with a sort of vocalic harmony or assimilation to attested OPruss. *anguris* (or Lith. *ungurỹs* as assumed in Otrębski 1955, 26; cf. Otrębski 1958 214ff.; **ang-ur-iịa-s* in Smoczyński 2001, 113).

We have to ask: is there a real possibility of connecting the Lesbian gloss ἴμβηρις to Lith. *ungurỹs* < Proto-Baltic **anguriịas* < **anguriịo-*? It seems that neither form continues the same stem and that the differences apply to the phonology as well as to the word formation, cf.

Lith.	*ungurỹs*	Lesb.	ἴμβηρις
Proto-Baltic	**anguriịas*	Proto-Aeol.	** i n gʷe: r i s*
			i n b e: r i s

If we consider one reconstructed lexeme **angʷʰ-* (see above) we cannot interpret the Lesbian form unless we assume an irregular phonetical development: **/ang^wh-/ > */eng^wh-/* > the loss of aspiration **engʷ-> *enb-> *emb-> imb-*, with the sound change /e/ > /i/ / _ [+ Nas], and an Aeolic treatment of the inherited labiovelar before a front vowel. Such a development would be quite unusual. The change of /e/ to /i/ in the context before nasal is, however, typical of the Arcadian dialect (ιν = ἐν, Ινναλιος, μινουσαι = μένουσαι; cf. also part. suffix *-μινος* for *–μενος*, Schmitt 1977, 86), and is also sporadically attested in Cretan (in Axos and Eleutherna where it has been interpreted as an influence of Achaean substratum, cf. ἰν = ἐν, also ισς, ις < **/ins/* < **/ens/*; Schmitt 1977, 51). Peters points to the fact that some examples of such a change may also be

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[6]For the problem of the Baltic loan-words in Finnish cf. also Thomsen 1890. esp. 105, 158; Ritter 1993, 152, 155.

found in the Lesbian dialect, where the inscriptional evidence from Mytilene yields the forms of the noun αγιμων (for ἡγεμών). This epigraphic evidence however is very late (Roman period) so there could be a doubt about the vernacular status of a form;[7] cf. MYT 035, 3 . ...βολλας και τω δαμω περι αυτω τουτω προς τοις αγ[ι]μονας οππως και αυτοις φανεραν ποημεν...; MYT 160 b 2: Γ. Καισαρι και Λ. Καισαρι αγιμοσι τας νεοτατος (translation of Lat. *pricipes iuuentutis*); MYT 148 a 4: Γ αιω Καισαρι αγιμονι τας νεοτατο<s>, or ERE 015, 10: ... εν δε προτανει Γαιω αισαρι τω παιδι τω Σεβαστ[ω α]γιμονι [τας νεοτατ]ος εβουθυτησε ... (Peters 1986, 311[32]). Peters challenges Hodot`s hypothesis according to which the quoted examples with /i/, like αγιμων, should be considered as the result of the analogous influence from the interjections as αγι, αγιτε (Hodot 1990, 109; Peters 1988-90 , 562).

It seems that the relation of the Latin, Baltic and Slavic forms to the Lesbian ἴμβηρις as being the continuation of hypothetical *eng^w- (*h$_2$eng^{wh}-/ ang^{wh}-) is especially from the phonetic point of view rather problematic.[8] The same applies to Hom. ἔγχελυς, both for the phonetic and morphological reasons. There is, however, always a possibility that the form could be the result of tabooistic changes or folk-etymology.

A possible "candidate" for a derivational basis of ἴμβηρις would be a nasal present *ϝίμβω "anschirren, harness", "tighten a belt", "ζεύγνυμι" (Frisk GEW I 725f.) which is not directly attested and survived only in glosses, cf. Hsch. I 645f. aor. part. ἴμψας· ζεύξας. Θετταλοί Ἴμψιος· Ποσειδών ὁ ζύγιος.[9] According to García Ramón, we deal here with the root *u̯ei̯b- "turn, voltar (se)" in the shape of a nasal present *u̯i-n-b-o/e- a thematic form of the

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[7]In most cases the Lesbian inscriptions from the Roman Period seem to be artificially Aeolised, with the majority of the formulas and forms belonging to the κοινή, sometimes with dialectal endings or dialectal phonetic (orthographical) peculiarities added.

[8]Cf. also Mažiulis I 79.

[9]This epiclesis of Poseidon is attested for Thessaly, see García Ramón 1997, 538 for details.

original * u̯i-ne-b- stem-;[10] the nasalisation would then be secondary extended from the present formation to the aorist and all nominal derivatives (García Ramón 1997, 544). If ἴμβηρις was really formed in the same way as λεβηρίς then it should reflect the former adjective *ἴμβηρος (< *u̯i-n-b-es-ro-) in the meaning "turning one".[11]

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[10]Cf. however the entry *u̯eip- in LIV², 671 "in schwingende /zitternde Bewegung geraten" with parallels from other languages. The authors of LIV point to Germanic forms as e.g. Goth. *weipan* "to crown", *wipja* "crown", which could be interpreted as reflexes of quasi IE. */b/. It seems that there are some more reflexes of quasi *u̯eib- variant, cf. e.g. Lat. *uibrō, āre* "to move to and fro, flash" and *uībix, -ícis* "weal" (cf. Pokorny 1959, 1131f., Ernoult-Meillet 1959⁴, 731f.). It seems that the PIE root-final consonant could really vary in voicing, cf. OInd. *kṣipáti* "to hurl", *kṣiprá-* "quick, fast" and YAv. *xšuui̯bra* "quick" from *k^(w)su̯ei̯bʰ/p- (de Vaan 2008, 674), cf. similar example in PIE ?*u̯eng- "sich krümmen" (LIV², 682) and ?*u̯enk- in the same meaning (LIV², 683).

[11]In principle the –ro- derivation from an –s stem is quite common in Indo-European, cf. Ved. *támisrā* "dark night" < *temHs-ro- to *támas-* "dark" < *temH-os-. The nasalisation of the presumed s-stem *u̯imbes- is quite strange. It seems however that it really has been secondary extended from verbal formations to all nominal derivatives, cf. the existence of the form Ἴμψιος· Ποσειδών ὁ ζἘγιος which is also to be explained as originally –i̯o- adjective to unattested *ῐ̓́μψος. The same secondary extension of nasalisation from verb to noun occurs also in Thessalian αγγρημι "take, seize" and an abstract noun ανγρεσις, cf. e.g. IG IX, 2, 461b, 28: εδοξ]ε του κοινου τας πολιος [επαινεσαι] Λιοντα ετ τα **προανγρεσ [ι, ταν εχει και π**]οτ ταν πολιν και πο[θ εκαστον]…; 504, 4: [… διοτι ανδρας καλος] εξαπεστελ[λεν και αξιος τας] ευτοι **ανγρεσιος**; LAR 517, 41: Θεμιστιοι τα υστερομεινυια αγορανομεντος Αλεξιπποι, περ ιερουν, Αλεξιπποι λεξα[ν]τος εψαφιστει τα πολιτεια, οσσουν μεν **εφανγρενθειν** κινες τουν πεπολιτογραφειμενουν τος ταγος ε[γ]γρα[ψαν]τας εν λαυκουμα εσθεμεν αυτος εν τον λιμενα …; MD 347, 14 (= IGC 9, 1, 14): και το χουρον εμε[τρει]θει **αφανγρειμεναν** ταν οδουν και ταν ενοδουν· or MD 337.40 (=BCH 59, 55, 2, 40): Λευκιον Νικασιαιον ετ τα **αγγρεσι** τα ειχε ποτ ταν πολιν και δοθειμεν. One may also point to the existence of pairs as in Gr. θάμβος "Staunen, Verwunderung, amaze", ἀθαμβής and verb θαμβέω "to be astonished at" opposite to τάφος, °ταφής. In this particular case different forms have different chronology: in case of θάμβος and θαμβέω the s-stem is derivational basis for verbal form (cf. zero grade *dʰm̥bʰ- preserved in Aor. ἔταφον and regular °ταφής, τάφος noun). According to Stüber in the period when the ablaut of the root was still preserved the s-stem *dʰembʰos > θέμβος also existed, which has udergone later the levelling to the zero-grade forms and has been reformed to the shape

If this proposal is right, it would be another name of an animal in Greek expressing the action it performs.

Even more interestingly, such a proposal could also be supported by Lithuanian, where the dialectal name of an eel formed on the basis of folk etymology is attested: *vingurỹs/viñguris* or even *viñguras* (cf. LKŽ XIX 466f.) instead of *ungurỹs* to the secondary present formations as e.g. *vìngti, vingiúoti* "to turn"; one may quote also the Latin *serpens* "snake" which obviously was named after its characteristic movements, cf. **serp-* "kriechen, schleichen" (LIV^2, 536).

The entry in Hesychius` Lexicon yields the form ἴμβηρις, with the comment that it was used by the inhabitants of Methymna on Lesbos. This may really point to the vernacular status of ἴμβρις in the light of a fact that Hesychius uses the adjective Aeolic, or expressions like "in Aeolic" Αἰολεῖς to indicate mostly glosses coming from literary sources: Epic or Lyric, while the label: Λέσβιοι seems to apply to actual dialect spoken on Lesbos. In this case a dialect, or sociolect of one Lesbian town is indicated, but it is impossible to indicate Hesychius direct source (though it seems that it does not come from Diogenianus). The possibility of work of a literary nature can not be excluded either, cf. the use of ἔγχελυς "eel" in Homer Φ 203 ἐγχέλυές τε καὶ ἰχθύες and in Archilochus Fr. 189: πολλὰς δὲ τυφλὰς ἐγχέλυας ἐδέξω, where it occurs in the metaphorical meaning "blind eels" - "penises".[12] We cannot

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θάμβος, which finally became a basis for the denominative verb θαμβέω (Stüber 2002, 48). For the problem of Greek *s*-stems see also Meissner 2006.

[12] "You received many blind eels", cf. also Ath. Deipn. 7,53, 21 -54, 3f.: ἔγχελυς, ἥ φύσει ἐστὶν ἀπύρηνος μόνος ἰχθύς … Ὁμήρου δὲ εἰπόντος «τείροντ' ἐγχέλυές τε καὶ ἰχθύες» ἀκολούθως ἐποίησε καὶ Ἀρχίλοχος (fr. 189): πολλὰς δὲ τυφλὰς ἐγχέλυας ἐδέζω. The same metaphor is apparently to be found also in Lat. *natrix* "watersnake, penis", cf. Lucil. II, 69 *si natibus natricem inpressit crassam et capitatam* "if he put the head of a fat snake between the buttocks" (Krenkel 1970, 130). In Greek obscene language of Comedy the similar reference has been made, cf. Ar. Ecc. 909f. κἀπὶ τῆς κλίνης ὄφιν προσελκύσαιο ‖ βουλομένη φιλῆσαι "may You find a snake in Your bed" which is the curse directed at a young girl by her older rival, and the meaning of a "snake" in this particular case is "a

state precisely whether the form was in use also in other parts of Lesbos, e.g. in Mytilene, nor can we say anything about the chronology of ἴμβηρις, though the form of the suffix seems to be already influenced by κοινή (**ιμβερρο- expected?).

References

Blümel, W.
    1982   *Die aiolischen Dialekte. Phonologie und Morphologie der inschriftlichen Texte aus generativer Sicht.* Göttingen: Vandenhoeck & Ruprecht (= Ergänzungshäfte zur Zeitschrift für vergleichende Sprachforschung Nr. 30).

EIEC = *Encyclopaedia of Indo-European Culture.* Ed. by J.P. Mallory and D.Q. Adams.
    1997   London and Chicago: Fitzory Dearborn Publishers.

Ernoult-Meillet = Ernoult, A.-Meillet, A.
    1959[4]   *Dictionnaire étymologique de la langue latine. Histoire des mots.* Paris: Klincksieck.

Fraenkel = Fraenkel, E.
    1962-1965 *Litauisches etymologisches Wörterbuch.* Bde. I-II. Heidelberg: Carl Winter Universitätsverlag.

Frisk, GEW = Frisk, H.
    1960   *Griechisches Etymologisches Wörterbuch.* Heidelberg: Winter.

García Ramón, J.L.
    1997   Cuestiones de léxico y onomástica tesalios. Katà diálekton. In A. C. Curio (ed) *Atti del III Colloquio Internazionale di Dialettologia Greca. Napoli – Fiaiano d`Ischia, 25-28 settembre 1996,* 521-552. Napoli: A.I.O.N. XIX (1997).

García Ramón, J.L.
    2004   Del trabajo en una gramática del tesalio: para una valoración lingüística de las glosas. Dialetti, dialettismi, generi letterari e funzioni sociali. In. G. Rocca (ed) *Atti del V Colloquio Internazionale di Linguistica Greca, Milano, 12-13 settembre 2002,* 235 – 264. Alessandria: Edizioni dell` Orso.

Henderson, J.
    1975   *The Maculate Muse. Obscene language in Attic Comedy.* New Haven and London: Yale University Press.

Hodot, R.
    1990   *Le dialecte éolien d`Asie. La langue des inscriptions VIIe s. a.C. IVe s. p.C.* Paris: Èditions Recherche sur les Civilisations (Mémoire n° 88).

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limp phallus" Henderson 1975, 127. For the connection between "blindeness" and "eels", as well as "eels" and "illicit sex" and the function of "eel" in the Indo-European mythological and poetic tradition see Katz 2005, 259-296.

Katz, J.T.
   1998   How to be a Dragon in Indo-European: illuyankas and its Linguistic
             and Cultural Congeners in Latin, Greek and Germanic. In J. Jasanoff,
             H. C. Melchert and L. Oliver (eds) *Mír Curad. Studies in Honor of
             Calvert Watkins*, 317 – 334. Innsbruck: Innsbrucker Beiträge zur
             Sprachwissenschaft 92.

Katz, J.T.
   2005   To Turn a Blind Eel. In: K. Jones-Bley, M.E. Huld, A. Della Volpe, M.
             Robbins Dexter (eds) *Proceedings of the Sixteenth Annual UCLA Indo-
             European Conference, Los Angeles November 5-6, 2004*. Washington, DC:
             Institute for the Study of Man. Journal of Indo-European Monograph
             Series, No. 50.

Kluge-Seebold[23] = Kluge, F.
   1999   *Etymologisches Wörterbuch der deutschen Sprache.* 23., erweiterte Auflage.
             Bearbeitet von E. Seebold. Berlin-New York: Walter de Gruyter.

Krenekel, W.
   1970   *Lucilius. Satiren. Lateinisch und Deutsch.* Berlin : Akademie-Verlag.

Lejeune, M.
   1972   *Phonetique historique du mycénien et du grec ancien.* Paris: Klincksieck.

LIV[2] = *Lexikon der Indogermanischen Verben. Die Wurzeln und ihre
             Primärstammbildungen.* Unter Leitung von Helmut Rix. Unter der
             Mitarbeit vieler anderer bearbeitet von Martin Kümmel, Thomas
             Zehnder, Reiner Lipp, Brigitte Schirmer. Zweite, erweiterte und
             verbesserte Auflage bearbeitet von Martin Kümmel und Helmut Rix.
             Wiesbaden: Dr. Ludwig Reichert Verlag, 2001.

LKŽ = *Lietuvių Kalbos Žodynas.* T. XIX
   1999   Vilnius: Lietuvos Mokslų Akademija, Lietuvių Kalbos Institutas -
             Mokslo ir enciklopedijų leidykla.

LSJ = *Greek-English Lexicon.* Compiled by Henry George Liddel and Robert Scott.
             Ninth edition with a revised supplement. Oxford 1996: Clarendon
             Press.

Mallory-Adams = Mallory, J.P. – Adams, D.Q.
   2006   *The Oxford Introduction to Proto-Indo-European and Proto-Indo-European
             World.* Oxford - New York: Oxford University Press.

Mažiulis = Mažiulis, V.
   1996   *Prusų kalbos etimologijos žodynas.* Vilnius: Mokslo ir enciklopedijų
             leidykla.

Meissner, T.
   2006   *S-stem nouns and adjectives in Greek and Proto-Indo-European. A diachronic
             study in word formation.* Oxford: Oxford University Press.

Otrębski, J.
   1955   Aus der Geschichte der litauischen Sprache. *Lingua Posnaniensis* 5, 23
             – 40.

Otrębski, J.
   1958   *Gramatyka języka litewskiego.* Tom I. Warszawa: PWN.

Peters, M.
  1980   *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen.* Wien: Verlag der Österreichischen Akademie der Wissenschaften.

Peters, M.
  1986   Zur Frage einer "achäischen" Phase des griechischen Epos. In: A. Etter (ed) **o-o-pe-ro-si**. *Festschrift für Ernst Risch zum 75. Geburtstag*, 304-319. Berlin-New York: Walter de Gruyter.

Peters, M.
  1988-90 Indogermanische Chronik 34. 560-563 (= G 298). *Die Sprache* 34, 2 (1988-90).

Pokorny = Pokorny, J.
  1959   *Indogermanisches etymologisches Wörterbuch.* Bern-München: C.H. Beck`sche Verlagsbuchhandlung

Risch, E.
  1974   *Wortbildung der homerischen Sprache.* Zweite völlig überarbeitete Auflage. Berlin – New York: Walter de Gruyter.

Ritter, R.-P.
  1993   *Studien zu den ältesten germanischen Entlehnungen im Ostseefinnischen.* Frankfurt a.M.-Berlin – Bern -New York – Paris -Wien: Peter Lang (= Opuscula Fenno-Ugrica Gottingensia V).

Sausurre De, F.
  1889   Variétés. La glosse d`Hesychius ἴμβηρις· ἔγχελυς. Μηθυμναῖοι a passé. *Mémoires de la Société de Linguistique de Paris.* 6, 78-79.

Schmitt, R.
  1977   *Einführung in die griechischen Dialekte.* Darmstadt: Wissenschaftliche Buchgesellschaft.

Schrijver, P.
  1991   *The reflexes of the Proto-Indo-European Laryngeals in Latin.* Amsterdam-Atlanta, GA: Rodopi.

Schwyzer, E.
  1939   *Griechische Grammatik.* Erster Band. München: C. H. Beck`sche Verlagsbuchhandlung.

Smoczyński, W.
  2000   *Untersuchungen zum deutschen Lehngut im Altpreußischen.* Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
  2001   Indoeuropejskie podstawy słownictwa litewskiego. *Język litewski w perspektywie porównawczej*, 96-166. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego (Baltistica Varsoviensia 3).

Sowa, W.
  2006   Bemerkungen zum lesbischen dialektalen Wortschatz. *Emerita* 74, 2. 233-258.

Strömberg, R.
   1943   *Studien zur Etymologie und Bildung der griechischen Fischnamen.*
                 Göteborg: Elanders Boktryckeri Aktiebolag (= Göteborgs Högskolas
                 Årsskrift XLIX).

Stüber, K.
   2002   *Die primären s-Stämme des Indogermanischen.* Wiesbaden: Dr. Ludwig
                 Reichert Verlag.

Thompson, D`A. W.
   1947   *A Glossary of Greek Fishes.* London: Oxford University Press.

Thomsen, V.
   1890   *Beröringen mellen de finske og de baltiske (litauisk-lettiske) Sprog. En
                 sproghistorisk Undersøgelse.* København: Bianco Lunos Kgl. Bogtrykkeri.

Thumb, A. - Scherer, A.
   1959   *Handbuch der griechischen Dialekte.* Bd. II. Heidelberg: Carl Winter
                 Universitätsverlag.

Toporov, V.N.
   1975   *Prusskij jazyk.* Moskva: Nauka.

Vaan de, M.
   2008   *Etymological Dictionary of Latin and the Other Italic Languages.* Leiden:
                 Brill. (Leiden Indo-European Etymological Dictionary Series, 7).
                 http://www.brill.nl/default.aspx?partid=227&pid=24131

"Swadesh lists" of Albanian Revisited and Consequences for Its Position in the Indo-European Languages

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In the last decade, several scholars claimed to have finally solved the subgrouping of Indo-European by new lexicostatistical attempts. The public of course was not able to perceive the questionable outcomes, of which the different and idiosyncratic positions of Albanian are particularly conspicuous. One reason for this is the inadequate methods, simply copied from bioinformatics (cf. Holm, H. J. 2007). That defective data may contribute a great deal to these mistakes, is now first demonstrated here by analysing the Albanian part of three representative lists frequently employed in these studies: Thirteen percent of the data on these lists contains errors and this mixes inextricably with the stochastic dispersion. Seventeen new etymologies are proposed; however, about thirty per-cent of the list remains unsolved or questionable. Moreover, the high amount of differently changing replacements in Albanian is one more compelling argument against the rate assumption in glottochronology.

Introduction

In the last decade, mathematical methods from the field of bioinformatics have been employed to "enlighten" the subgrouping of Indo-European. The low suitability of these methods was reviewed in Holm (2005, 2007).

These computations rely linguistically on presumed cognations in the employed data, which, therefore, deserve a similar critical survey. This, however, has only

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[1] I owe thanks to Xhelal Ylli (YL) for his valuable comments and corrections from the view as a native speaker, and in particular to Prof. Rolf T. Ködderitzsch for his repeated corrections and grammatical hints. Of course, any mistakes remain my own responsibility.

scarcely[2] been done.

The aim of this synopsis cannot be to revisit anew all studies from the last 150 years, but rather to evaluate those arguments that have survived into the newer etymological dictionaries, and then cautiously try to find decisions. The results will be confronted with three representative Swadesh lists, all so-called meaning lists, with the corresponding lemmata entered for every language, here Albanian. Note that the candidates – according to the rules of these representatives of lexicostatistics – decide only the question of whether any responses in a meaning (or character) line are cognates or not.

The first candidate is the often employed "COMPARATIVE INDOEUROPEAN [!] DATABASE" by Isidore Dyen (1997). However, in his list of English – the author's mother tongue – alone, Sheila Embleton (1986:100) exposed 16 entries as loans from Nordic languages, of which seven were misjudged[3] as original cognates in Dyen (1992). Albeit this should raise considerable mistrust, three teams of non-linguists used this list for several international widely published lexicostatistical studies and even the questionable glottochronology (regarding the latter, cf., e.g., Huld[4] 1984:15, and, in more detail, Holm 2007:168ff).

Concerning the next test list, employed by Ringe, Warnow, and Taylor (2002), Holm (2007:206) wrote, "RWT place much emphasis on establishing their own professional, reliable list, in terms of historical linguistics[5]." We will see. Regrettably, the data of Ringe have only been published in 2007, on the internet, where it is still difficult to fathom the coded entries for many meanings back to the lemmata of the word list.

The third list is that of the late Russian linguist Sergej

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[2]In 2007, a similar study appeared on Old Irish as a PhD by Martina Lucht.
[3]Even a short glance into *The Concise Oxford Dictionary* would have helped.
[4]"I have not used Swadesh's list because of any faith in the glottochronological dates that are obtained from it; indeed, the two tacit assumptions of glottochronology – that language change occurs as a continuous, logarithmically definable process irrespectively of cultural changes, … seem questionable to me."
[5]In particular for his employment of the oldest available sources.

Starostin[6], a leading representative of Swadesh-type glottochronology.

Because it would exceed the time and available printing space, this study will be limited to the amount (=100) and choice (meanings) of the latest updated Swadesh list[7] (1971:283), a standard in those lexicostatistics. Out of the many languages (94 in Dyen, 24 in Ringe, 97 in Starostin), we chose Albanian, because of its radically different positional outcome in the computations.

The entries consist of three parts:

First, the header, which starts with the alphabetically ordered concept of the 100-word list of Swadesh or Dyen (of the latter in their ORIGINAL CAPITALS, followed by the number of the Swadesh list in brackets). In some cases, there are gaps in one or the other list, due to changes between an older version of Swadesh's 200-item list used by Dyen[8] and the last one used here.

Within the header there follows, according to the rules of mainstream lexicostatistics, the primary response to the meaning in Albanian. This response is often ambiguous, because the choice between Geg (or Gheg, the northern) vs. Tosk (the southern dialect) for standard Albanian has not been settled yet in many cases. Thus, sources based simply on "Albanian" in general (e.g., Ringe, Starostin, and LIV) tend to raise difficulties. Frequently cited authors are given by their acronym in SMALL CAPS, which can be traced in the references. Where a dictionary contains more than one equivalent, the first is considered the primary one and marked as "1.", etc.

Still in the header, there follow the attestations in the lists under review, beginning with the unambiguous ones of "The Indo-European wordlists" by D. Ringe[9]

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[6]By courtesy of his son, Georgij Starostin, by e-mail, November 25, 2007.

[7]Verbs are only marked in Dyen (with to), regrettably not in Swadesh and Starostin.

[8]Because Dyen used a former 200-Word list of Swadesh, who, however, cancelled many words in later versions, we used additional words of the Dyen list, used in former Swadesh lists, which only totalled 97 words.

[9]Gives the verb forms in the 3rd pers. sg.

(RI#[10]), and S. Starostin (ST#), with their respective list numbers. The attestations of Dyen's list (marked by their ORIGINAL CAPITAL LETTERS[11]) contain five Albanian dialects[12], cited by the abbreviations T.(osk), T(osk)Og.(rén "TOP"), G. (Gheg 1914), Kor.(inth Albanian), Sic.(ilian Albanian), Alb. = addenda after 1992.

Secondly, the etymological options follow as a bulleted list. These were checked[13] in particular by newer literature, beginning with the thorough[14] Huld 1984 (HU#). This study lacks 10% of our lists, and I had to transpose his 6-laryngeal notation into the modern 3-fold one. He took his forms from the then official *Fjalor i gjushës shqipe* ("FGS"). In every case I checked B. Demiraj 1997 (DM#), the most reliable source, in modern laryngealistic notation; this one, however, covers only half of the material by avoiding questionable cases and loans[15], and additionally had to be cross-checked with the updated and thereby often differing online version in the Leiden IEED project (the latter noted "DM-O" for "o"nline). In fact, the most complete work is the "Albanian etymological dictionary" by the late[16] V. E. Orel 1998. Orel gave abundant sources; however, their position is often concealed, he seldom dealt with their arguments[17] (e.g., p219 lesh), and avoided giving PIE forms, namely of Pokorny, thus evading laryngealistic traps. His abbreviation "Rom" for Romance had to be changed to "Rmc" in order to avoid confusion with Romanian. In every case, I tried to trace back the PIE reconstructions to either roots/bases of Pokorny 1959 (PK#) or, for verbs, of Rix et al. 2001 (LIV#), a methodologically helpful step too often omitted

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[10] "#" here placeholder for all numbers.

[11] Due to the original work with punch cards, also responsible for the only use of lower ASCII.

[12] The details can be traced in Dyen et al. (1992).

[13] It cannot be and is not the aim of this short review to recapitulate the entire history of all the scholarly work of the past, which is generally amply taken care of in the adduced newer studies.

[14] Except his frequent off-putting, because uncommented, citations of the PK IEW.

[15] Therefore, in cases of loans, the absence of entries in DM is not noted.

[16] Died 5.8.2007

[17] J. Matzinger (1998) gave some corrections in his review.

by the above experts. This is not in respect of the Albanian entries, where Pokorny unfortunately relied too often on questionable sources, which are dealt with and corrected in Huld 1984; moreover, Pokorny was sometimes unaware of self-contradictory entries. All entries were tested for possible loans in all directions, thus from Latin and Italian, referring, e.g., to Haarmann 1972[18] (HAL#) and 1990 (HAG#), and to Bonnet 1998, further from Greek, from South-Slavonian (referring e.g., to Ylli 1997)[19], and from Turkish (checking e.g., Boretzky 1976). The lemmata adduced by Dyen 1997 show that he seemed not to have used any of these sources, which was admittedly his philosophy: to prove that by his method it would be possible to find the correct relationship of languages by use of simple dictionaries.

Third and finally, the decision: Either "Yes" = the Albanian response is regarded as an Indo-European cognate; or "No", including a mark for its suspected reason, where No(C-) means that there are cognates (C) outside Albanian, however not under exactly this meaning (-); No(L) marks a loan. Question marks stand for too-uncertain or debated cases. This decision is then compared with those in each of the three databases[20]: Dyen with his cognation code[21] (– DY#), followed by Ringe, and Starostin, all noted in their already mentioned acronyms.

In some cases, there follow parts in reduced font size, for responses, where the Albanian differs in the sources.

Further Abbreviations: dem.(onstrative), FN (footnote); {f.,m.,n.} the genders; iso.(lated), prf. (perfect), pres. (present), ptc. (participle), sg. (singular); Languages: Blg. (Bulgarian), Grm. (German), Gmc. (Germanic), Gre.(ek), Hit.(tite), IE (Indo-European), Itn. (Italian), Kel. (Celtic), Lat.(in), Lit.(huanian), OCS. (Old Church Slavonian), Phr.(ygian), Rmc.(Romance); Rom.(anian); SHr. (Serbo-Croatian < '*srpskohrvatski*'), Skr.(Sanskrit), Sla.(vonian), T.(osk), Tok.(harian/

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[18] Rather a word-field study. His index numbers in italics, distinguishing these from page numbers of the other cited authors.

[19] Svane, Gunnar (1992): Slavische Lehnwörter im Albanischen, does not contain relevant entries.

[20] To control these decisions, the reader has to go directly to the references, which cannot be reprinted here.

[21] In this work, of course, transposed into a short text, explained in detail in the attachment.

Tocharian), Trk. (Turk), QIE (Quasi-IE of B. Demiraj); O(ld)-, P(roto), S(outh)-, V(ulgar)-.

Symbols: * unattested reconstruction; ** fake reconstruction; ~ similar, with marginal differences; / also, variant; before | after. Only in citations: [insertion by this author].

The Data and their Assessment

ALL (Sw9) Adj.: **gjith**|ë,a. = RI1, ST1. DY: G., Alb. GJITH; T., TOg. GITHE.
- (1) Possibly with PK902 [2.]*sem-* 'one, entire' > *sem-ko*: HU69 equates the rising of em|s > i|s with that in *mish* 'meat', however, finds a difficulty in the voiced reflex /-ð/ in one (Ukrainian) diaspora form, which should be secondary. Nevertheless, OR136 also clings to this /-ð/, explaining it by an alleged IE *-ĝho-*suffix, only questionably seen in Arm. *ez*, however, unparalleled in Alb.
- (2) Hardly from PK282 [3.]*ei-*, most times dem. pron.: In DM-O(188) indirectly referred to by noting [Hom.] Gre. ἴα 'una', via > IE *sih_2-ko-* > PAlb. *śīθ-* 'each, whole'; this reconstruction, however, leads phonetically rather to
- (3) LIV544 *sh_2ei-* 'bind together' + *ko*, which would also match the semantics.

  Yes(C?+) – DY008, and ST "iso.", for the old solution (1), where both overlooked their SW-Ira. cognates: Doubtful. Only because the latter are not contained in RI, thus iso.: a weak OK.

ASHES (Sw83): **hi**|ri; G. hî|ni. = RI4, ST. DY: G. HINI; T., TOg. HI. · DM no attempt, the record entry "p398" is an orphan.
- From PK917 *$skih_1$-n* 'shine, whitish'' (also > OEng. *scīnan*, Lat. *cinis* 'Ashes'), > PAlb. *skino*-: so HU74; OR147 < PAlb. *skina*. Today no cognates for 'ashes', thus:

  No(C-) – DY010, RI4, and ST "iso." = all OK.

BARK (OF A TREE) (Sw27): Ambiguous standard! YL 3., QE single entry:
  1. lëvozhg|ë,a.; ~ (YL 2.) **lëvor**|e {f.}. DY: T. LEVEZHGE.
- Hardly reshaped loan < Lat. *velārium* 'covering, screen', of course neither contained in HAL nor BON.
- Also hardly from LIV290 *h_2uer-* 'to hang (intr.)' > Alb. *vjerr* 'to hang': As in OR511 after half a dozen cross-references

> OR226 *lëvozhgë* < *lëvore* 'peel, skin, rag'; semantically too different. Therefore, if we correctly

- reconstruct *lëvozhgë* < IE **leu̯eHg^{uh}-ske*, this should be an Alb. extension of PK681 **leuH-*, with the semantically close Gmc. **lawa* > *Lohe* 'tan/ abgelöste Rinde als Gerbmittel'; the word might be influenced by SHr. *ljuska* 'peel, crust, shell', probably from the same root. No close semantic matches, thus:

No(C?-) – DY001 „unique": so far OK.

  2. (YL 1.) **zhap**|ë {f.} 'rind, bark, leather'. DY: G., Alb. 1. ZHABA (typo! zhablë,a {f.} 'toad'!). · Missing in QE, HU, DM, OR, YL! In early Alb., the sound law *s̱* > *sh-* ruled not only the loans from Lat., but also - up to 1000 AD - those from Sla. (YL317); analogically we should accept the voiced variant Sla. *z* > Alb. *zh-*; if so, the source could be Blg. запари 'wrinkle' (in YL291 > Alb. *zapëri* 'id'-).

No(L?). – DY207 confused with next:

Besides two semantically false entries in DY:

  – **cip**|ë {f.} 'thin (piece of) skin' (see there). At – DY001 TOg. CIPE: Mistaken.
  – **kuj**|e,a 'crust of bread' (!), obviously referring to this, DY: G., Alb.2. KUJA. – DY207 both (!) doubtful to derivates of PK940 ^{4.}**(s)ker-to* (Slav. *kora*, Ind. *chal*): Minor mistake. This latter might after BON209 be cognate to the next:

Beside **3. kore** (HU after FGS 1954: korë, now out-dated); though single entry in SI (e druret!), it is rather used for 'crust (of bread)'. Only employed by ST3. – Missing in HU, and DM. BON209 considers a loan < Lat. *corium* (see, however SKIN). Better: YL129, OR191 'crust, bark' = Loan < SSlav. (Srb., Blg.) *kora*: No(L), thus: – ST so far OK. Remains a dubious response.

Beside **4. shkëlbozë**. Only brought in by RI8. After OR419 'bark', derivation in –*ozë* < [PK926] **skel(H)-b* 'half-opened' > e.g., '*silique*' [the –*b* elsewhere only Gmc.]; questionable. Loan < SSlav? [cf. Rus. *skal(in)á* 'birch bark']. Isolated. No(?) – RI dubious, missing the standard.

Beside: **5**. **labë** 'Rinde, Kork' < **lHub^h-os* < PK690 **leub^h*, a phonetically good match, not noted in any of the lists.

BELLY (SW49): **bark**|u {m.}. = RI10, ST4. DY: G., Alb.1. BARKU, TOg., T. BARK.

- (1) Not from PK130 ^{1.}**bher-* 'tragen/to carry': So HU0; similar OR18 via < PAlb. **baruka*, obviously inspired by [Ill.] *βαρ(υ)κα*; however, rightly doubted by DM92 as all problematic, and now expelled online. All overlooked the direct, completely unproblematic, derivation

- (2) from (the extension?) PK110 **bharek̑-^{u}* 'vollgestopft/

jammed'.
No(C-) – Dʏ005, Rɪ, and Sᴛ "iso." = all so far OK.
Beside Yʟ 2. **mull**|ë,a 'belly, stomach'. Dʏ: G., Alb. 2. MULLA. Dʏ
   without further notice.

BIG (Sᴡ5): i/e **madh**|e. = Rɪ11, Sᴛ5. Dʏ: Sic., TOg., T. I
   MATH, E MADHE; G. MADH.
   • From Pᴋ708 [reduced grade *$m\mathring{g}(e)h_2$] > *madha*: So Hᴜ88 in
      spite of difficulties with the vocal. Dᴍ42 and 250 tried to
      explain the /*e*/ (similar Oʀ240) by "schwa secundum",
      however, changed in Dᴍ-O completely to zero grade
      *$m\mathring{g}(e)h_2$.
Yes(C+) – Dʏ200 with Greek ML MEGALOS = Rɪ and Sᴛ: all OK.

BIRD (Sᴡ20): **zog**|u. = Rɪ12, Sᴛ6. Dʏ: G. ZOGU; TOg.
   ZOK; T. ZOG.
   • Hardly from [Pᴋ86] *$h_2u(e)i$- 'bird': So Hamp 97ff, under
      "lex Hamp" and even more far-fetched assumptions, p103
      refuting the following solution as "unmotivated":
   • Pᴋ409 *$\hat{g}^h\bar{a}g^uh$ 'Junge eines Tieres, bes. eines Vogels', also >
      Farsi زاغ <*zāq*> 'chough' (not 'bird'!), unnecessarily
      declared as borrowed > Arm. ձագ <*jag*> 'young of
      animals'. Influenced by this suggestion, Hᴜ135 amplifies
      the FGS by giving '(young) bird', and declares it as
      'culture word'; copied by Oʀ525 as "oriental
      Wanderwort", though it is in no way a typical one and
      thus not convincing at all, only backed up by an incorrect
      translation of the Farsi word. Dᴍ429 translates 'bird, in
      particular small one, also young of animals, nestling',
      and avoids the otherwise wrong anlaut by inserting a /u̯/,
      via < Hamp 97ff, *$\hat{g}^{(h)}ueh_2$-G < "Pᴋ909" [typo], which also
      takes account of the Arm. word and is the more justified,
      as Djahukian (1990) attested all Balkan languages a
      tendency to labialization. The seme[22] 'small' is elsewhere
      only attested in Dʜ1664, e.g., *zog pule* 'Küken/ chick', *zog
      pate* 'Gänseküken', not in other adduced dictionaries.
      Outside Alb. not primary response for 'bird', thus:
No(C-) – Dʏ004, Rɪ, and Sᴛ "iso." = all OK.
   Not: shpes|ë,a; **shpesëri, shpendë, shpend**|i {m.} 'fowl, poultry'. Dʏ:
      G., Alb.1. SHPENDI, SHPEZA. – In Hᴜ168 as homologous derivation
      < Pᴋ825 6. *$pet-ont\bar{\imath}$ 'fliegend/ flying' with the meaning 'bird' in Kel.
      dialects. Contrasting: Oʀ429, opaque (why 'down'?), as derived

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[22] Elsewhere sememe, semanteme: smallest semantic component.

from pendë 'feather', thereby loan < Lat. All this remains questionable, note Grm. Spatz < Sperling 'sparrow'. – DY004 takes no further notice.

BITE (Sᴡ56) Verb: **kafshoj**, kafshon. ~ Rɪ13, Sᴛ7. Dʏ: G., Alb. KAPSHOJ; TOg. KAFSON (AOR. KAFSOVA). T. ME KAFSHUAR. · Bonnet no entry.
- (1) Not from the formerly adduced Pᴋ931 **(s)ke/a-p* 'to cut', which would neither account for the /-*sh*-/ nor the /-*f*-/.
- (2) Albeit the concept 'bite' is contained in all Swadesh lists, Hᴜ79 cites only KAFSHË 'animal' [better, 'pack animal'], loan < Lat. CAUSA 'thing', not distinguishable from the homonym for 'reason' (HAL*88*, cf. Dᴍ72, 210). Thus remains, also semantically far more convincing:
- (3) Loan < Lat. *capessere*, possible in spite of Petersen 1905 (cf. HAL: p13): so Oʀ164, citing HAL here, however, without mentioning his better proposal:
- (4) HAL*78* loan < Lat. *captiare* 'beißen, verschlingen'. In any case:

No(L) – DY004, Rɪ, and Sᴛ (L) "iso." = all OK.

BLACK (Sᴡ91): i **zi**, e zezë. ~ Rɪ14 zi = Sᴛ8. Dʏ: G., TOg. I-ZI, T. I ZI, E ZEZE.
- Hardly with Pᴋ483-5 **g^{u}h$_1$(udh-)* 'Ekelhaftes?/unlucky, mourning' > PAlb. **džedi* > *zi* 'black, mourning': So Oʀ524: Semantically and phonetically questionable. Also far-fetched:
- Nor from [Pᴋ469 **gueid(h)-* ~ 'fluid filth?'] > PIE **guidh-s*: Hᴜ134 "If the semantics … are acceptable." Rather not. Presumably
- from [Pᴋ488 **gu^{h}Hi-d* 'light, grey coloured', > e.g., Gre. φαιός 'brownish, grey', and PAlb. d^{z}īd(i-): So Dᴍ427, albeit uncertain. Elsewhere deviant meanings; therefore:

No(C-) – DY011 and Sᴛ (C-) "iso." = OK. – Rɪ expelled.

BLOOD (Sᴡ30): **gjak**|u {m.}. = Rɪ15, Sᴛ9. Dʏ: G., Alb. GJAKU; TOg. GAK; T. GJAK.
- From Pᴋ1044 **s(u)ek^{u}o-s* ~ 'Pflanzensaft/juice of plants' > *sok^{u}o-* > PAlb. *śak:* So Hᴜ67; Dᴍ-O(181); Oʀ129 via < PAlb. *saka*. Elsewhere deviant meanings, therefore:

No(C-) – DY007 and Sᴛ (C-) "iso." = OK. – Rɪ expelled.

BONE (Sᴡ31): **1. kock**|ë,a {f.} (QE, Sɪ). = Rɪ17. Dʏ: T.,

TOg. KOSKE.
- Loan < Blg. коцка (Yʟ121); similar Oʀ *koc*, as loan < PSla. **kostъ*. Missing in Hu.

No(L) – Dʏ007 iso.: OK. – Rɪ expelled.

2. rrasht|li {m.} 'bone'; **rrasht**|lë,a {f.} '(skull) bone' (BFU). Dʏ: G., Alb. RRASHTI.
- (1) Hardly composed of *rrë* + *asht* for 'skull bone': So Çabej (II: 101[23]), and Dᴍ82, who skipped this possibility online, where only *asht* appears (cf. 3. below).
- (2) Possibly from [Pᴋ1181] [2.] **ureh₂ĝʰ*- 'puff, beat'?? > Att. Gre. ῥάπτω 'beat', and Alb. *rrah* 'to beat', as verbal noun > PAlb. **wrag-šta*: Oʀ379 assumes semantically a source 'hammer bone', referring to Lith. forms, rather meaning 'hollow' or 'bent' instead of the proposed connection with Lit. *káuti* 'beat'; the adduced Gmc. forms around *bone*, etc., are far from settled, and the case remains questionable.

No(C?-) – Dʏ202 = not acceptable his doubtful connection with Dʏ201 (~ Sla. KOST); doubtful with Dʏ200, containing, with others:

3. asht|li {m.} (BFU, Dʜ43, not Sɪ). From Pᴋ783 **h₂ost(h₂)* > PAlb. **aśt*. So Hu38 along with the FGS, with many dialectal forms; Dᴍ82 as {m.}; similar Oʀ11.

Yes(C+): – Dʏ200 Sic. AST, here also – Sᴛ10: both OK, however, not primary response.

breasts (Sᴡ51, note the unambiguous plural; absent in Dʏ): **gji**|ri; G. gjî|ni {m.} 'bay, breast, tit, bosom'. = Sᴛ11; ~ Rɪ18 gji, sisë.
- (1) The experts refer with empty remarks, however no decision, to Lat. *sinus*: Hu153 via < **sínos* "cf.", Oʀ135 "identical"? Similar Dᴍ56, only hidden between sound laws: "uralb. **śin-*" should be the regular source, for which, however, no older root is detectable. A possibility:
- (2) From Pᴋ481 **gʷ̯iieh₂*- 'string' is derived > Skr. jyā́ 'string', borrowed as mathematical term into Arab. as جيب (jība) 'pocket, wrinkle', translated[24] as such into the (yet) unetymologized Lat. *sinus*.
- (3) A loan from Lat. *sinus*, however, would have ended in Alb. **shinu, and would not display this broad scale of meanings.
- (4) A derivation from Pᴋ990 **sp/steno* 'Zitzen/tits' would

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[23] Friendly hint from Xh. Ylli.
[24] Translated into Latin by Gherardo da Cremona (1114 - 1187).

require either, a) an Alb. simplification at the border between *steni (> Gre. στηνίον, Arm. *stin*, normally Alb. **shten-), and NW-IE *speni- (> OIri *sine*), to **seni, which is improvable; or, b) a loan of early Kel. into both, Lat. and Alb. during the Celtic expansions around the fourth and third century B.C.

No(L?) – Sᴛ, unaware of the ambiguous meaning of his 'breast' with (3) = dubious. – Rɪ expelled.

BURN (verb intr.) (Sᴡ84): **djeg**/digjem (Aor. u/ dogja). = Sᴛ12. Rɪ20 digjet. Dʏ: TOg. DIGEM (AOR. UDOGA); G. DIGJEM (DJEG); Alb. DJEG.
- With Lɪᴠ133 *dʰegᵘʰ-e 'id.' > PAlb. *deg-: So also Hᴜ53; Dᴍ138. Oʀ68 via PAlb. *dega.

Yes(C+) – Dʏ204 = cognate with Slav., Iri. = Rɪ and Sᴛ: all OK.

CHILD (YOUNG) (skipped in Sᴡ later): **1. fëmij**|ë,a {original f., today m.: Dʜ280}. Dʏ: Sic. FEMIJ; G., Alb. FEMIJA ~ Rɪ see below; Sᴛ no entry.
- Loan < Lat. *familia*: Hᴜ64; Oʀ95; HAL*209*> Alb. *fëmilë*.

No(L) – Dʏ009 iso.: OK.

Beside **foshnjë** {f.} 'Säugling/infant'. Dʏ T. FOSHNJE, TOg. FOSNE. Oʀ102 G. *foshi* 'infant'. Neither in Qᴇ nor Hᴜ. – Dʏ015, iso.: So far OK, superficial entry.

Qᴇ: **2. kalama**|ni {m.} 'kid up to 9 years'. – Rɪ21 iso.: Acceptable, OK. Narrowed semantics!

Qᴇ: **3. vogëlush** 'small child' (cf. entry SMALL). Too different: **çilim i** 'baby'.

claw (Sᴡ45, not Dʏ): kthet|ër,ra {f.}. (sharp, hooked, e.g. of lions, talons of falcons).
- All from the root Lɪᴠ319 *ḱeh₃-(i̯-) 'schärfen/sharpen', either
– after Oʀ200 via PAlb. *tsā(i)nja [?] > *thyej* [?] 'to break [?]' > *k-thej* [?] 'to turn [?]', which appears only semantically somewhat confused.
– Dᴍ395, DM-O under k(ë)thap 'hook, claw' supports forms with –p-determinant, given in Pᴋ543 *ḱoipo* 'spike', e.g. > *thep*.

Yes(C+). However, because 'claw' unambiguously refers to 'nails' of animals, all list authors miss the desired tight meaning:

Semantically different: th|ua,oi '(finger)nail': Hᴜ120 reconstructs < PIE */ḱeEn(T)-s/, not mentioning Pᴋ567 *kent* 'stechen, Nagel'. – Rɪ22 (iso.) false 'claw'; Sᴛ13 iso. (C-) for claw (nail); though both

codings seem to be correct, both missed the correct term (the 'nail' in Sᴛ should only apply to such languages, which do not distinguish between these expressions). The Albanian cover-term for claw, nail, and hook is *çapua*.

CLOUD (Sᴡ80): **re**|ja; G. rê {f.}. = Rɪ23, Sᴛ14B. Dʏ: G., Alb. REJA; TOg., T. RE.
  - Not from Pᴋ871⁻²˙ **reug** (absent as verb in LIV509), a circulation only based on alleged PAlb. **rougi*, not explaining the loss of the dorsal; moreover, the Gmc. attestations have originated from a meaning 'to smell' (cf. Kluge '*Rauch/smoke*').
  - Possibly from Pᴋ853 ⁵˙* *reh₁*- 'dark' (with different extensions Pᴋ334 'red-brown colours, Pᴋ857 'darkness': Dᴍ-ᴏ(344) only uncertain < PAlb. **(e)reN < *h₁regᵘ̯-*(s); connected with Alb. *érrë* 'darkness', seen in Buzuku *er(r)ë* '*nūbēs*'; the meaning 'cloud', however, appears nowhere else, nor the requested /-N/.
  - Questionably under the sememe 'wet, flow, rain' as variants of a root **er-*, doubtful LIV498? **reĝ* 'fließen, tropfen (?)', alone based on Alb. *rrjedh*, 'flow' (~Pᴋ857 typo *rrjeth*). The *rrj-* and semantics (cf. the Roman aqueducts!) point to loan of Alb. *rrjedh* < Lat. *rigare* 'irrigate'.
  - It remains either
  – without /i/: Pᴋ336 ²˙* *h₁ers*- 'to flow', also > Alb. *resh* '(it) falls, showers' (not followed by Dᴍ345, therefore missing at the corresponding LIV241), mostly extended by 'snow, ashes, rain'; *reshje* 'precipitation'; also here, with ablaut ros > Lit. *rasà* 'dew': so Hᴜ107 with doubts, and again the off-putting (see above) entry IEW 872 **reu(g)-*; or – my choice:
  – To LIV305 **h₃reiH*- 'wirbeln, fließen' +n, > PAlb. **rina* (cf. OInd. *riṇā́ti*, Sla. *rinǫ ti*; Ill. ῥίνος 'cloud', +s in MHGrm. *risel* 'rain'); Pᴋ330 > Alb. *ri-të*, adj. 'wet': so Oʀ366 via singularized pl. < **ri.*
    No(C-) – Dʏ002 ~ Sᴛ "iso." = both OK. – Rɪ23 expelled.

COLD (Dʏ: WEATHER) (Sᴡ94, adj.): i/e **ftohtë**. = Sᴛ15a ~ Rɪ24 ftohët {noun}. Dʏ: G., Alb. FTOFT, FTOFET; TOg. FTOTE ~ T. I, E FTOHTE.
  - Hardly from [LIV616 ²˙* *teh₂*] 'melt, thaw' > *awa-tāja*: So Oʀ105 under *fto|h/f* 'to make cold' as verb with negative prefix *awa-*: Phonetically and semantically (as 'not melting') not convincing. Better:

- From LIV 629 $^{1.}$*tep-* 'to be warm/hot' > {fientiv} *t_ep-éh$_1$* > PAlb. *tpo-*, in two possibilities:
- Already PK1069-70 > *$vëtëp$-sk̑o*, entwärme/dis-warm', in HU65 *ftohët*, declaring *f-* as the correct negative, privative prefix; where DM173 under *ftoh* 'to cool', remains undecided between this prefix solution or a
- metathesis *tpē-(h)* < *tep* 'warm' > < *ptoh*, and inter-Albanian change of meaning to the contrary.

In any case, for elsewhere with different meaning:

No(C?-) – DY008 and ST "iso." = OK. – RI expelled.

COME (SW66) verb: **vij,** vjen; (aor. erdha, ardhçë; T. me ardhur, G. me ardh). = ST16a, RI25. DY: T. ME ARDHUR; Sic. VIN (PRET. ARTH -?- sg.), TOg. VIN (AOR. ERDHA); G., Alb. VIJ (INF. ARDH).
- Perhaps from LIV232 *h_1ei-* 'gehen' via u̯ {prothesis}-ō {preverb}-: so Matzinger 2005:100, referring to former work of Klingenschmitt; this root, however, appears very far-fetched and over-employed, since the same root is also adduced for responses of WALK, GO. Mainstream:
- Loan < Lat. *venīre* 'to come' (so HAL*629;* HU129; OR508; BON298 < [oblique forms of] Lat. *uen(is, it)*), because Alb. **$vënen$* would have resulted > Tosk **$vëren$*, as Matzinger (ibid.) correctly objects.

No(L) – DY208, ~ ST loan: OK(?). – RI expelled.

DY connects the aor. forms too doubtful with his DY209 (Gre. ERCHOMAI), ἔρχομαι < PK326/8, LIV238 *$h_1er(ĝ^h)$-*.

DIE (SW61) verb: **vdes** (aor. vdiqa, inf. Geg me vdek; Tosk me vdekur). = RI29, ST17a. DY: G., Alb. VDES, (AOR.VDIKJA, INF.VDEK); T. ME VDEKUR; TOg. VDES (AOR. VDIKA).
- (1) Hardly from LIV620 *tek^u-* 'laufen, fließen/run, flow' (also > Alb. *ndjek* 'follow, pursue' [?]) > iter. caus. *au̯-tok^u-ei̯e-ti* 'leaves': so cited from HU124. Similar OR496 via < *awa-takja*. Not followed by DM288, who mentions no relation to *vdes* here nor has an entry for it. Formally and semantically better:
- (2) From LIV150 *$d^h g^{u̯h}_- ei̯$-* 'hinschwinden, sterben/pass away, die', > *$d^h eg^{u̯h}_- (e)i̯o$* > PAlb. *v-dez*, dissimilated against *ndez* 'to lighten'; cf. also > Att. Gre. φθί-νω 'to die'. In this case:

Yes(C+) – ST (2): OK; vs. – DY004 iso.: Wrong in any case. – RI expelled.

DOG (Sᴡ21): **qen**|i {m.}. = Rɪ32, Sᴛ18a. Dʏ: G., Alb. KJENI; Sic. KEN, T. GEN; TOg.1. KEN.
- Not from Pᴋ632 **k̂úu̯ōn-*, because an > PAlb. **kōn should have lost the -*n* (Dᴍ55, g), or rhotacized, if not so. Therefore:
- Loan < Lat. *canis* 'dog' presupposes that the ending has been lost before rhotacism: Hᴜ107, Jᴀ192, Oʀ356; if not so, we must assume a late loan < Itn. *ken, or neighbouring Rmc. dialects (Bᴏɴ115, 182).

  No(L) – Dʏ009, Rɪ, ~ Sᴛ loan: all OK.

  Besides Yʟ: Tosk **busht**|ër,ra. Dʏ: TOg.2. BUSTER. Seldom, because of pejorative shift, cf. *bushtër* 'Hündin/bitch' (Dʜ116).

DRINK (Sᴡ54) verb: **pī** (Geg inf. me pi). = Rɪ33, Sᴛ19a. Dʏ: T. ME PIRE; Sic. PI, TOg. PI, AOR. PIVA, G. PI, PIVA.
- LIV462 **peh₃(i̯)-* 'to drink' > pres. **piph₃é* > **pib(h₃)e* > **pibe* > ?PAlb. *pii: so Dᴍ318; the reservation of Hᴜ103 against Lat. *pōto* hits a secondary form. Oʀ324 via supposed PAʟʙ. **pīja*, (in LIV corrected to *pī-i̯e*, after a newer, only Bal-Sla. *i̯e*-pres., however not noting the long *ī*).

  Yes(C+) – Dʏ004 with the due forms in other languages, = Rɪ, and Sᴛ: All OK.

DRY (sᴜʙsᴛᴀɴᴄᴇ) (Sᴡ99) adj.: i/e **thatë**, to the verb thaj. = Rɪ34 ~ Sᴛ20a. Dʏ: TOg., G., Alb. THAT; T. I, E THATI.
- (1) Lubotsky[25] regards a PIE adj. **h₂sus* 'dry' as primary, belonging as prf. ptc. to PIE **h₂es* (~ Pᴋ68-9 **h₂es(d)* 'to burn'); in LIV255, however, this is only acknowledged as *~h₂ed-* 'to dry up' > **h₂d-ié*, > Gre. ἄζω 'to dry', with no Alb. form. Contrasting:
- (2) From the adj. Pᴋ880 **saus/[h₂]seus* 'dry', we can derive the Alb. verb > **thaus-ni* > Alb. *tha-(n)j*: With Hᴜ117, the adj. with late suffix *–të*. Similar, however confining to the verb, Dᴍ-O (updating the different print version Dᴍ392), uncertain about the position of the h_2, and "Only under the assumption of an old regressive dissimilation of the two *s.*", with Gre. *au̯a*. Without such reservations, Oʀ473, as derivative of *thaj* 'to dry', via PAlb. **sausnja*. Nothing of this is mentioned in the corresponding LIV285 'to become dry'. Obviously, both entries are related, thus

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[25] A study in particular refuting a PIE /*a*/.

Yes(C-) – Dy003 iso. = mistaken. – Sᴛ with the forms in (2): OK. – Rɪ expelled.

Besides non-standard: Sic. I-TERM. Perhaps verbal adjective to QE1.: **ter,** Sɪ2. **terur**, with Dᴍ384 *ter* <= Pᴋ1078 **ters*, trans. verb 'to dry'. – Dy005 connects his Sic. form with Nordic, seems OK.

EAR (Sᴡ39): **vesh**|li {m.}. = Rɪ37, Sᴛ21b. Dy: Sic., TOg. VES; G., Alb. VESHI; T. VESH.

- From Pᴋ785 ^{2}·[**h$_2$(e)us-*] 'ear' > dual **h$_2$(e)us-ós-ih$_1$* > PAlb. **(a)uaś(ī)* > umlaut of /*a*/: So Hu127 **/Hu-/* > /*ve-*/; also Dᴍ415 (clearer Dᴍ-O); ~ Oʀ501 via PAlb. **wausi-*.

Yes(C+) – Rɪ, and Sᴛ: OK. : – Dy002 mistaken, by connecting the Alb. exclusively with his Ira. forms, which may belong to a root LIV200 ?**g$^{(u)h}$eu̯s-* 'to hear'.

EARTH (soɪʟ) (Sᴡ79): **1. dhe**|lu. = Rɪ38. Sᴛ22 de [!]. Dy: TOg., T.1. DHE; G. DHEU.

- (1) Hardly from Pᴋ244 **dhei̯ĝ^h-* 'to form of clay etc.', because of too-far-fetched semantics; thus only "perhaps" Hu57, 147, with compensatory lengthening for the lost velar in most dialects. Rather the suggested option is
- (2) Pᴋ414 [**d^{h}éĝ^{h}e(h$_3$)m*] > *(d)ðōm* > *ðe^m*: Dᴍ155 with early loss of the /-*m*/ to account for the absent nasalization in Geg; for the same reason, Mᴀʀ233 assumes an intermediate *(d^h)ĝ^{h}ōs*. Neglecting this problem: Oʀ80 via PAlb.**dzō*. The Gre., Ill., and Alb. forms suggest a Balkan-IE *ĝðˠ^{h}ō-* (cf. Pᴋ414, bottom).

Yes(C+) – Dy200 with many cognates = Rɪ38-1 and Sᴛ (though typo): OK.

2. tokë {f.} 'earth', < Sla. **tokъ* 'threshing floor' (Oʀ459); Dy: T.2. TOKE, without further notice.

EAT (Sᴡ23) verb: **ha** (aor. Tosk hëngra, Geg hângra; ptc. Tosk ngrënë, hënger/Geg ngrânë, hângër). Rɪ39 ha = Sᴛ23a. Dy: Sic. XA; G. HA (INF. HANGER), TOg. HA (AOR. HENGERA); T. ME NGRENE.

- (1) Dy and Sᴛ mistakenly equate HA with Hindi *ha(na)*, < OInd. *khādati*, this – if IE at all – < **k$^{(u)}$h$_2$éd-* [LIV359], which can never give Alb. *ha*. Negative already
- (2) Hu72, 151, who also rejects the second attempt, ~ Lat. *edo* [< LIV230 **h$_1$ed-* 'id.'], for it would not yield the *h*-anlaut. Oʀ140 takes up this connection, accounting for the *h*- as an archaic rest of < -*d*- in **edóm*, copied as footnote in LIV230; both, however are not aware that an

acrodynamic pres. *$h_1\acute{\breve{e}}d$*- should not end in Alb. *ha*, but ~
**$*odh(am)$* (cf. DM62).

- (3) Hu72 himself resorts to only "possible" Lat. *aveō* <
  [copied at LIV274] *h_2eu*- 'genießen/to enjoy'; this,
  however, following DM45, would have resulted in Alb. *a-*.
- (4) This in fact unsolved situation might have inspired an
  alleged "undetected sound law"[26] Gre. φ ~ Alb. /*h*/, thus
  connected with ~ φαγεῖν 'to eat', which, however, goes
  back < *$b^{h}ag$*- (LIV65) without Alb. continuation, ~ **$*ba(g)$*.
- (5) LIV211 *$g^{u}erh_3$* 'verschlingen/to swallow' is the source
  of the above suppletive forms; ibid., footnote 5, cites an
  attestation[27] O-Geg *an-grë* 'ate', which changes the
  reconstruction of Hu147(i), *$h_1en\text{-}g_o^{u}\acute{r}h_3\text{-}Cno$*- into *$*h_2en{\sim}$*, in
  which case, following DM59, the result are the attested *ha*-
  forms; so DM297, who in turn avoids discussing the
  difficult pres. *ha*. These could then well have split into the
  pres. *ha* vs. the suppletive forms without *ha-*, while OR140
  chose the reverse order.

  Yes(C?+), – Dy200, St, both (1), clearly mistaken. – Ri
  expelled. Still open case.

EGG (Sw33): **vez**|ë,a {f.}; (Geg ve(o)|ja, also 'widow|er'). ~
RI40, St24b. Dy: T. VE, VEZE; Sic. VE; G. VEJA.
(DM157 only marginal remark).

- A phonetically possible *$a\under0020ueg_o^{u}|\hat{g}h/g$*- (cf. Pk84 and 1117-8)
  with meanings '(become) strong, increase' is semantically
  not convincing.
- Or497 infers from an alleged contrast Tosk *v(a)e* ~ Geg
  vo(e) upon a "typical" loan < Lat. *ōvum*, overlooking that
  all other loans from Lat. *ō-* result in *(h)u-* (cf. HAL, p139);
  moreover, he simply keeps quiet about Hu125, who had
  explicitly rejected such vocalism as "unique", as well as
  MAR238 with more counter arguments. Thus, with
- Hu125 VE,-JA < Pk783 [*$eh_3u\underline{i}om$*] 'Ei'. Cf. Arm. *jvoj* {Gen.},
  Cze. *vejce*.

  Yes(C+) – St: OK. – Dy006 and Ri = iso. = mistaken.

  Besides (Dy) TOg. KOKOVE, QE: *koqeve*, combination of Pk611 *$*koko$*
  'hen' + 'egg' above.

EYE (Sw40): **sy**|ri (Geg -ni) {m.}. = RI41, St25b. Dy: Sic. SI;

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[26]Holst (1998: 83f) simply equates the anlaut /*h*-/ of five Alb. forms with
Gre. ones with /φ-/, without tracing these back to IE (in this case *$*bh$*-),
overlooking that IE aspirated mediae are generally deaspirated in Alb.
[27]Klingenschmitt 1982:279f.

G. SYNI; TOg., T. SY.
- All agree with PK775 [*$h_3(e)k^u$-ih_1] as source, however, disagree upon the /y/:
- – PK775 *$ok^u i$ himself > Alb. *(sy)sii* < *asii*, is doubted by Hu113, because /ī/ would not yield "T."/y/; his only evidence, however, is the N-Tosk dialect of Berat, which may well have been influenced by the bordering Geg, and remains without result;
- – DM43 demonstrates that *ī* > *y* in labial environment, and thus can DM356 reconstruct *sy* < *tśuī*. Another labial proposes
- – OR405 via PAlb. *$atšī$-wi {dual}, after ORXVII-7 presuming Alb. /y/ in "isolated cases" to reflect PIE *ī, and declares the development as secondary. Finally BON96, FN51 as concealed definite article like in *hy,-u* 'deity'.
Yes(C+) – ST OK; versus – DY007 and RI41 iso., both mistaken.

FALL, DROP (skipped in SW 1972): **bie** (aor. rashë, ptc. rënë). = RI42, absent in ST. DY: G., Alb. BI (INF. RA, RAN); Sic. BIE (PRET. RA), Kor. BIE (AOR. RAASE), TOg. BIE (AOR. RAS), T. ME RENE.
- All authors derive the word from [LIV80] *$b^h erH$- 'to work on sth. with sharp tool', semantically 'struck > fall', following Hu3 'strike, fall' via < *$bher$-ioh_2; DM100 'to fall, to lay (down), beat'< *beri*; OR24 via PAlb.*be(r)ja*. Elsewhere deviant meanings:
No(C-) – DY011 iso.: OK. – RI expelled. Cf. also TO RAIN.

FAR (skipped in SW 1972): **larg**. = RI43, ST. hidden at end of list DY: T. LURG, Tog. LARK, G., Alb.1. LARG.
- Probably loan < Lat. *largu(s)* 'large, ample > far (away)': So HAL*305,* ~ followed by Hu85, OR214. BON357 « un adverbe roman », because of the preserved –*rg*, however, will not exclude Rom. *larg* or Itn. *largo*.
No(L) – DY005 and RI "iso." = OK.
Dyen's further entries here, Sic. GHARGHU; Alb. 2., GJAN; G. 2. GJAT; QE **gjatë** are mistranslations, in fact meaning 'long' or 'wide' (e.g., of sleeves).

FAT (SUBSTANCE) (SW32 'grease'): **1. dhjam**lë,a; var. dhamli {m.} 'fat' {noun}. = RI44, ST26b. DY: TOg. DHJAME; T. I, E DHJAMTE [!]; G.1. DHJAMI.
- (1) To avoid the objection of Hu in solution (2), OR83 declares the [N-Geg] variants *vjam* as secondary and

establishes a new source, PAlb.**dzel-mā*, from Alb. *dhallë* 'buttermilk', this after Hu57 transformed < Pk400 **glakt-* 'milk', followed by Dm-O(153) with "no certainty". Apart from the far-fetched semantics (Alb. *gjalpë* {m.} 'butter'), Alb. *dh-* < *dz-* requires PIE/ *ĝ-/*. Preferable is the old solution:

- (2) Under Pk175 **deh₂* 'to flow', where we find in all and only the three Balkan-IE languages an *-m-*derivation with the meaning 'fat, wet': Gre. δημός 'fat of creatures', Arm. *tamuk* 'wet', and Alb. *dhjamë*, however irregular (?) vocalism (unclear Rom. *zeámă* 'juice, broth'). Hu59f objects that Alb. */ja/* "can only reflect an original short *e.*", will therefore not connect the word with Gre. (see, however, below), and remains without result. Dm161 doubtfully keeps to this solution via < *ðem-*. The */a/* may have arisen by loan < Gre., where the unstressed */η/* became */ě/*, and thus (cf. Hu153) > */ja/*. Trk. *damla-* 'drop' might additionally have influenced the phonetics.

  No(C?-) – DY208 - 210 all forms iso. = RI44 ~ ST: all OK. In fact unsolved.

  2. lyrë {f.}. DY: G., Alb. LYRA. **3. yndyr**|ë,a {f.} ' grease' < Lat. *unctūra* (Bon88): No(L). – DY: G., Alb. YNDYRA. Both latter forms neither in Hu nor Or.

FEATHER (large) (Sw36): **pend**|ë,a. = RI47, ST27a. DY: Sic. PEND; G. PENDA; TOg., T. PENDE. · Missing in Hu.

- Loan < *penna* < Lat. *pinna* 'feather, wing, pinion': Hal*444,* Bon384; likewise in Or315; as < 'wings of yoke' applied to 'pair of draught oxen', neither recognized by Ja184, nor Dm314, who therefore sought unsuccessfully for other etymologies. Not rhotacized because of *-nn-* (Ja104).

  No(L) – DY004, RI47, ST "iso." = all OK.

  Besides the specialized: **pup**|ël,la {f.}, in fact 'Daunenfeder/down' (not in Hu, Dm, and Or).

FIRE (Sw82): **zjarr**|i {m.}. = RI50, ST28b. DY: Sic., TOg. ZJAR, T. ZJARR; G. ZJARRI.

- From Pk493 **gʰer-* 'warm' > Balkan-IE **gʷ·ermo-* (Gre., Arm.; Alb. dialectal retained Geg *zjarm*) > **ǵerm-*: So Hu135, Dm429; overlooked by Or525, who creates < PAlb.**džera*, unnecessarily via an ablauting **gʷhoros*, which additionally would not explain the *-rr-*.

  Yes(C+) – DY008 and ST = cognate with Riksmål, OK. – RI expelled.

FISH (Sᴡ19): **peshk**|u {m.}. = Rɪ51, Sᴛ29a. Dʏ: Sic. PISK; G. PESHKU; TOg. PESK; T. PESHK.
- Loan < *pisce* < Lat. *piscis* because of /*shk*/ (HAL*448*, Hᴜ103, Oʀ316), with regular shift of Lat. /*ĭ*/ > Alb. /*e*/ (Jᴀ182f).

No(L) – DY008, Rɪ, and Sᴛ "iso." = all OK.

FLY (Sᴡ64) verb: **flutúroj**. = Sᴛ30a, ~ Rɪ56. Dʏ: Sic., TOg. FLUTURON (AOR. FLUTUROVA); T. ME FLYTURUAR; G., Alb. FLUTEROJ. · No entry in HAL, Hᴜ, Bᴏɴ.
- At the outside < Pᴋ24 [1,*]*al-*, ~ Gall. *alouda* 'lark'?
- Dᴍ172 under *flugë* 'shingle', only *flútur* 'butterfly' as possible cognate; this is completed by
- Oʀ101 under *flutur* 'butterfly' < *fluturoj*, as borrowed from Rmc. *fluctulāre < Lat. *fluctuāre* 'to move to and fro in waves'; although missing in Bᴏɴ, an obvious suggestion:

No(L) – DY007, Sᴛ "iso." = both OK. – Rɪ56 expelled.
- Rɪ instead comes up with a new entry in his "screened list" 339 'fly' (v. or n.?), alleged cognate with e.g., Arm., Gre., Bal. (!?); obscure, because without attestations.

FOOT (Sᴡ46): **këmb**|ë,a {f.} (also 'leg'). = Rɪ58, Sᴛ31a. Dʏ: TOg., T. KEMBE; Sic. KEMB; G.1. KAMA.
- Loan < Lat. *camba:* HAL*61*. Slightly different, as equestrian term: Eᴜ116 < Lat. *camba* 'Schienbein, Sprunggelenk d. Pferdes'. Hᴜ80: < VLat. with "unclear direction"[?]. Oʀ177 notes that he has only found *gamba* 'leg' in Balkan-Rmc. (Vlat. *camba* still exists in Occitan), and Gre. καμπή 'bend, foot joint of horses'.
- The vocalism might be influenced by < Gre. σκαμβός 'bow-legged'.

No(L) – DY006, Rɪ "iso." = OK. – Sᴛ only OK regarding the 'No', though loan not recognized.
- Besides Dʏ G.2. PUTER: **put**|ër,ra {f.}, in fact 'sole, paw', var. **shput**|ë,a 'paw', not used.

full (Sᴡ 95, not Dʏ): **1.** i/e **plotë**. = Rɪ62.1/2 = Sᴛ32a.
- LIV482 *pleh₁- 'to (become) fill(ed)' > PAlb. *plē-to-* 'filled': So Hᴜ105, Dᴍ327; ~ Oʀ335 via PAlb. *plāta.

Yes(C+), thus – Sᴛ: OK; – Rɪ62-1(4) iso. = mistaken.
- **2. mbushur** 'filled' (ptc. of *mbush* 'to fill').

GIVE (Sw70) verb: **(j)ap**, (j)ep {pres. forms}. = St33a ~ Ri63. Dy: T. ME DHENE; TOg. JAP (AOR. DHASE); Alb. AP (AOR. DHASH, INF. DHAN), G. AP (INF. DHAN).
   • From LIV237 *h_1ep- 'to grasp, reach' > causative *h_1op-*éie*-, by completely normal development (even for h_1e-: cf. Hu154, Dm42). Hu77 notes Hit. *epzi* 'gives' (copied by Or, which, after Kloekhorst 614f, however, means 'he takes', while 'to give' is represented by Hit. pai- from the derivation <PIE *h_1p-(o)i-; Dm-O(79) places h_2 instead of h_1-, unnecessary after his own rule p42; Or157, unaware of these laryngealistic and morphological implications, notes the parallel Alb. *ap*.
   No(C-), thus – Ri63.1,2, and St "iso." = both OK, because after Ri, 'to give' in Hit. = *pāi*.
   Suppletive: Aor. **dhashë**, prf. **dhënë;** *dhânë*. · From LIV105 *deh_3-. – DY200 neglects the *(j)ap*-forms, and orders all finds according to this suppletive stem with derivations of *dō*.

GOOD (Sw97) adj.: i/e **mirë**. = Ri64, St34c. Dy: Sic., G., Alb. MIR; TOg., T. I, E MIRE.
   • Possibly loan (?) < Lat. *mīru(s)* 'wonderful': Neither in Hal nor Bon; Hu92 unclear. For the phonetics cf. *një-mijë* < Lat. *mīlia*, and *mërej* < Lat. *mirārī*.
   • Alternatively, with Pk711 [7.] *$meiH$- 'lieblich/mild' > *mi-ro-: so Dm268, ~Or267.
   No(C?-/L) – DY010, Ri, St "iso." = all in any case OK.

GREEN (Sw88): Unclear standard: **1.** (Si, Qe) i/e **gjelbër**. = Ri66.1,2 = St35a. DY006 TOg. GELBER ~ T. I, E GJELBER.
   • Loan < Lat. *galbinu* and *gilvus* ‚gelb': so Hal*243;* Or131; Hu84 only marginal notice under KUQ. Bon380 vert 'pâle'.
   No(L) – DY006 only forms 1. and 3. iso., Ri ~ St loan, all OK. Beside
   2. (Si, Qe) i/e **blertë** 'maigrün/spring green', not employed in tested lists. • From Pk160 *b^hleh_1- d^hro-: So Hu5; Dm-O(104) *bler(t)ë* < PAlb. *$blōr$ (his hint to Lat. forms to enlighten the semantics is in vain, since color terms are known to be extremely variable, cf., e.g., Kober 1934).
   3. jeshil (Yl also for Tosk) 'green of nature'. Dy: G., Alb. JESHIL. • Obvious loan < Trk. *yeşil* 'id.' (with Bo70).
   No(L) – DY005 sees form 3. isolated, OK.
   False: *i/e kaltër*, because 'light blue, azure', not green. DY006 T. 2. I, E KALTERT. Loan < Lat. *calt(h)a*: Hal*60,* Bon376, which is a further example for the variability of colour terms, following the

normal translation as 'Marigold/Calendula' or 'Caltha' with their orange blossoms. Double mistake.

HAIR (Sᴡ37) unclear standard: **1.** (Sɪ, BFU) **qim**|**e,**ja {f.} '(single) hair', Hᴇ 'body-hair', in compounds of animals' colours. = Sᴛ36a. Dʏ: G.2., Alb. KJIME.
  • Loan (Bᴏɴ no entry)
  – either < MLat. *cyma* (HAL*166*; Oʀ361)? Or directly from the original source:
  – < Gre. κῦμα 'wave, swell, cabbage sprout'?
  No(L) – DY006 iso. = Sᴛ iso.: so far OK (though loan not recognized).
  2. (Qᴇ 1.) **flok**|u {m.} '(shock of) hair', Hᴇ **flokët** {pl.} 'Kopfhaare', in compounds with human hair colors. = Rɪ68. Dʏ: G.1. FLOKU.
  • Loan < Lat. or Rom. *floc(cus)*; Bᴏɴ390 *flokë* {pl.}, in list « incertaine ».
  No(L) – DY006 iso. – Rɪ expelled.
  3. (Qᴇ 2.) **lesh**|i {m.} 'wool, fleece, hair'. Dʏ: T. LESHRA, Kor. TOg. LES.
  • Not convincing: Oʀ219 via PAlb. **laiša*, to Bal-Sla. forms for 'foliage' without a reference; semantically too far, and not mentioned in Pᴋ.
  • Perhaps with Pᴋ681 [2.]**leuH-so* 'abgeschnitten/cut off'. Self-contradictorily cited by Hᴜ85. the alternative
  • from Pᴋ1139 [4.]**u̯elH-* 'hair, wool' > *Hu̯l̥h₁-so-* > PAlb. (u)laś 'wool, hair, fleece': obviously Hᴜ85, by referring to OSax. *wlōh*, and PIE ?* *h₂uloh₂-so*; similar Dᴍ238.
  No(C?-) – DY005 "iso." = OK, because elsewhere deviant meanings.

HAND (Sᴡ48): **dor**|**ë,**a {f.}. = Rɪ69, Sᴛ37. Dʏ: TOg., T. DORE; Sic. DOR; G., Alb. DORA.
  • Out-dated: Pᴋ203 [1.]**deh₃r-om* 'span of hand', because of wrong vocalism.
  • From Pᴋ447 **ĝhesr- > dērā*, via compensatory lengthening after loss of –*s*|*r*. Hᴜ54 false < **/ĝhēsr-/* and again bothering his readers by finally citing Pᴋ203 above; also possible a collective n. plural, singularized to f.: So Dᴍ44, 140; similar Oʀ70 via his standard intermediate PAlb. **dārā*.
  Yes(C+) – DY203 with Greek D. CHERI, Arm. ZARK. = Rɪ, Sᴛ: all OK.

HEAD (Sᴡ38): **1. kok**|**ë,**a {f.} (in anatomical sense). = Rɪ71. Dʏ: TOg. KOKE. · Missing in Hᴜ.
  • Hardly loan < (seldom) Lat. *cauca* 'drinking vessel', because the spectrum of meanings points rather to a

- Loan < VLat. *coccum* 'berry': HAL*111*, HAG5 astonishingly for anything else but 'head', e.g., 'testicle' (vulgar usage!); correct OR189 for 'head, bulb, berry, grain'; BON390 « incertaine », citing Rom. *coc*, Gre. κόκκος 'grain' without explanation, presumably as possible sources.

No(L) – DY001, RI "iso." = OK.

2. krye|t {n.} (in mental sense, e.g., *rrugë pa krye* 'cul-de-sac'). = ST38c. DY: G., Alb. KRYET, T. KRYE. DM no entry.

- Not loan < Lat. *corōna* (MAR236), which yielded in fact other, phonetically and semantically closer forms (cf. HUL139). Therefore:
- From PK574 [1.]*ḱerh₂-eu-* 'Kopf, Horn': OR199 via PAlb. *krasnjā* with a compensatory lengthening > *krānjā*, which, however, does not explain the /y/; therefore, with (though tacitly) HU83 via < *ḱrh₂-eu-no-*.

Yes(C+) – DY003 = iso. = mistaken. – ST: So far, OK, though secondary response.

Not belonging here: *ballë*: DM-O(88 not so clear) with now the correct meaning 'forehead' < PK118 *bhh₂-lo*; puzzling, for all other meanings there are based on 'shining white'.

HEAR (SW58) verb: **dëgjoj**. = ST39b, ~ RI72. DY: TOg. DEGON, AOR. DEGOVA; T. ME DEGJUAR; G. NDEGJOJ. · Missing in HAL, HU, and DM; remains difficult:

- Not possible: Loan < Blg. *da cuva* 'id.', which perhaps influenced the aorist. The ending points to a
- loan from Lat., possibly:
- – < Lat. *degāvo* 'have learned' (extended meaning); or rather:
- – < Lat. *intelligere*: so OR62, recurring on dialectal forms like *diligonj*; BON273, 303, in spite of recurring on Sic. *ndëlgoj*, the lemma is not listed in his "Mots d'origine latine".

No(L) – DY209, ~ ST (though loan not noted) "iso." = OK. – DY208 doubtful with Sic., Kor. GEGEM, probably syncopated derivatives. – Ri expelled. Remains doubtful.

HEART (SW52): **zem**|ër,ra {f.}. = RI73, ST40b. DY: Sic. ZEMBER; G., Alb., T., TOg. ZEMER.

- (1) As "difficult word without any reliable explanation" described by DM426 *zë* 'to grasp, catch', and, similar OR520; both not following
- (2) HU132 questionably < ?PIE *$/g^{u}hen\text{-}mer\text{-}/$, from [not mentioned PK491 [1.]] *$g^{uh}en$-* 'to swell', relating this with 'stomach'; unbelievable. The homonym in
- (3) LIV218 *$g^{uh}en$-* 'to beat' clearly describes the typical action of the heart, phonetically even closer in the labial

derivation Pκ490 *$g^{uh}em(b)$- 'springen/to jump' > Eng. *game*, (cf. *$\hat{k}erd$ 'heart', perhaps < Pκ933 *$(s)ker$ 'springen/to jump').

No(C-) – DY002, Rι, and Sτ "iso." = all OK. The connection by Sτ via code 1920 to entries for '(to) see', however, is mistaken.

horn (Sw34): **bri**|ri (Geg brîlni) {m.}. = Rι78, Sτ41. · Absent in DY and HU.
- All from different derivations of [Pκ166 -172] ~ h_3b^hreu/i:
- (1) Possibly from Pκ108 [*$bhar$, *$bhor$-] > the zero-grade $bh\b{r}$- 'Hervorstehendes, Borste, Spitze/ projecting, tip': So DM-O(110), uncertain via > b^hrih_1 > $br\bar{\imath}$ > Alb. *$bri(n)$; to this entry in DM-O, MDV reintroduced the following option in footnote {5}[28]:
- (2) From [Pκ172] *h_3b^hruH 'eyebrow', because the root *b^hr (obviously meaning $b^h\b{r}$-) were hardly attested, not mentioning that DM110 refuted this solution. Better explaining the –n:
- (3) Already Pκ168 *$bhren-to-s$ 'Geweih(träger), Hirsch', notes cautiously "vgl. dazu alb. $br\bar{\imath}$": So also tacitly OR36, via < PAlb. *brina*, with irregular /i/ (cites DM110 only with (2) above). Thus even better, from the zero-grade *$b^h\b{r}$-na*.

No(C-) – Sτ iso., OK (notes Tok. cognate under deviant meaning). – Rι expelled.

The form in Qε 2. *bori* {f.} refers to the musical instrument!

I [Pers. Pron. 1.Sg.] (Sw1): **unë**. = Rι82, Sτ42a. DY: Sic. U; G. UN; TOg., T. UNE. – Goes in two directions:
- (1) From the general PIE Pκ291 *e$\hat{g}^{(h)}$ō > * e$\hat{g}oh_2$ > *edhe*. So alone Matzinger[29], in analogy to PIE *tu* > *ŭdhë*, before the Alb. shift $\bar{u}$ > $\ddot{\bar{u}}$ > i, with –$n\ddot{e}$ added after loss of the dental. He objects in particular that the use of a reflective in nominative position was syntactically unusual; this can, however be disproved by many counterexamples, cf., e.g., the use of Engl., Kel. 'me', or 'I myself'. Thus, the
- (2) mainstream assumption is a refl. pron. Pκ88 $^{2.*}s^u e$ 'oneself' > *u-* + "pronoun suffix" –*në*. So HU122 (though doubtful); Sh. Demiraj177; DM400 under *"u"* as derived from Alb. Pron. refl. *ve*; and OR486 as pers. pron. *u*, identical with *u* 'self'. Neither can be proved nor

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[28] Date of last control: 'January 12., 2011.
[29] IF 103/1997:185f

disproved, thus:

No(C+?) – DY200 and ST as cognates; – Ri expelled. Remains
   questionable.

KILL (Sw62) verb: **vras,** vret. = ST43b, Ri86. DY: T. ME
   VRARE; Sic., TOg. VRAS (AOR. VRAVA); G., Alb. VRAS
   (INF. VRA). · Difficult; missing in Pᴋ, Hᴜ, Dᴍ, and LIV!
   • Possibly, though without Alb. forms there, from LIV510
     reu̯H- 'aufreißen/ to tear, to wound': So tacitly OR515 via
     PAlb.**awa-rautja*; explicitly Matzinger 2005:99. Also
     possible:
   • From Pᴋ1163 [7.] **u̯er-* 'aufreißen/to tear, to wound' with
     different variants, e.g., OCS. *vrědъ* 'wound', Blg. *vreda* '(to)
     damage', SHr. *vred* 'snake venom', Alb. *varrë* 'wound'; with
     this, uncertain, LIV701 ?**u̯Resk⁽u̯⁾-* 'to chop off' with only
     Ved. forms. Semantically better, and typical for the
     anlaut:
   • Presumably loan < OCS *u-rasiti* 'durchbohren' or other
     South-Slavonian form < Pᴋ1181 **u̯reh₁ĝ,* with association to
     Alb. *rrah* 'beat' from the same root (cf. Hᴜ150).
   No(L?) – DY010 iso. ~ ST (under deviant meaning with Blg.
     'walk [!]): OK. – Ri expelled. Unsettled.
     Hᴜ90, not mentioning these general Alb. forms, gives *mbys* 'to drown,
     to strangle, to asphyxiate'.

knee (Sw47): (Tosk) **gju**|ri {m.}; (Geg gjû|ni). = Ri87,
ST44a. · Not in DY.
   • (1) Hardly with Pᴋ362 [D.]**g(e)leu* 's. ballen' (cf. > Gre. γίγ-
     γλυ-μος 'Knochengelenk, Türangel'), puzzling entered at
     Hᴜ70, who in fact defends the source
   • (2) Pᴋ380 ĝ(o)nu- 'Knie' via PAlb. **gλuno,* dissimilated <
     gnu-no-, as also Dᴍ190, p63 adding that the initial cluster
     g- is preserved in Tosk diaspora and oldest literature;
     similar OR137. Because PIE /ĝ/ has early become >/g/,
     the reservation of Pᴋ362 is groundless.
   Yes(C+) – With Dᴍ, OR, also both, Ri87 and ST44 list many
     cognates: OK.

KNOW (FACTS) (Sw59) verb: **1. dī** /aor. dita/ ptc. ditur. =
   Ri88. DY: T. ME DITUR; Sic. DI, TOg. DI (AOR. DINE),
   G. DI (INF. DIT).
   • With LIV141, Pᴋ243 **dʰei̯H-, dhejə* 'see, regard' > (also Alb.
     diturë, ditme 'Weisheit/wisdom'): Hᴜ152 only under
     vocalism: <**dhiH-,* no further etymology given. Dᴍ-O

(altering DM132 < **dhiH-m̥*) PAlb. < *dī* < QIE aor. *dʰiH-to.* OR64 < PAlb.**dīja.*

No(C-) – DY205 "iso." = OK. (Doubtful with DY206 = Wakhi [SE-Iran.] DIS-). – Ri expelled.

    2. njoh, *njeh* 'recognize', with a different, albeit related meaning. This, with LIV168 *ĝneh₃ 'erkennen/recognize', pres. * *ĝn̥h₃-sḱé >njā-h*: So Hu101; DM305 with parallel *ngre*, DM-O < QIE **ĝneh₃-sḱ/o*, also OR305. Additional Lat. and Gre. influence?

No(C-) – ST45a (C+): Questionable, deviant meaning!

LEAF (Sw25): Tosk **gjeth**le,ja, Geg gjethli {m.}. = RI91, ST46a. DY: G. 2., Alb. GJETHI.

    • With PK480 **guos-d*: Hu69. DM187 expelled his original entry and now online hides it under *gath* 'catkins' as "Other Alb. forms". OR133 via PAlb. *gadza with irregular unvoicing of the auslaut, thus presuming a secondary –*th*- suffix. Elsewhere slightly deviant meaning, therefore:

No(C-) – DY210/11 and ST "iso." = OK. – Ri expelled.

    Besides different: DY: Sic. FLET; ~ TOg., T. FLETE; G. 1. FLETA. • Hu no entry, DM172 marginal remark. OR100 *fletë* 'wing, leaf', obviously unaware of the particular meaning 'sheet (of letter)', relates this etymologically to 'wing', which could be not be confirmed anywhere; additionally idiosyncratic his reference to OHG *lecken* 'to kick'. Probably loan < Lat. *flōs*+të < PK122 *bhleh-₁ 'Blatt, Blüte' (missing in HAL). – DY209 = iso: so far OK.

LIE (ON SIDE) (Sw67) verb: **1. shtrihem,** var. of shtrij, shtrin. ~ RI94 rri shtirë = ST47a. DY: Sic. STIXEM; TOg. STRITEM (AOR. USTRITA); T. ME U SHTRIRE.

    • With LIV599 **sterh₃*, pres. **str̥-né >* Alb. *shtrij* 'breite aus/ spread, stretch': With Hu115, DM378; OR442 via PAlb.*strinja; semantically > refl. 'be stretched, laid down'.

No(C-) – DY007 and ST "iso." = OK. – Ri expelled.

    Besides **2. gjendem,** refl. of *gjej* 'to find' (cf. DM185), in the different sense 'sich (be)finden/to be situated, located' < LIV194 **gʰed-*; not used.

    Besides **3. rrej** 'to lie', as assumable misprint in DY Alb. RRI [?]. – DY001 = "no cognates known" – naturally. Otherwise not mentioned.

LIVER (Sw53): **mëlçi** (in QE only form). = RI96 ~ST48a. DY: G. MELTSI E ZEZ; TOg. MELCIA EZEZE; T. MELCI.

    • Loan perhaps already < Got. *milti (cf. Catalan *melsa*) 'milt, spleen', later upheld via < Itn. *milzi* (OR259), from

the same source, with shifted meaning. The suppletion *zeze* 'black' follows Trk. usage of colors for entrails, cf. *karaciğer* 'liver' with *kara* 'black'.

No(L) – DY007, RI, and ST (though loan not recognised) "iso." = all OK.

Besides Sic. U-FIGHATU, loan < Lat. *figato* 'stuffed (liver)'.

Besides Kor. SPREKE [?], if correct, contaminated from Tosk **shpretkë** 'milt, spleen', loan < Lat. *splenēticum*. – DY001 no cognates found, OK.

LONG (SW14): i/e **gjatë**. = RI97, ST49a. DY: G., Alb. GJAT; TOg. I-GATE; T. I, E GJATHE.
- From PK196-7 > **dl̥h₃gʰó* > *glh₃ð(V)-tā*: So HU68, arguing for the vocal, with DM50: C̥RHC > CaC; similar DM-O, without the doubts in DM184. Similar OR130.

Yes(C+) – Only ST OK. Mistaken both, DY203 and RI "iso.". The doubtful connection with DY200 would be correct.

LOUSE (SW22): **morr**li {m.}. = RI98, ST50a. DY: Alb. MORR; Sic., TOg. MOR; G. MORRA; T. MOZ. · Missing in HU.
- (1) Hardly from LIV439 **mer-* 'to die' > PAlb. *mērwa*: OR274. Semantically better by far:
- (2) From LIV440 **merh₂* 'zerdrücken, to squeeze' (~PK735-7 [5.]**mer*) via laryngeal metathesis (?) > *meh₂r(e)n*?: So DM277 via PAlb. < *mēr(e)n* [not PK739 in DM-O].

No(C-) – DY004, RI, and ST "iso." = all OK. In ST however, his code [750], connecting this with Ind. forms for 'meat', going back to PK725 (see MEAT), uncovers a mistake.

Besides correctly not used Alb. *ergjëz* 'newly hatched nit'.

MAN (MALE) (SW16): **1. būrr**|ë,i {m.}. = RI99. DY: T. BURRE; Sic. BUR; G. BURRI; TOg. BURE. "Grown, experienced man":
- (1) OR42 "borrowed from OHG *giburo*" is historically inconceivable.   PK cites two self-contradictory versions:
- (2) Hardly from PK130 [1.]**bʰer-* 'tragen, bringen/ to carry' > Alb. *bir* 'son', not *burrë*, as defended by HU6 via **bhr̥no-*, to account for the *–rr*, and rejecting the following, because /ū/ would yield Alb. /y/; the latter, however, is unnecessary, and moreover, comparing Alb. *grure* 'wheat' < **gr̥na, **bhr̥no-* would result in ***brure*. Therefore preferably
- (3) from PK146, LIV98 **bʰueh₂* 'to be/ thrive/ dwell' ~ **bur-* : DM113 via **buro*, explains the /rr/ (contrasting to HU and

his own 'lex burrë' p52) as expressive-intensive reduplication, however, remains (p113) too doubtful regarding the semantics. In such cases, a look at frozen residues is a deciding help: In fact the same semantic development > neighbor 'next-dwelling', as well as Grm. Bauer < *gabūra* (cf. Kluge97) decide the question; cf. also Alb. *bun, buj* 'to spend the night, dwell'; *bujk,-u* 'farmer. The other way round argues Ködderitzsch[30]: Analogous to Mess. βύριον 'house, dwelling' he suggests an Alb. **bhur-* 'house', from which > PAlb. **bur-no* as 'house-owner' > *burrë* 'man'. In any case:

No(C-) – Dy213 "iso." = OK. – Ri expelled.
> Beside **2.Mashkull** 'man, male' not used in lists.
> Besides **3. njeri,** primarily 'person, human' (Dm304 'homo, vir', see PERSON). This false entry in St51b results from a misinterpretation of the ambiguous concept in the Swadesh list.

MANY (Sw10): **shūmë**. = Ri100, St52. Dy: T. SHUME, TOg. SUME; Sic. SUM; G. SHUM.
- Loan < Lat. summu(s): so HAL*581*, Hu116 < Lat. summa, Bon387, Or445.

No(L) – Dy005 iso., ~ St loan: both OK. – Ri expelled.

MEAT (FLESH) (Sw29): **mīsh**|i. = Ri101, St53a. Dy: Sic., TOg. MIS; G., Alb. MISHT; T. MISH.
- From Pk725 **m(e)h₁mso-* via two lines of assumption
- via oxytonic *mēmśá-* to account for the irregular shift $\bar{e} > i$ (Dm269/ Dm -O); we might, however, see an
- already IE variant **mi-ms-* in Got. *mimz,* TokA. *misa,* (Arm. *mis*); then > PAlb. **minsa > *miša* (with Hu92, Or267).

Yes(C+?) – Dy007 big class. = Ri and St: all OK.

moon (Sw73): Tosk **hën**|ë,a; Geg hânë {f.}. = Ri102, St54a.
· Not in Dy.
- From Pk526 (s)kand- 'leuchten/shine' > **skand-nā-* > *handnë*: with Hu74, Dm-O(199) similar. Or146 with metathesis < PAlb. *ksandā* (cites abandoned view of Dm199).
- Against all others, Holst (1998: 83) declares this etymology as "äußerst gewagt" and mistakenly connects Gre. φανός 'Fackel, Leuchte' (see already EAT), which in fact goes back to PIE **bʰeh₂-n-* [> Alb. ***bona*].

No(C+) – St with Indic forms, OK. – Ri expelled from both

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[30] Ködderitzsch 1995:81-84.

data sets (sic!).

MOUNTAIN (Sw86): **mal**li {m.}. = RI104, ST55b. DY: G.,
   Alb. MALI; TOg., T. MAL. – All from PK721 [8.]mel-
   'Erhöhung/elevation':
   - (1) Hu89 via < *$ml̥h_3dh$-o-*; modified by
   - (2) Dm254, uncertainly via < PAlb. *$mall$ < IE *$molH$-(i-),
     noting the possibility of Non-IE substratum; similar
     OR243 via PAlb. *$mala$, who mentions the Balkan
     toponyms without comment. In any case:
   No(C-?), nowhere else primary response: DY007, RI, and ST
   "iso." = all OK.

MOUTH (Sw42): **gōj**|ë,a {f.}; T. also golë (YL). = RI105,
   ST56a. DY: Sic. GOJ; G. GOJA; TOg., T. GOJE.
   - Loan < Lat. *gula* 'Schlund': So Hu66. The vocalism
     however, is only accounted for by a late loan < Itn. *gola*, as
     demonstrated by EU117 and OR120. Missing in BON.
   No(L) – DY004 and RI = iso., so far OK; even clearer: ST, loan.

NAME (Sw100): Tosk **ém**|ër,ri '(first) name'; Geg êmën
   {m.}. = RI106, ST57a. DY: G. EMEN, TOg., T. EMER.
   - [PK321] *$h_1n(h_3)$-men* [Tosk; Geg exchanged!] > h_1n-men >
     enmen: So Hu61 via for Alb. unnecessary -*mn̥*, and DM165;
     in DM-O, MDV has added critical notes regarding
     difficulties with an anlaut h_3, which, however, is a special
     reconstruction at Leiden – thus suggesting a loan < Lat.
     nōmen; however, a loan < Lat. *nōmen* would have preserved
     the *n-*; moreover, this old universal is considerably
     resistant to borrowing, and thus may be influenced by
     substratum. OR87 *enmena* < IE *$(o)noHmn̥$*[!]; the plural –
     na is needed for the rhotacism. In any case,
   Yes(C+) – DY003 very big class. = RI, and ST: all OK.

NECK (Sw50). Albeit the primary response to this junction
   between the trunk and the head seems to be **1. zverk**|u,
   all lists refer here (mistakenly?) to nape, rather the
   back part of the neck: **2. qaf**|ë,a. = RI109, ST58a. DY: T.
   G/KAFE, G., Alb. KJAFA.
   - Loan < Balkan-Trk. *kafa* 'back of head' (with HU106,
     OR353; not in BO).
   No(L) – DY208 iso., OK. His doubtful connection with
   derivations of *$k^u el$*₁ [PK639 'drehen', who, of course, gives
   other Alb. forms] contradicts all sound laws. The same in

ST58: mistaken. – RI expelled.

NEW (Sw96): i **ri**, e re. ~ RI110 ri = ST59a. DY: G. RI, T. I, E RI, TOg. I-IRI, Alb. IRI.
- (1) After HU108 "impossible"; in DM344, 251 only marginal remarks, "waits for a closer study": no attempt.
- (2) Presumably < PK330 $^{3,*}h_1ere(i)$- 'something freshly coming in motion'; for the semantics cf. from the same root Phry. ειροι 'children', in particular regarding the second seme 'young'. For the phonology, cf. DM346 *rî(me)* for Alb. *rîtë* 'wet' from the same root. Similar OR371 as zero-grade via < PAlb. **rija*. Because no other cognates with this meaning:

No(C-) – DY003 and ST "iso." = both OK. – RI expelled.

NIGHT (Sw92): **nāt|ë**,a {f.}. = RI111, ST60c. DY: T., TOg. NATE, G. NATA, Sic. NAT.
- From PK762 **nok^{u}t*: HU96, DM41,283 (notes unusual plural vocalism), OR282.

Yes(C+) – DY004 big class = ST, both OK. – RI expelled from both data sets (!).

NOSE (Sw41): **hūnd|ë**,a {f.}. = RI112, ST61a. DY: Sic. XUND; G., Alb. HUNDA; TOg. UNDE; T. HUNDE.
- (1) From the general IE [PK755] **n(e)h_2s*[31] tries HU76,155 to derive this word via a questionable laryngeal metathesis *neh_2s- +te > noh+to > hon-to >hun-dë*; moreover, the shift *s > h* requires VsV environment, and the root is generally missing in the Balkan - Anatolian area. Thus, we have to look for another root that can be found via
- (2) the proper reconstruction *skuna* > PAlb. *skun-tā* in OR152, also > Alb. *hu/ hû*, pl. *hunjë* 'picket, pole', only under the latter combined with meanings 'thorn' [PK958]; the word may as well be retraced to < PK951 *(s)keu̯-*, with numerous different extensions, often 'shelter, canopy', or Gre. σκύνια 'brows', or, without s-mobile PK592 $^{1,*}\hat{k}u$-n-d, cf. Arm. *sun* 'hole'.

No(C?-) – DY008, RI, via ST "iso." = all OK.

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[31] An alternative notation **h_2n̥ ðh_1-os*, cited in MBR (L330, with ltr.) appears too far from all attestations, and long-windedly derived from LIV267 **h_2enh_1-* 'to breathe'; there only cited Alb. ënj, after HU63, 155 and OR91 *ëj* 'to blow (up), swell', which, however DM171 (with otherwise no attempt) suspects as a ghost word (cf., however, entry PERSON).

NOT (Sᴡ8): **nūk**. = Rɪ113 ~ Sᴛ62ab. Dʏ: G., T. NUK; Sic. NG; TOg.2. NUK.
- (Dᴍ no attempt). Hᴜ99 '(Alb.) negation preceding verbs', doubts the "u arising from e" and remains without result, overlooking the
- obvious regressive assimilation from Pᴋ757 *ne-kᵘo- > PAlb. *neku > nuka: So Oʀ302.

  Yes(C+) – Dʏ005 ~ Rɪ113, and Sᴛ62, OK.

  Besides Dʏ: TOg. 1. JO 'no, non-'; TOg. 3. MOS 'do not!' – only used in Dʏ.

ONE (Sᴡ11): **një** (Geg nji). = Rɪ115, Sᴛ63. Dʏ: G. NJI; Sic., TOg. NE; T. NJE. ·Dᴍ207 only marginal remark, no entry, Pk only brings Alb. *gjith* 'all'. There are two difficult options:
- (1) Perhaps from Pᴋ286^[3D.] *oi-nos (undoubtedly the source for the Western-IE words for 'one', except the special meaning Gre. οἴνη 'one on dye'): So Oʀ304 via > PAlb. *ain-ja [> en-je]*; it remains doubtful, how the e-anlaut should have got the required pretonic position. Thus rather:
- (2) From Pᴋ902 ^[2.]*sem-* 'eins', via Balkan-IE *sm-ijos > Arm. *mi*, Gre. μία, and PAlb. *mja > Alb. *një*: asserted by Hᴜ101, by assimilation of *m→n|i̯*; unnecessary his detour via back-formation of a {f.} *smieh₂ > *njo.

  Yes(C?+) – Sᴛ with (1): Minor mistake; – Rɪ with (2): OK; – Dʏ202 iso. = mistaken in both cases, too doubtful with Dʏ200 for case (2). Debatable.

PERSON [human being] (Sᴡ111>42>18, switched several times between these expressions in his different list versions): **njerí**|u {m.}. = Rɪ117, Sᴛ64. Dʏ: G., Alb. NJERIU; TOg. NERI, T. NJERI.
- From Lɪᴠ267 *h₂enh₁- 'to breathe' > Pᴋ765 *h₂ner- 'man' > Balkan-IE *anér > PAlb. *(a)ner- (also > Arm. *ayr*, Gre. ἀνήρ 'id.'): With Hᴜ100, Dᴍ-O(304 with different auslaut), Oʀ304 via PAlb. *nera.

  No(C-) – DY003 and Sᴛ "iso." = OK, because the close Arm. and Gre. cognates are today no primary responses. – Rɪ expelled from both data sets.

RAIN (Sᴡ76) verb: bie **shī**, literally, '(it) falls rain'. ~ only

the noun: RI122, ST65b. DY: Alb. BISHI; TOg. SI, RA SI, KA RENE SI, SHI; G. SHI (IT RAINS); T. ME RENE. – Compound of *bie* 'to fall' (cf. entry FALL) and the noun *shi* 'rain', the latter:

- From LIV545 /pres. *suh₂-* 'to pour, to rain', ~ PK912 *sh₂uH* 'rain' > *śū* > *shi*: HU113 doubts this standard derivation, because *s* > *sh-* in his view requires a pretonic vowel; however, has no alternative, and self-contradictorily leaves the reader with PK912 $^{1.*}$*seuH-*. From that base: DM-O as sing. tantum (no longer undecided, as in his printed DM360). Also OR413 (for the noun) hypothesizes an idiosyncratic "intermediary" **jūja* > *sūja* out of the same reason. The *sh-* can, however, be substantiated in many other ways: DM56(b) considers "probably" *s|H* > *sh*, or before a pretonic vowel, which could be found in a later vanished pres. form **suh₂-i̯é*, as LIV notes for Gre. ὔει 'id.'; moreover, the shift *su-* > *shu-* is regular in all loans from Lat., e.g., *summu(s)* > *shumë*. In any case

Yes(C+) – DY012 iso. = false, because in his list OGre. is missing, with which RI122 and ST probably connect it.

RED (SW87): i **kuq**, e kuqe. ~ RI123, ~ ST66 kuq. DY: G. KUKJ; Sic., T., TOg. I-KUK.
- Loan < VLat. **coccu(m)* < Lat. *coccineu(s)* 'scarlet'; HAL*110*, ~ BON342, ~ OR205.

No(L) – DY011 and ST "iso." = OK. – RI expelled.

ROAD [~SW85 'path' = better, for all cultures can be supposed to have had paths, rather than roads, or streets; therefore]: **1. ūdh|ë**,a 'way, journey'. DY: T. UDHE; Alb., G.2. UDHA.
- (1) Hardly from [LIV660] **u̯edʰh₁-* 'to beat, to break': of which OR482 invents an o-grade **u̯odhā*, after Rus. *tropá* 'beaten path, tracks' [< PK1094 $^{1.*}$*trep-* 'step, pad']; cf. Alb. *be* 'oath', where the *-dʰ-* of < LIV71 **bʰei̯dʰ-* 'to confess' has been lost at all. Rather
- (2) With PK1119 **u̯eĝʰ-* 'to draw, drive' „schwundstufig wohl alb. *udhë* ‚Weg, Reise' " > **uĝʰ-om* {n.} > *uðā* {f.} : So also HU120 'road, path', the gender shift is required, because otherwise the *-ĝʰā* would have vanished; referred to also by DM400 < quasi-IE **uĝʰ-o-[-s < -m?]*.

Yes(C+) – ST OK; versus – DY208 mistaken, for only doubtful with his class 209 (Grm. WEG), only half a mistake because of ambiguous concept:

Beside **2. rrūgë** 'road, street' = RɪI27. Dʏ: G., Alb. 1. RRUGA. Loan <
VLat. *rūga* 'road': Hᴜ110, after the FGS, translates 'street'; similar
Oʀ390; not recognized by Hᴀʟ; after Bᴏɴ314 loan < Itn., because «
comme l'atteste la conservation de l'occlusive intervocalique », a
reservation unnecessary for –*g*– (cf. Alb. *ligë, plagë*).

No(L) – Dʏ207 iso. (with 206 = Sard. ARRUGA) OK in his meaning. –
Rɪ expelled.

Besides not standard Dʏ: Sic., Kor. DHROM. Late loan < Gre. δρόμος,
not < SHr. *drum.* – Dʏ009 iso., OK.

ROOT (Sᴡ26): (Tosk) **rrënj**|ë,a, (Geg rrâ(n)jë) {f.}. =
RɪI28, Sᴛ68b. Dʏ: G., Alb. RRAJA, Sic. REN, TOg. RENE,
T. RENJE.

- From Pᴋ1167 **u̯h₁reh₂d-* > *urh₂d-(nieh₂)* > *radniā*: So doubtful
  Hᴜ109, too reserved with "initial rr- has never been
  satisfactorily explained"; however, there are enough
  attestations given for / **ur-* / > / *rr-* / at Dᴍ48,52. Moreover,
  Dᴍ350 as a native speaker explains –*një* as frequent Alb.
  botanical suffix. Similar Oʀ384.

Yes(C+) – Dʏ003 big class = Sᴛ, both OK. Versus – Rɪ, iso. =
mistaken.

round (Sᴡ98): i/e **rrumbullak**(të/ët). = RɪI31; ~ Sᴛ69
rrumbull (rather 'balled' of wool). · Absent in Dʏ. – Hᴜ,
Dᴍ, Bᴏɴ no entry. Generally

- loan, either from
- Lat. *r(h)ombu* > Tosk *rrum(p)*: Hᴀʟ*499*, with different Alb.
  meanings, e.g., stump, spindle, clapper', all rather
  seldom today; or via
- Rmc. *rombulus* (attestation?) > *rrumbull* 'rolled into a ball'
  (Oʀ391); or
- Rather directly from Att. Gre. ῥύμβος 'Kreisel/top, gyro'?
  This in particular for the clerical use 'bell-clapper'.
  Second syllable analogous to *sumbull* 'round button'.

No(L) – RɪI31 iso. ~ Sᴛ loan: both so far OK.

SAND (Sᴡ78): **rërë** (Geg rânë) {f.}. = RɪI34, Sᴛ70a. Dʏ001
Sic. RER. "unique". G., Alb. RANA, generally used in
compounds, e.g., *ranishtë* 'sandy beach'. · Hᴜ no attempt
with any form.

- (1) Generally assumed as loan < Lat. *arēna* 'id.': So Hᴀʟ*22*,
  Dᴍ295 (in passing), and Oʀ370. This, however, requires
  additional assumptions, for Lat. *ar-* normally yields Alb.
  rr-, and, e.g., Lat. *frēnum* yielded Geg *frê(ni)* 'fence'; hence
  Bᴏɴ113 regards it as « mot irrégulier(s) du guègue »;

further, it is a semantically doubtful loan, for the secondary meaning 'theatre' would – as cultural loan – be more convincing. Better directly:

- (2) From PK332 [4,5] *er- 'Erde, Sand, locker' (cf. Lat. *rārus*), as reduplication with r-r dissimilated > r-n. Even in this case, no recent cognates with the exact meaning, therefore,

No(C?-) – DY009 and RI134 = iso., ST loan: all so far OK.

Besides DY: T. SHUR, Kor. SUUR, rather 'deaf'. (Kö 'literary' form). – DY011 iso.

Besides non-standard TOg. KUM: Loan < Trk. *kum* 'id'. (Kö 'literary'). – DY001 unique, OK.

SAY (SW71) verb: **them** (thom), thua, thotë; aor. tha(shë). = RI135, ST71. DY: Alb., G.2., Sic. THOM (INF. THAN); T. ME THENE, TOg., Kor. THEM (AOR. THASE).

- (1) Not from (and rightly not cited in) LIV326 *$\hat{k}eNs$- 'speak formally' > *$\hat{k}eh_1nsmi$ > Alb. *thom*: So OR480 < PAlb. *$ts\bar{a}nsmi$*; the PK again misleadingly cited by HU119, who in fact favors the athematic stem:
- (2) LIV318 *$\hat{k}eHs$-[32] 'anweisen/to advise', > PAlb. $\theta\bar{e}m$ > pres. *thom*: DM57, 399 (= OPers. $\theta\bar{a}tiy$); the /a/ of the 1sg. aor. *thashë* 'I said' evolved regularly < *$\hat{k}Hs$-om (DM61 with many examples), and may then have been analogically extended to the ptc., to mark the imperfect aspect in the pres./ipf. stem.

No(C-) – DY012 and ST "iso." = OK. – RI expelled.

Deviant meaning: Alb. **rrëfen** 'erzählt, gesteht/ confesses' < Lat. *referre*. Not employed.

False: Alb. *dëftoj* 'zeigen, angeben/show, demonstrate'. DY: G.1 DIFTOJ. • Loan < Lat. *dictum*.

SEE (SW57) verb: 1. **sheh,** shoh 'look at (each other)'. = ST72c, RI138. DY: Sic. SOX, G. SHOF (INF.PA); TOg. SO (AOR. PASE), T. ME PARE.

- (1) Not from LIV297 *$h_3e\hat{k}^u$- 'to watch': DM57, only in chapter phonetics, assumes[33] a long-grade *$(V)\hat{k}s\bar{e}$-$(s\hat{k})$, not mentioned under DM312 *pashë*; cf. EYE above.
- (2) From LIV525 [1·]*$se\hat{k}^u$- 's. anschließen/ to follow (with the eyes)', as caus.-iterative *$so\hat{k}^u$-$\acute{e}ie$ > PAlb. *$sa\acute{s}\acute{a}j$-$s\hat{k}$ > *$\check{s}\bar{a}jh$-: With HU114 via < [*$so\hat{k}^u\acute{e}h_1$-$s\hat{k}e$-]. Questionable OR425 via

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[32] Could be simply the base for the extended stem kens.

[33] By courtesy of an e-mail from Prof. B. Demiraj. The former entry DM-O < *$h_3(e)k^u s$-, has been removed Dec., 2007.

PAlb. **sāk-ska.*

Yes(C+) – Dʏ005 and Sᴛ with Gmc: both OK. Contrasting to – Rɪ138(4) iso. = mistaken.

Cf. the variant Qᴇ 2. **shikoj**, *shikon* 'look (after)' < *siku̯-onj* (missing in Dʏ and Hᴜ).

SEED (Sᴡ24): **farë**. = Rɪ139, Sᴛ73b. Dʏ: Sic. FAR, T., TOg. FARE. – Both possibilities depend on the acceptance and time of a sound law Alb. *f-* < (Balkan-IE.) *sp-* (Dᴍ56,c "most likely" for this sound law; otherwise no entry):

- (1) Under this law, old verbal noun from LIV580 $^{3.*}$*sper-* 'ausstreuen/to scatter' > PIE **spór-eh$_2$* > PAlb. *sparā: Hᴜ63 doubtful; similar Oʀ93.
- (2) Perhaps loan, either
- (2a) under this sound law, early from Gre. σπορά 'seed'; or, without the law,
- (2b) rather later loan from Lat. far(īna) 'flour, spelt', e.g., as tribute.

No(C+/L?), not decidable: Dʏ006 (2) iso. Contrasting Sᴛ (1) = cognate with Gre. – Rɪ expelled from both lists.

Puzzling: For both, Alb. and Geg, Dʏ000 found nothing usable.

SIT (Sᴡ68) verb: In Alb., this concept is often circumscribed, in two ways: **1. rri** (BFU alone, as well as extended by), *ndenjur* (literally 'buttocks', being single response in Sɪ); contrasting: In Qᴇ, *rri* stands for 'linger, stand, stay', vs. i/e *ndenjur* for 'stale' (!). Ri144 *rri ndenjur*; St74 *rri*. Dʏ: G., Alb. RRI NE BYTH; TOg. RI (AOR. NDENA). · Alb. *rri* is missing in LIV.

- (1) Semantically not convincing as derivation of [LIV502] **rei̯d^h-* 's. schwankend bewegen', which rather represents meanings of motion: rightly with doubts Hᴜ109 for *RRI* 'sit, remain'. The same applies to
- (2) LIV238 **h$_1$er-ei/eh$_1$* 'to set in motion > arrive' in the different sense 'sit down, stand, stay': DM-O (supplementing the secondary remark in printed Dᴍ351); Oʀ386 indirectly via other derivations under *ri* 'to sit, to stand, to stay, to remain' with aor. *ndenja*, thereby no lemma for our head meaning alone.
- (3) Rather closely related to LIV269 **h$_2$er-*[+*ei*] 'anordnen/to arrange', as original essive or refl., today only used as pres. act., mainly with suppletions (~ *ndënjur* 'to sit', ~ *në/më këmbë* 'to stand', ~ *më gjunë* 'to knee'). In

the same sense, Bᴏɴ40 translates « rester ».

1.: No(C?-) – Dʏ005 iso. = Sᴛ: OK. Deviant meanings. – Rɪ expelled from both lists.

2. ulem {3sg. pass./refl. of **ul**, ulim} 'to fetch/put down', also 'to sit/settle down, be seated'. Only Dʏ: T. ME U UNJUR; Sic. (T)UJE. · Albeit often single (!) response (e.g., Qᴇ), no entry in Hᴜ (where, however, FGS is cited as explaining 1. above by "jam ulur …");

• Out-dated: Dᴍ317 erroneously under *përkul*, by his online update, see below:

• From PIE **u̯el*- under LIV674-9 = Pᴋ1138-43, not noted there, and only distinguishable by very close meanings like 'to turn, to lock up, to wrap': Oʀ484 indirectly with the meaning 'to lower' via < PAlb. *wala, the other forms via *ulnj < *walnja; Dᴍ-ᴏ now under new entry. These forms (the /ur/ in Tosk and the /t-/ in Sic.) might point to an influence of Balkan-Trk. *utur*- 'id.' (cf. Bᴏ223 with literature).

2. No(C-) – Dʏ003 iso., OK.

SKIN (ᴏꜰ ᴘᴇʀsᴏɴ) (Sᴡ28): **lëkúr|ë**,a {f.}. = Rɪ145, Sᴛ75a. Dʏ: T. LEKURE; TOg. 2. LHEKURE; Sic. LIKUR; G., Alb.1. LIKURA. In connections with 'leather'.

• Hardly from < *lakur* 'naked': Oʀ222 'skin, hide'; the further derivation from IE **leuk̂* 'to shine', however, is semantically too far from 'hide'.

• A semantically possible loan < Lat. *lacerna* 'wrap, originally of Roman legionaries' (cf. Engl. (anat.) coat) leaves us with unexplained vocalism, also *lakuri,* loan < Trk. *lahuri* 'cloth for women's garments', not mentioned in Dᴍ240, with wrong /h/ (cf. Bᴏ84; mostly of yellow silk satin, made in Lahore).

• Hardly from LIV559 **(s)kert*- > e.g. ?Arm. *k'ert'em* 'ziehe die Haut ab/skin', Alb. *kr̥-no* 'abgezogen', does not help with the /u/.

• Perhaps with Pᴋ674 [2.]*leh₂k- 'Fetzen/shreds' > *lek: So Hᴜ86, with a half-finished note that "in native words –*r(os)* is dialectically reflected as –*ërr(ë)*".

• Pᴋ951 **(s)kū̆-ti*- (where, however, the meanings for 'skin' appear with a dental formant) > **ku-rā(?)*: Dᴍ240 with prefix *lë*- 'off' (Dᴍ-ᴏ);

• Proposal: Prefix *lë*- +*kur* = loan < Lat. *corium* 'thick skin, leather', for the vocalism cf. Alb. *kurorë*, metathesized < Lat. *corōna*. Cf. Alb. *lakurë, lakuriq* 'naked'.

No(L?) – Dʏ003 and Sᴛ "iso." = so far OK. – Rɪ expelled from both lists.

Besides Dʏ: TOg. 1. CIPE. **cipë** {f.} rather 'thin (piece of) skin' (cf.

BARK). Isolated.

SLEEP (Sw60) verb: **fle**. = RI147, ST76b. DY: Sic., G., Alb. FLE (FLEJT, INF. FJET); TOg. FLE (AOR. FLEJTA); T. ME FJETUR. · HU, DM no attempt.

- (1) Hardly from LIV332 *$\hat{k}lei$- 's. anlehnen' (MAR234), which presupposes a phonetically weakly attested $^{*}\hat{k}l > fl$, against, e.g., $^{*}\hat{k}lew$- > Buzuku *kluoj* > Tosk *quaj* 'call', or Balkan-IE LIV362 *$kleh_2u$ - 'to cry' > Alb. *qan* 'he cries'. The semantically alleged parallel Tok-B *klänts* 'sleep' fits better to OInd. *klām(y)ati* 'be(come) weary', cf. PK602. Only semantically better, thus:
- (2) Nor from LIV398 *leg^h-e- (e.g., > Gre. λέκτο 'to lie down to sleep') via PAlb. *awa-leja* > *flê*: so OR99, indirectly by relating Slav. *$l\check{e}jati$ [fake meaning?:] 'to doze, to slumber'; rather[34] PSla. *$le\check{z}\grave{a}ti$ 'to lie (down, ill)'; this root should, however, yield > Alb. **leg-. It remains:
- (3) From LIV406 *$lei h_2$-ié 'schwinden/to fade' (no Alb. entry), with prefix f-
– either analogous to Alb. *flugë* < PK681 *leu-; (cf. LIV400 *leh_1d- > Alb. *lodhem* 'get tired');
– alternatively, via PAlb. *awa-leja* > *flê*: so far with OR99, however, not with (2) above. In any case:

No(C?-) – DY010 and ST "iso." = OK. – RI expelled.
Only the noun *gjum|e ð, i* (PK1048) mentioned in HU71, DM192 <śubn-. With this form, e.g., DY002 (Persian) would be cognate.

SMALL (Sw15): i/e **vogël**. = RI148, ST77b. DY: G. VOGEL, Sic. I-VOGEL, TOg. I-VOGELH-I, T. I, E VOGEL. ·HU131 without result, DM no attempt. At least

- (1) OR513 tries with > PAlb. *wagla, relating this to Lat. *vagor* 'to roam around' (tacitly following the reconstruction of PK1120, however, not accepted in LIV); in spite of his explanation semantically implausible.
- (2) Probably loan < Trk. *ufaklik* 'tinyness' (< Arab. *faqīr* 'poor'). Missing in BO.

No(L) – DY009 Alb. iso., OK. – ST's [2987], with v. Windekens[35], connection with TokB. *yakte* (typo for *yäkte-* /*yekte-*, used as prefix) seems too weakly founded. Moreover, Ringe (as an expert in Tokharian), lists two other lemmata, however, not this one, – RI himself expelled.

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[34]Derksen online
[35]Van Windekens, A. J.: Le tokharien confronté avec les autres langues indo-européennes. Louvain, 1976: 586f.

SMOKE (Sw81): **tym**|i {m.}. = Rɪ150, Sᴛ78. DY: G., Alb. TYMI; TOg., T. TYM.
- (1) Pᴋ345 *eh_2t-men* 'Hauch, Atem': Tacitly Oʀ470, who cannot explain the /y/. He further refutes a
- (2) loan < Gre. θυμός because this "is unknown in any meaning close to 'smoke' "[sic]; perhaps these (of many more) will do: θυμήριον 'Räucher-pfanne/ smoke pan', θῦμάλ-ωψ 'Kohlenmeiler/charcoal kiln', all verbal nouns < LIV *d^hueh_2 'Rauch machen/to make smoke'. Hᴜ117 favours a "recent loan", because an old /y/ would have changed to /i/ in Tosk; the required recent sources could well have been both, OBlg. *dymъ* and Trk. *duman,* which at least might have influenced the vocalism. Thus in any case,

No(L) – DY201, Rɪ = iso., Sᴛ loan: all OK. Dʏ further doubtful cognate with 200 [< Pᴋ261^{4}dheu]: Mistaken because of *t-* and *y.*

STAND (Sw69) verb: **rri** (në/më këmbë). = Rɪ158 rri më këmbë. Contrasting, Qᴇ: rri (aor. ndenja, ptc. ndenjur) alone, with. Sɪ, Sᴛ79a; however, see notes under 'SIT'. DY: Sic. RI STUERA, TOg. RI NE KEMBE, G. RRI ME KAM. · Hᴜ, for RRI alone, gives only the meaning → 'SIT'. For 'stand':
- Ambiguous: Dᴍ-0^{36} *rri* 'to sit down, stand, stay'[!], uncertain as suppletive verb < IE *Hr-ei/eh_1 'to set/put in motion'. Similar Oʀ386 for both, 'to sit, to stand', without explaining the semantic discrepancy. Proposal:
- Essive form *$h_{1/3}r$-$h_1ié$ (cf. LIV25) of PIE *$h_{1/3}r$- 'set in motion/to arrive somewhere' (cf. LIV238/299, with notes; ~ Pᴋ326 ^{3}·er-); both without Alb. entry, however Hit. *arta-* 'stood' (confirmed by Kloekhorst195), thus:

Yes(C+) – Dʏ003 not assessable; Rɪ and Sᴛ "iso." = mistaken. Ambiguous standard!

Besides Sɪ 1) **qëndroj** (ne këmbë) 'stay', therefore nowhere else used.

Confused from Portuguese: T. ME PENDRUAR – Dʏ001= no cognates known – naturally.

STAR (Sw74): **yll**|i {m.}. = Rɪ159, Sᴛ80. DY: G., Alb. YLLI; TOg. YL, T. YLL.

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[36] reference Dᴍ353 typo for 351 *rris.*

- (1) Hardly from Pᴋ917 *sḱeh₂i ,schimmern, Schatten‘, where we find different Alb. forms with anlaut *hi-*, which would not explain the vocal: As usually, not referring to this, Oʀ518 reconstructs PAlb. *skᷓw-ila < hije < skija* ‘shadow’, based on a parallel form *hyll* (Geg, not noted in the dictionaries[37]); for further relations the reader is left with a self-reference. Not only semantically better:
- (2) From Lɪᴠ245 *h₁eus* ‘burn, glow’: So Hᴜ132 via PIE *h₁us-li-* (again with a self-contradictory final entry of Pᴋ881 *sāuel-* ‘sun’); similar Dᴍ-O *yll* via < *(h)ūl,* in print Dᴍ206 *hyll,* “only in N.-Geg dialects”. For all cognates have deviant meanings today,

  No(C-) – Dʏ006, Rɪ, and Sᴛ “iso.” = all OK.

STONE (Sᴡ77): **gūr**li {m.}. = Rɪ161, Sᴛ81. DY: G., Alb. GURI; Sic., TOg., T. GUR.
- From Pᴋ477 ³·*gʷer* ‘Berg/mountain’ > *gʷr̥H(i)* > PAlb. *gur(i)*: Hᴜ66-7, Dᴍ181; Oʀ127 via < PAlb. *gura.*
  Yes(C+) – Albeit most cognates have the deviant meaning ‘mountain’, there are semantically agreeing Iranian dialects cited in Sᴛ, OK. Albeit also listed under STONE in Dʏ001, however not connected with Dʏ007 Alb. “iso.”, mistaken. These dialects do not belong to the database of Ringe, instead TokB. *kärweñe* ,stone‘, not recognized as cognate, thus Rɪ mistaken.

SUN (Sᴡ72): **diell**li {m.}. = Rɪ164, Sᴛ82a. DY: Sic. DIEX; G., Alb. DILLI; TOg. DIEL, T. DIELLE. · Dᴍ429 only marginal remark.
- (1) Hardly from [Pᴋ1045 ²·] *suel-uo-* > Gre. ἕλη: So Hᴜ50,148 assuming *su > d* before stressed vowel, against Dᴍ48 (*su > v/h*), both with apparently contradictory parallels. Making no effort to refute this, Oʀ65 presents
- (2) *ĝhel-uo* ‘yellowish to green colours’ (again tacitly from Pᴋ429 ¹·, there, however nowhere ‘sun’!), by as “tabooistic substitute” via PAlb. *delwa.* Similar Mᴀʀ233. Possible, however, why not directly
- (3) from Lɪᴠ108 *deih₂-* ‘glänzen/to shine’, plus –*lo,* as, e.g., διη-λός ‘clear’. In Dᴍ-O(176) from this root only > Alb. *di(të)* ‘day(light)’. In any case:

  No(C?-) – DY004, Rɪ and Sᴛ “iso.” = OK.

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[37] Cf., however, the Gheg cultural journal „Hylli i Dritës“ (Ködderitzsch, pers. e-mail).

SWIM (Sw63) verb: **nótoj**, nóton. = RI166; ST83 (typo) natoj. YL Var.: bëj/baj notoj 'do swim'. DY: G. NOTI ME BA; T. NOTUAR; TOg. BEN MNOTE, AOR. BERA MNOTE; Alb. BAJ NOT.
   • (1) Not typical for a loan < Rmc *notāre*, which OR301 cites without commentary p138 of HaL*390*, who in fact derives a homonym Alb. *notoj* 'to note' < Lat. *notare* (where the dictionaries prefer *shënoj* < Lat. *signare*). In BON391 (list only) "incertaine, peut-être pré-romane". OR does not attempt to refute the following normal solution. Moreover, he and
   • (2) LIV572 (under *(s)neh₂* no Alb.), overlooked the hidden entry in HU148 [sound developments] *notim* 'swimming' < *snéh₂-t-imo* with early lost /s-/, cf. Gre. νήχω 'id.'. Convincing, thus:
   Yes (C+) – DY009 Alb. iso., not recognizing the connection with DY008 = ST, loan: both probably mistaken because of the vocalism. – RI expelled.
   Besides: (YL) *plevas*, rather 'to float', loan < Blg.

TAIL (Sw35): **bisht**li {m.}. = RI167, ST84. DY: Sic., TOg. BIST; G., Alb. BISHTI; T. BISHT. · HU5 „obscure" because of the /sht/, without result.
   • (1) Hardly from LIV98 *bʰueh₂-* 'wachsen, entstehen/to grow' > *bhū*: so OR27 via < PAlb. *būšta*: Semantically idiosyncratic and phonetically problematic, as /ū/ yields /-i/ only in final position. His citation of DM is out-dated, who only gives a noncommittal hint to DM100 *bij* 'to sprout, grow out' [cf. Alb. *bijon* 'give birth', *mbin* 'come up (seed)'], however, proposes the better solution:
   • (2) From LIV72 *bʰeiH-* > *bʰi(H)-st-o-* 'schlagen/to beat' > *bi-śt-*: Too uncertain DM-O(103) *bisht*: The /-sht/ has many parallels, e.g., Alb. *gisht* 'finger', perhaps also influenced by SSlav words for 'whip' (cf. OCS *bičь*, SHr. *bič*), seeming to express a semantically characteristic property, thus
   No(C-) – DY017, RI and ST "iso." = OK.

THAT (Sw5) dem. pron.: **ai, ajó, atá** {m., f., n.}. Ri168 ai = St85c. DY: ATA (M. PL. + N.); TOg. AY, AJO, ATA; Alb.*, AI; Sic. AJI, T. AJO, G. AI.
   • Mistakenly OR3 regards /a-/ as an undefined proclitic particle, and the endings as demonstrative *ei* < [PK281 [3.]] *ei-*, > e.g., Lat. *is*, which is in fact semantically different.

The contrary is much more convincing:
- This proclitic particle /a-/ is identical in all Alb. words combined with the meaning 'there', e.g., a\ndej/-ty/-the/-tjé, can thus only bear the deictic function, and can be derived
- – either from PK979 *so/sā 'ille, illa' [unexplained loss of /s-/]: so Hu37;
- – better, from PK73 *h₂eu- 'that': so DM-O(70) – though not established as sound law.
- The second parts can easily be identified as the (Hu37 "widespread") gender endings –i/y {m.}, -jo {f.}, -ta {n.} < PIE *tod, identical with those in the following lemmata for THIS. In spite of ambiguous meanings:

Yes(C+) – DY200 with many other forms, = ST: OK. – RI expelled!

*Besides DY: Alb. KJO, noted here as well as with THIS below(!)

The following equivalents are correctly not noted in the tested lists: QE **1. që** refers to the pron. rel. & conj. 'that, which': DM-O under *aq* 'so much', (DM80 under *áqë*) <*kai* < PK644 *kᵘo, 'that'), after OR360 loan < Lat. *quī*; QE **2. i cili** (pron. rel.).

THIS (Sw4): **ky, kjo, këtá** {m.,f.,n.}. ~ Ri174 ky = ST86a. DY: G., Alb. KY; T. KJO; TOg. KY, KJO.
- (1) The attractive PK609 *k̂(i)i̯o- 'this' > Lit. *šìs* 'id.', would have yielded Alb. **thijë*.
- (2) The same gender endings as in the words for THAT above are again mistakenly interpreted by Hu84 (who lists extremely variable dialectal forms), as demonstrative pronoun PK979 *so- > jo before stressed vowel; similar OR208 via < PAlb. *ka-jā, as demonstrative –jo as above.
- (3) Here, all accept a deictic prefix k(ë)- 'hic/here', which appears further in Alb. *këtu* 'here'. This prefix remains an unexplained pronominal element *ka in OR208, at least explained as loan < Lat. *quo* by MDV, noted under DM-O, which appears extremely unlikely, and should rather have been derived from PK644 *kᵘo-: So Hu84; DM217-8 [1.]kë; clearer, however still uncertain in DM-O[38] k(ë) 'here' < *kᵘu; (> with different result in his [2.]kè).

No(C?-) – DY200 and ST, who do just this (1): Both mistaken. – RI expelled.

THOU (different from Sw2 'you', in turn not used by

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[38] Not understandable is the contrasting interpretation in note {1} as particle of „remote" [sic!].

Dyen): **1. ti** (QE under 'you' unspecified). = RI175, ST87a. DY: Sic., G., Alb., TOg., T. TI.
- From the general PIE PK1097 *$t\bar{u}$* 'du/thou' > PAlb. *$t\bar{u}$: HU116 "thou, you [sg.]". DM386 (unspecified), ~ OR455.

Yes(C+) – DY200 with many others, = RI, and ST: OK.

TONGUE (SW44): **gjuh**|ë,a {f.}; YL: Geg gju|a; Pl. gjuhna; (also 'language'). = RI179, ST88. DY: Sic. GLUX; G., Alb.: GJUHENA; TOg. GUE, T. GJUHE.
· DM342 has only a secondary notice denying a relation with *qúaj* 'to name'.
- (1) Nowhere accepted is a derivation from PK402 *$gleh_3gh$-* 'tip', neither as (1a) a direct derivation, as assumed by ST88, nor (1b) as a loan via Att. Gre. γλωσσα.
- (2) Semantically not convincing: From PK350 *gal-so* 'schreien/to scout' (no attestations for tongue): after OR138 via *$g\mathring{l}$-so > PAlb. *$glus\bar{a}$, because of *gl-* in dialectal forms (see following). Therefore:
- (3) Probably from PK223 *$d\eta\hat{g}hu\bar{a}$* 'tongue', metathesized to *$\hat{g}hnud$-, plus -*sǩe*, with *gn-* > *gl-* > *gj-* (as in *gju* 'knee'): HU71; the verb *gjuanj* with the same development belongs to the second meaning 'language'.

Yes(C+) – DY201: Too doubtful with (3); – ST (1a): Mistaken; – RI iso.: Highly questionable.

TOOTH (FRONT) (SW46): **dhëmb**|i {m.}. = RI180, ST89. DY: G. DHAM B I; Alb. DAM B I; Sic., TOg., T. DHEMB.
- With PK369 *$\hat{g}omb^h$-o-s* 'id.': HU58; ~ DM158, extended in DM-O via PAlb. *δamb;~ OR82 via < PAlb. *$dzamba$.

Yes(C+) – DY002 and ST with Slavic forms: OK. – RI180 expelled (!).

TREE (SW23): **1. dru**|ri, (Geg drû|ni) {m. < older n.}, (so BFU, SI; vs. QE only 'log'!). = RI181, ST90b. DY: G., Alb. DRUJA.
- From PK214 *$d(o)ru$* > *dru(n)*-: HU56 via PIE *dru-n; the −*n* was strictly refuted by DM146 (however reintroduced as analogical -*n*-stem in DM-O), confusing regarding loan < OCS. (not maintained in DM-O), finally via *dru-s*; OR76 via < PAlb. *$druwa$, declaring the /-*n*/ as secondary or taken from the plural forms.

Yes(C+) – DY206 with Slav. and Gmc. forms = RI, and ST: OK. DY207 too doubtful with = Gre. DENDRO.
2. (QE 1.) **pem**|ë,a. TOg. PEME. In dictionaries for '(fruit) tree' (!),

which enlightens the following HAL*455* 'Baum (G.), 'Frucht', loan < Lat. *pōmum*, plus other loans in Kor., Sic., and T. – DY001 "unique", so far OK. In Bon384 only « fruit ».

TWO (Sw12): **dy**. = Ri183, St91. DY: Sic., Geg, TOg., T. DY.
- With Pk228 **du̯i > dúi > dy*: ~ Hu56 via a PIE dual **duuai*, ~ Dm151.

Yes(C+) – DY002 cognate with all others, = Ri, and St: all OK.

WALK (~ Sw65 go) verb: **1.** (Qe 1. for 'go') **shkoj** (në/më këmbë) '(I) go (by/on foot), drive, leave'. Misprinted in DY: Geg SKKOJ.
- Not from LIV346 **keih₂* 'to start to move', wrong anlaut (in spite of Arm. *čogay* 'I went').
- Hardly from LIV232 **h₁ei̯* 'to go' > **(n)- ik-ē >* : Dm-o unexplained under *ik(i)* above as "Other Alb. forms" 'to go away' (thus moving away from printed Dm119 under *(n)ço|j*, Buzuku *ençúom* 'to carry/send away').
- Also hardly from LIV593 **steigʰ*- 'schreiten/walk' > *shtég-onj > sht(e)kó(n)j*: Or421; with a detour Hu114 via verbative suffix *–onj* from PIE noun **stoiGh*, where, however, the tectal would be preserved.
- Rather loan < Lat. *sequor* 'to follow', with typical anlaut and ending, perhaps influenced by SHr. *skočiti* 'jump':

No(L) – DY013 iso.: OK. – St92a 2. sh-k-c (!?) opaque (see above).

Qe **2. eci**, écën 'to hike, walk, pad' (Yl: 'to run'). ~ Ri185. DY: Sic. JEC; T. ME ECUR, ME BARITUR; TOg. ECEN (AOR. ECA). – (Neither in Pk nor Hu).
- (1) Hardly from LIV232 **h₁ei*-'to go',
– plus *–k*, which yields the semantic different *ik(i|ënj)*: Dm-o 'to go away' uncertain from QIE **h₁(e)iK*; in the referenced Dm379 indirectly under *shtrij*, "eventually (ur)alb. **ik-ē̄*", as parallel for *ē̄ > o* (deverbative): ? > *shkoj* (see below), or,
– plus *–to* (normally a nominal suffix): Or85 < **etës* < PAlb. **aitatja*; too far-fetched, implausible; in particular the */-ci/* should arise from */-k̂/*, while */t/* would be preserved; moreover, the same root is demanded for 2. *vete* below! Not convincing.
- (2) Rather loan < South-Slav. *ići* 'to go', influenced by < Trk. *yetiş*- 'reach, catch up with' with dialectically preserved */y/*, and */tiş/* late *>/ci/*.

No(L) – DY012 iso.: So far, OK. – Ri expelled.

3. vete, vete (aor. *vajt|a,-ur*) 'to go (away), apart'. DY: Alb., Geg VETE (INF. VOJT): (Neither in Hu nor Dm).
- Hardly from [LIV664] **u̯eh₂dʰ*- 'to stride through', (cf. Alb. *va* 'ford'): So Or502 via < PAlb. **wadmi* displays irregular vocalism,

his alleged cognate Arm. *gam* '(I) come' belongs to LIV196 $*g^heh_1$-
'to come, to go'; not convincing.

- Possibly, however, far-fetched, from the same [LIV232, with ?]
$*h_1ei̯$- 'to go' (already claimed for 2. eci (1) above), of which the
$*i̯e$ pres. should have been analogically transformed to $*u̯e$, after an
otherwise unattested aor. Alb. $*u̯o < *ēi̯ < *h_1e$-$h_1i̯$. (LIV, with
literature; this alleged sound law is weakly established in Hu155,
not in DM44[1.3.1]).
- Only [PK83 [4.]] $*h_2uh_1$-t- 'to wander hither and thither' makes no
difficulties (cf. Engl. to wander, went).

No(C?+) If so, – DY013 these two isolated: False. Not yet settled.
  4. **iki**/ika/ikur, rather 'escape, flee, go (away?)'. ST92 1. i-k, not
  interpretable.
No(C?-) – ST together with and under same code as third entry above,
regarding both as IE cognate: highly questionable. – 5. Other
existing forms not used.

WARM (WEATHER) (SW see below): i/e **ngroh|të**/ët. =
RI186, ST93b. DY: Sic. NGROXT, Kor. NGROXETE; T.
NXEHTE; Geg, Alb. NGROFET.

- From Pk493-4 $*g^uher$- 'heiß, warm' $> gu^{uh}r$-$eh_1 >$ PAlb. $*en$-$grē$-
$sk̑$: So Hu98 'slightly warmed' via $< *h_1en$-$g^{uh}orē$-$sk̑'$-oh_2. Similar
DM298; OR296 (only the verb) via $<$ PAlb. $*en$-$grāja$.

Yes(C+) – DY002 = ST: OK. – RI expelled.
  - - - (Sw93 instead: hot, as opposite to cold): i/e **nxehtë** 'hot'.
  DM286 *ndez* 'to set on fire' $>$ verb. adj. Neither this, nor
  the following used by any candidate:
Besides **valë** 'wave, also of boiling water > hot' $<$ Pk1140 [6.]$*u̯el$- (also $>$
Arm. *gol* 'heat'): DM407; while QE and OR493 both give only the
meaning 'wave'.

WATER (SW75): **ūj|ë**,i {m.}. = RI188, 94a. DY: TOg., T. UJE;
Sic. UJ; G., Alb. UJT. – All start from forms of PK79 [9.]
$*h_2u̯(e)h_1$-:

- plus –*r* $>$ [PK80 [9c]] $*h_2u̯(e)h_1$-$r̥ > *(h_2)uh_1r̥$- $i̯o >$ PAlb. $uri̯ > uje$:
In DM-O only solution, with formant –*io*. With a similar
formant, however
- from the noun with -*d*-infix, PK79 [9b)] $u̯od$-$r̥$- 'water' $> *udr$-iom:
So Hu121, noting several N-Geg attestations with (long!) $ū$-
, which – strangely enough – DM401 missed, however
required as normal result of a vanished –*d*-. Similar OR483
via PAlb. $*udrjā$. · A variant with lost /r/ $> wedo$, also
assumed[39] as source for Arm. *get* 'river', could have
yielded PAlb. $udo(h_3) >$ via hiatic -*j*- $> ujë$. Albeit unsolved

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[39] Stempel 1994: 306.

details:
Yes(C?+) – DY004 and Sᴛ with WATER-forms: OK. – Rɪ
expelled!

WE (Sᴡ3): **ne.** = Rɪ189; Sᴛ95 nam, ne. DY: Sic. NA; TOg.
NEVE, NE; T., G. NE.
  • From general PIE (Pᴋ758) *nōs > *ne*: Hᴜ96 *NA*, Dᴍ291,
    Oʀ289 *ne*.
Yes(C+) – Dʏ002 and Sᴛ with *ne*-forms: OK. – Rɪ expelled from
screened dataset and replaced by 189a *us* (acc.).
Additional meaning for Alb. *na* 'here you are'.

WHAT (Sᴡ7): ç(-farë/-ka). Rɪ191 ç; Sᴛ96 së (?).DY: Sic.,
TOg. CE; G., Alb. TSH ~ ç', T. CFARE. · Dᴍ no attempt.
  • From Pᴋ 46 $^{2.}$ **kʷei-* > PIE *kʷid > PAlb. *tši > *ç*: Oʀ2 *çë/ç'*.
    Hᴜ7 *Ç'*, after citing many possibilities, remains doubtful;
    cf. the same loss of auslaut in Arm. –*č* 'id.' (SHr. *ča*, cited
    by Oʀ, seems to be a ghost word or typo).
Yes(C+) – Dʏ007 many cognates, = Rɪ, and Sᴛ: OK, by whatever
explanation.
(Different: Hᴜ110 **SE** 'what?, than' < Pᴋ644 *quem, is rather used as
conjunction).

WHEN (Sᴡ skipped later): **kur.** = Rɪ192. DY: Kor. KUUR; all
others KUR.
  • (1) Perhaps loan from Lat. *quā hōrā* 'at what hour, when':
    HAL*480*: Minor difficulties in the vocalism and far-
    fetched. More obvious, with only minor semantic
    difficulties arise
  • (2) from Pᴋ 47 $^{3.}$**kʷu- +r*. Hᴜ84 via **ku+Vr(V)*, refuted as
    unnecessary by Dᴍ227 and Oʀ206. The everywhere
    adduced Lit. *kur̃* 'where', Arm. **пр** <*or*> [40] (Pᴋ and Oʀ "ur")
    'what', have different meanings.
Yes(C+) – Dʏ200 (2) OK. – Rɪ iso. (1)?: Presumably mistaken. –
Not in Sᴛ.

WHITE (Sᴡ90): i/e **bardhë**. = Rɪ194, Sᴛ97c bardë (typo).
DY: G. BARDH, TOg. I-BARDHE, T. I, E BARDHE.
  • From Pᴋ139 *bherh₁ĝ-o 'bright' > PAlb. *bʰorh₁ĝ-o > *barða-*:
    Hᴜ0 (against an o-grade, because elsewhere not
    confirmed); ~ Dᴍ90 via o-grade; similar Oʀ17 via PAlb.
    *bardza.

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[40] If belonging here at all, regrettably circumvented in Stempel 1994.

No(C-) – DY004 and ST "iso." = OK. – RI expelled.

WHO (SW6): **kush**. = RI195, ST98. DY: G., Alb., T. KUSH; Sic., TOg. KUS, CILI.

- From PK647 $^{3 \cdot}k^u$u- > PIE $*k^u u\text{-}s$ > $ku\text{-}\acute{s}a$ (cf. > TokB. *kuse*): HU84, DM228, regarding the *–s* as "some pronominal element", in OR207 via PAlb. $*ku\text{-}\check{s}a$, the latter as "demonstrative **so-*"; but why here another function than the m., f. ending in PIE $k^u i\text{-}s$?

Yes(C+) – DY200 with many cognates = RI with all others = ST: OK.

WOMAN (SW16): **grúa**,-ja; (Geg grue; pl. gra). = RI202, ST99a. DY: G. not found. Sic., T., TOg., Alb. GRUA.

- (1) From [PK473] $*g^u e(h_1)n\text{-}ah_2$ {f. ā-stem} 'woman', can be derived
- regularly, the semantic different Alb. *zonjë* 'lady, madam'; however, a form Geg *zotnja*, cited from Bishop P. Budi around 1620 (cf. Ködderitzsch 1994:67) might – if not a folk analogy – suggest a derivation from Alb. *zot* 'lord (also addressing god), boss', derived either from < PIE $\acute{d}ib u$- (DM-O/184, phonetically better), or from $*\underset{\cdot}{u}i\hat{k}$- (HU137, HAMP95, semantically preferable, with many additional assumptions) + *-potis*[41];
- hardly Alb. *grua*, via an elsewhere as fem. weakly attested extension $*g^u n\bar{a}\text{-}ns$ > $gn\bar{o}n$ > $gr\bar{o}n$: so Matzinger (2000), not regarding that the anyway far-fetched */-n/* in that position would be preserved in Geg dialects (HU66, DM180 with literature), which they are not; further unnecessarily, but desperately sticking to an alleged Gre. *-iu*-suffix, and refuting the following in particular with debatable semantic considerations. Therefore:
- (2) From [PK390] $*\hat{g}r\acute{e}h_2$- 'ripe, ready (of grain, grown up of people[42])' via > PAlb. $gr_{\cdot}w\bar{a}$ (cf. Geg *grunë* 'grain, wheat' from $*gr_{\cdot}n\bar{a}$, JA84): HU66 $\hat{g}r\acute{e}h_2\text{-}us$ > $\hat{g}r\acute{o}us$ > *grua/e*, describing the conditions of this phonetic development p155 "When a final consonant cluster was lost after [PAlb.] o, a diphthong resulted … ."; DM-O(180) via QIE $\hat{g}r\acute{e}h_2u$- > PAlb. $gr\acute{a}u$-. OR125 assumes < PAlb. $*gr\bar{a}w\bar{a}$, which should have yielded ***grovë*. Possible and straightforward would be QIE $\hat{g}r\underset{\cdot}{u}eh_2$- > Buzuku *gruo* > *gru|a/e*. The

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[41] From that stem, we have the much more obvious derivations OInd. *pati*, Gre. πόσις, πότνια 'lord, lady'.

[42] Only there secondary > 'old'.

semantic doubts Matzinger levelled against this solution, overlook that similar meanings appear in ONor. *karl* 'husband, freeman, etc.', *kerling* 'wife', which can never go back to 'old, broken', as he suggests for this solution. This is further semantically not as singular as it seems, if we regard that (2) is used as standard, vs. *zonjë* (1), for the upper class or to honour someone (cf. Engl. *queen* from the same root). Contrary: *robinjë* {f.} 'unripe person, serf (YL224).

No(C?-): – With (1) both, Sᴛ and Dʏ203 (doubtful). – Rɪ "iso.", because old cognates replaced; not gradable, because the case remains debatable.

Beside **fém|ër**,ra 'wife, female'. G.: Dʏ000 no entry. Hᴀʟ*126* Tosk *femën* < Lat. *fēmina*.

YELLOW (Sᴡ89): i/e **verdhë**. = Rɪ207. Dʏ: G., Alb. VERDH; Kor., T., TOg. I-VERDHE. · Hᴜ and Dᴍ no entry.

• Hᴀʟ*646*: loan < *vir(i)de* < Lat. *viridis* 'greenish'; followed by Oʀ499.

No(L) – Dʏ007 Alb. iso. = Rɪ: OK.

– Sᴛ100 comes with an idiosyncratic entry *delpër*, obviously a misprint from the typical Russian phonetic transcription of *gjelbër*; even then false: see GREEN above.

you (Sᴡ2 unspecified): here '2nd P.Pl' **ju**. Not used by candidates.

• From Pᴋ513-4 [1.*]*iū-*: Oʀ159 < PAlb. *ju*; Dᴍ209, in Dᴍ-O more decisive < IE* *iu(H)-*? Only "possibly" (for the oblique cases) < *usm* < *ues*, which is decisively favoured by:

• Hᴜ78 "from the oblique stem *wes*".

Results

That in such a tremendous work, as undertaken by the three authors, e.g., Isidore Dyen with 95 languages with 200 controlled meanings each, errors occur, is not astonishing at all, and unavoidable. However, the relatively high amount of errors makes the data a bad source for the purpose for which they were designed, and still are (mis)used. Note that "errors" are only conceivable if under the required semantic restrictions and contents there are cognates or not. Note further that we have 107 entries, because those of Dyen are included that were part of a

former Swadesh list or are ambiguous, e.g., 'walk : go'. Like this one, many questionable cases are due to the unprofessional description of Swadesh's test list (cf. head, claw, warm, go, skin, etc.). Thus, in some cases we cannot decide which response represents Albanian proper, and had to evaluate additional forms.

To sum up probably:

- 42 lemmata of the Swadesh list are IE cognates under the given meaning ("C+"), including 6 "C?+" of debatable sources); plus 3 only in Dyen, including 1 questionable; 5 new solutions are proposed here.
- 33 are of IE origin, however, do not fulfill the tight semantic demands for lexicostatistical computations, i.e. there appear no cognates in the same meaning frame ("C-"), including 10 "C?-" of debatable sources; plus 2 only in Dyen; 8 new solutions are proposed here.
- 34 appear to be loans ("L"), including 14 L? questionable or secondary cases; thereof 5(4?) Gre.; 22(6?) (V)Lat., Itn., Rmc., 1? Kel.; 3(2) Sla.; 3(1) Trk.); plus 1 only in Dyen; 6 new solutions are proposed here.
- All questionable cases, where the source of the Albanian respond(s) remains debatable, may overlap with other results. All these could as well go back to an aboriginal substratum.

It must be mentioned here that – due to the Zipf distribution – the above amounts of replacements are not at all representative for Albanian in general, where we encounter tremendous more non-IE lexemes (up to 90 per cent, cf. Holm 2005, 2008).

Applied to the three reviewed lists, and now regarding also the secondary responses, the scores are:

In **Dyen's** list, 13 of the 97 entries appear to be erroneously coded, plus 6 minor faults, equating ~ 14%. Additionally, he is often unaware of giving grammatically wrong Albanian forms, e.g., under 042 FAT, 115 TO RAIN.

Ringe[43] had many words in his original list, which he later expelled because they did not fit into the "perfect" phylogenies of his mathematics advisors. Methodologically, this must be called a "Procrustean" procedure, for the qualitative decisions of the linguist have to precede quantitative computations. In any difficulty, it is rather the algorithm to be blamed, and the resulting phylogenies then, must be judged mistaken, in particular the various peculiar positions of Albanian. Astonishingly, also ~ 16% errors turned out from the 8 presumed mistakes and 3 questionable ones of 59 (non-expelled items) in Ringe's screened dataset of 2007.

Starostin alone kept tightly to the last Swadesh list with 100 entries, of which he scores the minimum of 10 presumable mistakes, plus a maximum of 12 minor ones; this is partly due to the fact that he marked loans by a minus sign, and thus allows detecting differences here, which remain concealed in the other lists.

Questionable employment of these data

Knowing that the amount of substrata and replacements by loans, and consequently that of the residues, does not bear any evidence on the genealogical relationship of Albanian with any other language, and further that the amount of common residues between any two languages, when the amount of residues in any of the two partners is smaller, must also be smaller, any conclusions from these surface numbers of agreements alone are mathematically erroneous. The same applies to the number of presumed internal innovations against the other IE languages, in our list *ca.* 33. Regrettably, even today scholars use exactly these ones, unaware of Holm (2003 passim), where the consequences of their stochastic relationships have been demonstrated.

Additional to this logical flaw, basing these computations on Swadesh lists has even more distorting side effects: Because they are designed to contain those lemmata with the highest resistance to borrowing, the

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[43]Ringe, as the only professional Indo-Europeanist of these, rejects glottochronology, and only uses his list for lexicostatistical subgrouping.

differences between many languages are so small that the statistical dispersion surmounts them, and mixes inextricably with the linguistic mistakes, and unsolved cases, e.g., in Albanian, about 28.6%. As a result, the amount of about 36 (42-6) clear form-meaning relations just allows computationally distinguishing Albanian from other languages; its genealogical relationships, however, if only based on this small amount of surface data, remain extremely unreliable and may even be false or true by chance.

Third, the strict limitation in the use of such meaning lists to tight semantic agreement is also responsible for many false results, because Engl. *hound* proves relationship with Grm. *Hund* in spite of their shifted meanings, so does Lat. *homo* with OHG. Bruti-*gamo*/OEng. brȳd-*guma,* both expelled by traditional rules of lexicostatistics. This understood, it becomes clear that the only methodological choice that remains is the use of complete, etymologically based lists and additional amounts of data, as particularly applied by Holm 2008.

Outlook: Lexicostatistics and the position of Albanian

Early loans from Greek and Latin (cf. Ölberg 1993) suggest that Albanians around the last decennia, if not millennium, BC already inhabited the same area as today. Albanian can be assumed to have separated from the same amount of Balkan-Indo-European vocabulary as Greek and Armenian (cf. Holm 2007, 2008), and this separation should have happened approximately in the same historical era. Because the latter languages, however, since that time, and namely since Roman times, underwent quite different amounts of change, this is a further argument against the questionable "clock" assumption of glottochronology[44]. It suggests again that not only these changes arise by socio-historical impacts, which of course can never be foreseen or computed. Moreover, already Jokl (1963) has amply demonstrated the linguistic position

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[44]That some glottochronologists are proud of expelling loans, and count only the core vocabulary with tight meanings is even worse, as demonstrated in argument (3) above.

of Albanian between the Western and Eastern (closest to Gre. and Arm.) part of the Indo-European languages, completely in contrast to Ringe/Warnow/Taylor (2002 , with Gmc.), Gray & Atkinson (2003, with Iranian [sic!]), Starostin (2004, Alb. correctly with Gre. and Arm., however, mixed up with Aryan amongst the European part). Only the results of Holm (e.g., 2007:209) are in full agreement with the study of Jokl, and the statement in Huld (1984:161), "Albanian is a central idiom, transitional between Meillet's 'North-western' and a looser South-eastern group of which Greek and Armenian are the most prominent members", is backed up with many common innovations. This has recently again been confirmed by Matzinger (2000:82, with literature).

References (with acronyms for frequently cited authors)

BO = Boretzky, Norbert
  1976   Der türkische Einfluss auf das Albanische; Teil 2, *Wörterbuch der albanischen Turzismen*. Wiesbaden: Harrassowitz.

BON = Bonnet, Guillaume
  1998   Les mots latins de l'Albanais. Paris: L'Harmattan.

BFU = Buchholz, O.; Fiedler, W.; Uhlisch, G.
  1990   *Wörterbuch Albanisch – Deutsch*. Leipzig: Verlag Enzyklopädie.

Çabej, Eqrem
  1976-2002 (in progress): *Studime etimologjike në fushë të shqipes*. Tiranë. (Up to now 6 volumes from letters A-RR).

Derksen, Rick
  as 2008, in progress. Slavic inherited lexicon. online www.indo-european.nl/cgi-bin/query.cgi?basename=\data\ie\slav&root=leiden.

Djahukian, Gevorg B.
  1990   A variational model for the Indo-European consonant system. In: *Historische Sprachforschung,* 103-1: 1-16.

DH[45] = Dhrimo, Ali
  2005   *Fjalor Shqip-Gjermanisht*. Tiranë: Infbotues.

---

[45] I thank R. Ködderitzsch, Bonn for the attestations from Dhrimo, cited DH##.

Dм = Demiraj, Bardhyl
    1997   *Albanische Etymologien. Untersuchungen zum Albanischen Erbwortschatz.* Amsterdam & Atlanta: Rodopi.

Dм-о = Dм in the shorter, formalized, and in many cases updated online-version of the "Albanian inherited lexicon" unter http://www.indoeuropean.nl.

Demiraj, Sh. (aban)
    1993   *Historische Grammatik der Albanischen Sprache.* Wien: Östereichische Akademie der Wissenschaften.

Dyen, Isidore; Joseph Kruskal; and Paul Black
    1992   An Indoeuropean classification: A lexicostatistical experiment. *Transactions of the American Philosophical Society* 82-5.

Dy = Dyen, I., J. Kruskal, and P. Black
    1997   COMPARATIVE INDOEUROPEAN DATABASE COLLECTED BY ISIDORE DYEN; FILE IE-DATA1. Original URL cancelled. Available at www.wordgumbo.com/ie/comp/iedata.txt.

Embleton, Sheila
    1986   *Statistics in Historical Linguistics.* [Quantitative Linguistics, Vol. 30], Bochum: Brockmeyer.

Eu = Euler, Wolfram
    1985   Körperteilnamen im Albanischen und ihre Herkunft. *Indogermanische Forschungen,* 90: 104-122.

FGS = Cipo, K. et al. (Eds.)
    1954   *Fjalor i gjushës shqipe.* Tiranë. As cited by Huld 1984.

Gray, R. D., & Atkinson, Q.D.
    2003   Language-tree divergence times support the Anatolian theory of Indo-European origin. *Nature, vol. 426:435-8.*

Hag = Haarmann, Harald
    1990   "Basic" vocabulary and language contacts: the disillusion of glottochronology. *Indogermanische Forschungen,* 95: 1-37.

Hal = Haarmann, Harald
    1972   *Der lateinische Lehnwortschatz im Albanischen.* Hamburg: Buske.

Hamp, Eric P.
    1997   A far-out equation. In: *Indo-European, Nostratic, and beyond; Festschrift for Vitalij V. Shevoroshkin.* Washington DC: Institute for the Study of Man. JIES Monograph 22.

He = Hetzer, Armin
    [3] 1998   *Albanisch-deutsches und deutsch-albanisches Taschenwörterbuch.*

Hamburg: Buske. [Based on Fjalor i shqipes së sotme, Tiranë 1984].

Holm, Hans J.
  2003   The proportionality trap, or: what is wrong with lexicostatistical subgrouping? *Indogermanische Forschungen*, 108: 38-46.
  2007   The new Arboretum of Indo-European 'trees'; Can new algorithms reveal the phylogeny and even prehistory of Indo-European? *Journal of Quantitative Linguistics*, 14-2: 167-214.
  2008   The distribution of data in word lists and its impact on the subgrouping of languages. In: Preisach, C., H. Burkhardt, L. Schmidt-Thieme, and R. Decker (eds): *Data Analysis, Machine Learning and Applications*. Proceedings of the 31st Annual Conference of the Gesellschaft für Klassifikation e.V., Albert-Ludwigs-Universität Freiburg, March 7-9, 2007. Berlin: Springer, 629 – 636.

Holst, Jan Hendrik
  1998   Ein bisher unentdeckes Lautgesetz im Albanischen und damit im Zusammenhang stehende Betrachtungen. *Historische Sprachforschung,* 111-1: 83-98.

Hᴜ = Huld, Martin E.
  1984   *Basic Albanian Etymologies.* Columbus OH: Slavica Publishers, Inc.

Jᴀ = Janson, Bernd
  1986   *Etymologische und chronologische Untersuchungen zu den Bedingungen des Rhotazismus im Albanischen; unter Berücksichtigung der griechischen und lateinischen Lehnwörter.* Frankfurt/M: Lang. - Unaware of Huld!

Jokl, Norbert
  1963 (posthumous): Die Verwandtschaftsverhältnise des Albanischen zu den übrigen indogermanischen Sprachen. *Die Sprache* 9: 113-56.

Klingenschmitt, Gert
  1982   *Das altarmenische Verbum*, Wiesbaden: Reichert.

Kloekhorst, Alwin
  2008   *Etymological Dictionary of the Hittite Inherited Lexicon.* Leiden: Brill.

Kluge, F., bearb. v. Elmar Seebold
  2002   *Etymologisches Wörterbuch der deutschen Sprache.* Berlin: de Gruyter, 24th ed.

Kober, A.E.
  1934   Some remarks on color in Orek poetry. The *Classical Weekly,* 27: 189.

Ködderitzsch, Rolf
　　1994　Alb. *grua, grue* ‚Frau, Weib; Ehefrau, Gattin'. In: Bielmeyer, R.; Stempel, R. (Eds): *Indogermanica et Caucasica; FS für K.H. Schmidt z. 65. Geburtstag*. Berlin, New York: W.de Gruyter.

Ködderitzsch, Rolf
　　1995　Thrak. **buros* 'Mann', in: *Studia linguistica, Festschrift für Ivan Duridanov* [Archiv für bulgarische Philologie 3]. Sofia: Kliment Ochridski.

LIV = Rix, H.; Kümmel, M.; Zehnder, Th.; Lipp, R.; & Schirmer, B.
　　2001　*Lexikon der indogermanischen Verben; die Wurzeln und ihre Primärstammbildungen.* 2nd. ed. Wiesbaden: Reichert.

Lubotsky, A.
　　1985　The PIE word for 'dry'. *Historische Sprachforschung* 98: 1-10.

Lucht, Martina
　　2007　Der Grundwortschatz des Altirischen. Available as pdf at http://hss.ulb.uni-bonn.de/diss_online.

MAR = Matzinger, Joachim
　　1998　Review of Vladimir Orel, *Albanian Etymological Dictionary*. Leiden, Brill. *Die Sprache* 40-2: 229-41.

Matzinger, J.
　　1997　Albanisch *unë* 'ich' im System der albanischen Personalpronomina. *Indogermanische Forschungen* 103: 185-201.

Matzinger, J.
　　2000　Albanisch *grā* 'Frauen'. *Münchener Studien zur Sprachwissenschaft* 60: 75-87.

Matzinger, J.
　　2005　Neue Etymologien zu (alt)albanischen Verben. *Die Sprache* 45,1-2: 81-109.

MBr = Meier-Brügger, M.
　　[8]2002　*Indogermanische Sprachwissenschaft.* Berlin: de Gruyter. [1st Engl. Version 2003. Indo-European Linguistics. de Gruyter Textbook]

MDV = Michiel de Vaan
　　　　continued frequent addenda as footnotes to DM-O(NLINE), Leiden, IEED.

Ölberg, Hermann
　　1993　Die ursprünglichen Wohnsitze der Albaner auf der Balkanhalbinsel. Kurzreferat 1993, via www.albanisches-institut.ch/pdf/text40.pdf, dated 2005/5/7.

Oʀ = Orel, Vladimir
    1998   *Albanian etymological dictionary*. Leiden, Boston, Köln: Brill.

Orel, Vladimir Ė.
    1985   PIE *s in Albanian. *Die Sprache*. Wiesbaden: Harrassowitz.

Qᴇ = Qeli, Albi
    2007   *English-Albanian & Albanian-English Dictionary*.
            www.argjiro.net/fjalor/.

Rɪ = Ringe, Don
    2007   The Indo-European word lists. The parallel wordlists of 24
            Indo-European (IE) languages used in the Ringe, Warnow,
            Taylor 2002 paper (PDF), as available at
            www.cs.rice.edu/~nakhley/CPHL/. Internal date 2007-07-05.
            Also under this URL, his cognation tables, not containing the
            "expelled" entries:
– " –   Unscreened IE dataset. This dataset contains 22 phonological
            characters, 17 morphological characters, and 336 lexical
            characters;
– " –   Screened IE dataset. This dataset contains 22 phonological
            characters, 13 morphological characters, and 259 lexical
            characters.

Ringe, D., Warnow, T., & Taylor, A.
    2002   Indo-European and computational cladistics. *Transactions of
            the Philological Society* 100(1): 59-129.

Sɪ = Simoni, Zef
    1997   *Wörterbuch Deutsch – Albanisch*. Hamburg: Buske.

Starostin, Sergej A.
    2004   Workshop on the chronology in linguistics, Santa Fe; cited
            after Blažek, V., Development of tree-diagram models of the
            Indo-European languages. *The Journal of Indo-European Studies*
            35 (2007): 84.

Stempel, Reinhard
    1994   Zur Vertretung der drei indogermanischen Gutturalreihen
            im Armenischen. *Historische Sprachforschung* 107: 298-309.

Sᴡ = Swadesh, Morris, post-mortem edited by Joel Sherzer
    1971   *The Origin and Diversification of Language*. Chicago: Aldine.

Yʟ = Ylli, Xhelal
    1997   *Das slavische Lehngut im Albanischen*. 1. Lehnwörter. München:
            Sagner.

Attachment: "Cognate classes" and their codes in I. Dyen (1992)

DY000 stands for missing or "unusable" data for that concept.

DY001 contains "unique" lexemes "unsuitable" for lexicostatistical purposes because Dyen found no cognates with the necessary tight meaning.

DY002-019 contain lemmata regarded cognate in this class alone, very often Albanian dialects alone; thus, these entries might be either borrowings confined to Albanian internal ["iso."] or cognates with some further entries. Note in particular that "iso." may consist of residual (homologous) Indo-European forms, which, however, elsewhere have no cognates as primary response for the meaning in question.

DR100-103 are regarded "doubtful" cognates even within the group.

DY200-224 are groups with cognates (including the necessary tight meaning) with additional relations to further groups, where Dyen distinguishes between 2 = faithful, vs. 3 = doubtful. The reason for not incorporating the outside faithful groups are the synonyms additionally listed there.

Rudra-Shiva and Silvanus-Faunus:
Savage and Propitious

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Contemporary history of religion affirms that Roman Faunus
and Silvanus represent the same divinity. This article argues
for the Indo-European parallel between Faunus/Silvanus and
Vedic Rudra/Shiva based on several similarities. They both
possess two names that should be interpreted thus: one as
wild and savage (Silvanus/Rudra) and the other as favorable
and propitious (Faunus/Shiva). The male divinity can appear
in both the plural and the singular, or he can have a
homonymous female counterpart (Faunus/Fauna/Fauni —
Rudra/Rudrānī/Rudrās). They have a cult and abode distinct
from other gods, closely associated with woods and
wilderness. They are in special relation to animals, cattle, in
particular. They have common abilities, such as healing all
creatures. Their destructive character puts them in relation
to the god of war. Poetry is the function of Faunus while
Rudra's sons, the Maruts, accompanying Indra on his martial
exploits, sing hymns of praise.

I

In his seminal work on Vedic religion, first published
more than a century ago (1894), Hermann Oldenberg
describes the god Rudra, mentioning the possible
connection between the savage Rudra and European
woodland deities, Faunus and Silvanus (Oldenberg 1993:
113). The issue was raised again by George Dumézil (1972:
350, 420-421) who notes that Rudra and Faunus/Silvanus
are homologous deities. We believe that these divinities
share a number of common traits and can be traced back to
a common Indo-European source.

Faunus and Silvanus are to be considered two
different aspects of what was originally one and the same

divinity. Their evident similarities are found throughout the Roman tradition and are enumerated as evidence of their shared identity by G. Dumézil (1972: 350-352), K. Latte (1960: 83) and G. Wissowa (1912: 213). Faunus and Silvanus greatly overlap in their divine function. Both are perceived as gods of the wilderness, closely associated with shepherds and invoked to protect cattle. The difference is found in their worship, Faunus generally having an urban, public cult, and Silvanus having a private, mostly rural cult that was later transposed to the Roman provinces. The later, Roman interpretation associated both the divinities with Greek Pan.[1] Furthermore, as to the period prior to Greek influence, there is ambiguity in the ancient tradition as to the battle between Romans and Etruscans. Some claim it was Faunus whose voice was heard from the Arsian forest announcing Roman victory (Dion. Hal. V 16, 2; Cic. *N. D.* II 6), while others name it as that of Silvanus (Liv. II 7, 2; Val. Max. I 8, 5). Although some have tried to argue away the parallel (Dorcey 1992: 33-40), there is a general consensus on the issue among historians of Roman religion, as confirmed in recent publications (e.g. Wiseman 1995: 6)[2].

II

Among the several concepts that link Vedic Rudra with Roman Faunus/Silvanus, the most obvious is their very name and their adjoining epithets. Although no common Indo-European name can be reconstructed for the divinity, there is an obvious conceptual parallel between its Vedic and Roman counterparts. Silvanus was perceived as the divinity of the forest, which is his abode.

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[1] The Roman cults of Faunus and Silvanus were not particularly paralleled by the Greek cult of Pan. As to the literary, poetic interpretation, Pan corresponds to Faunus, and Silvanus to satyr (i.e. Silvani to satyrs) in the classical period. In earlier times, however, the interpretation seems to have been variable, e.g. Accius ap. Cic. *N. D.* II 89: *Silvani melo consimilem ad aures cantum et auditum refert.* Here Silvanus obviously corresponds to the Greek Pan.

[2] T. P. Wiseman's article "The God of the Lupercal" is quoted as an example of recent scholarly consensus on this issue. We couldn't, however, agree with Wiseman in several other respects including his proposal that Pan is "the god of the Lupercal".

The original meaning of the word *silva*, however, as opposed to *nemus* and *lucus,* is wild and uncultivated wood, as attested by Servius (Serv. A. I 130).[3] This association of *silva* with wilderness/wildness has been preserved in modern Romance languages (OF *salvage,* Fr. *sauvage,* Pr. *salvatge,* Sp. *salvaje,* Pg. *salvagem,* It. *selvaggio,* Rom. *sălbatic*) in derivatives from Vulgar Latin *silvaticus/salvaticus* whence came the English word savage, a modern echo of Silvanus (Meyer-Lübke 1935: 653).

Faunus, as mentioned, is Silvanus' urban counterpart. Most sources from Antiquity derive the name Faunus either from *fāri* 'to speak, utter with divine inspiration' due to Faunus' prophetic function or from *favēre*[4] 'to be favorable, inclined', which is accepted by modern historical linguists. The latter explanation is strengthened by the indisputable etymological connection of *favēre* with the sacral terms *faustus* and *favor,* as well as Umbrian *fons. Fons* is found in the formula, repeated many times in the Iguvine tables, *fons pacer* where the meaning is the same as in *volens propitius,* all these implying the favor of the gods. Historical grammar affirms the notion while rejecting that of deriving Faunus from **Dhaunos* (both Walde-Hoffmann 1938: 464 and Ernout-Meillet 2001: 220; Latte 1960: 83. fn. 3), an exaggerated etymology that connects Faunus with the wolf and the Italic tribe of Dauni, mostly based on a Hesychius' gloss listing θαυνός as animal (cf. Altheim 1938: 206-217).

As to the Vedic counterpart, Rudra, the Indian tradition has insisted on deriving it from the Sanskrit root *rud* 'weep, cry, howl, roar' as if the god were one who weeps or howls, a notion that cannot be found in the Rig Veda. It has also been derived from the root **rudh-* (Eng. *red,* Lat. *ruber,* Gk. ἐρυθρός, OCS. *rudъ, Lit. raũdas*) which is untenable as Sanskrit would retain the aspiration. The most probable explanation, accepted by Dumézil (1972: 420-421), that sums up the aggressive character of the god

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[3]Serv. A. I 310: *interest autem inter nemus et silvam et lucum; lucus enim est arborum multitudo cum religione, nemus vero composita multitudo arborum, silva diffusa et inculta.*
[4]Serv. A. I 18: *quidam faunos putant dictos ab eo, quod frugibus faveant.* Macrob. I 12, 22: *Faunam, quod omni usui animantium favet.*

of the Rig Veda is the derivation from the Indo-European root **rud-,* Latin *rudis* (Mayrhofer 1992: II 452-453; Gonda 1964: 112) 'wild, rude', where we find the same semantic concept that was expressed in Silvanus. Due to Rudra's violent nature, the god is often implored to be merciful and benevolent and invoked with the epithets *Bhava* and *Śiva* (Vājasaneyi Saṃhitā 16, 18. 28), both meaning 'favourable, propitious' which find a semantic equivalent in Faunus.[5] The semantic connection having been firmly established, it would also be attractive to link *Bhava* with *Faunus* in etymological terms. *Bhava* is, however, more probably derived from Skr. *bhâvayati* 'be favorable', which is in turn a causative derived from Skr. *bhū-* 'to be', IE **bhū-* (Walde-Hoffman 1938: 465).

These considerations suggest the existence of an Indo-European divinity of the wilderness who is ambiguously characterized as wild and savage (Silvanus — Rudra), yet also as propitious/favorable (Bhava/Śiva — Faunus) once it has been placated. Thus, it is no surprise that Faunus' cult was originally found in Rome within the city walls,[6] and that of Silvanus in the countryside (later extended to the provinces) as attested as early as Plautus: *silvani lucus extra murum* (*Aul.* 674). The same divinity is called favorable once expiated and within the walls of a civilized city, yet wild and savage while remaining outside its walls.[7]

III

The second connection between Rudra and Silvanus/Faunus is their divine function as protectors of

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[5]Rudra's epithet *Śiva* would only later, in Post-Vedic literature, acquire independent existence as the name of the famous Hindu god.

[6]The position of temples in Republican Rome leaves no room for accidents. Thus, gods with destructive character do not have temples within the city walls. For example, not even Mars, a divinity of enormous importance to the Romans, had a temple within the city walls.

[7]Archaeological finds stress this most clearly with innumerable dedicatory inscriptions to Silvanus throughout the provinces. There is only one exception, however, as Faunus' name appears in Africa (DESSAU 3580) on a dedicatory inscription. There are many other instances of Faunus' name appearing elsewhere, but these are not of cultic significance.

cattle. Rudra is invoked as *paśupati* (lord of the cattle), beseeched not to harm the cattle and provide it with health and blessings (RV I 43, 2; 114, 1. 8). The poet offers him hymns "like a herdsman" (RV I 114, 9), and asks health for "our steeds, wellbeing to our rams and ewes, to men, to women and to kine" (RV I 43, 6). In rites he receives what is left from the sacrifice to other gods, but also various other forest products, as Oldenberg sums up: "wild sesame, wild wheat, milk of deers in short, things growing wild or originating from the forest" (Oldenberg 1993: 200).

Silvanus' rural cult is practiced to protect cattle. In the period of the Republic, his rite is described only by Cato (*A. C.* 83) who associates Silvanus with Mars and cites the purpose of the proceeding is *pro bubus uti valeant.*[8] Notably, it is performed in the forest with offerings of grain, fat, meat and wine. In the imperial period, Silvanus is worshiped as the protector of cattle and shepherds as confirmed on the inscriptions set up by *saltuarii* 'rangers, foresters' (CIL V 2383. 5548. IX 3421. X 1409), and as noted by the poets. A good example is that of Virgil (*A.* VIII 601) who calls him *arvorum pecorisque deo.*[9] In time, Silvanus' domain extended to other areas, such as the protection of borders (Hor. *Epod.* 2, 22), a function that was originally associated with the divinity Terminus. A true expansion came when Silvanus was transposed to the provinces, where he merged with numerous local divinities of the autochthonous populations. At that time, various sources seem to imply Silvanus was offered different sorts of sacrifices, from pig and milk to lamb and kid.[10]

With the exception of the Lupercalia where a goat

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[8]Cato *A. C.* 83: *Votum pro bubus, uti valeant, sic facito. Marti, Silvano in silva interdius in capita singula boum votum facito. Farris L. III et lardi P. IIII S et pulpae P. IIII S, vini S. III, id in <un>um vas liceto coicere, et vinum item in unum vas liceto coicere. Eam rem divinam vel servus vel liber licebit faciat. Ubi res divina facta erit, statim ibidem consumito. Mulier ad eam rem divinam ne adsit neve videat quo modo fiat. Hoc votum in annos singulos, si voles, licebit vovere.*
[9]Servius' commentary on the verse affirms this: *publica caerimoniarum opinio hoc habet, pecorum et agrorum deum esse Silvanum* (Serv. *A.* VIII 601).
[10]Iuv. VI 447; Hor. *Epist.* II 1, 143; Mart. X 92, 6-7. It is no surprise to find a great variety in sacrificial offerings, especially in the later period. For greater detail see Dorcey (1992: 27).

and a dog are sacrificed to him, Faunus' cult is scarcely mentioned, but is virtually identical to that of Silvanus. Livy (XXXIII 42, 9-10) writes that the construction of the temple of Faunus was financed using money collected from the fines incurred from cattle-breeders (*pecuarii*). Horace (*Carm.* III 18) describes Faunus' rural rites on the Ides of December, a time when cattle returns from their seasonal pastures to their winter barns. On this occasion, a kid is offered to him, along with wine. Thus, the cult of Faunus/Silvanus mainly revolves around a village economy, maintaining this god's specific function as protector of cattle which does not differ from that of Vedic Rudra.

<center>IV</center>

One of the most distinct traits of Rudra is his wild and savage nature. As opposed to other Vedic gods who dwell in the east, Rudra lives in the north of the Vedic lands as "Mountain-dweller, Mountain-wanderer and Protector of mountains" (Oldenberg 1993: 111). He is depicted as sinister and frightful, so destructive and unpredictable that he must be implored in a sequence of verses to have mercy and spare both people and cattle (RV I 114, 6-8. 10). His shafts are a danger to all living creatures: "May Rudra's missile turn aside and spare us, the great wrath of the impetuous One avoid us. Turn, Bounteous God, thy strong bow from our princes, and be thou gracious to our seed and offspring" (RV II 33, 14). Rudra's malevolence is even more prominent in later Vedic texts, Atharvaveda and Vājasaneyi Saṃhitā where he turns all the more aggressive, a trait that will continue with Shiva in Hinduism (MacDonell 1897: 75-76).

Although Faunus and Silvanus are not literally implored to spare people and cattle, their dangerous nature is evident. As mentioned, Silvanus' savage nature is first observed in his very name. He lives in the forest and wild, uncultivated land. The only two rites of Silvanus described completely by the sources warn of his danger to women. Cato says: *Mulier ad eam rem divinam ne adsit neve videat quo modo fiat* (*A. C.* 83) and Varro, quoted by Augustine (*C. D.* VI 9) describes a ritual in which three guardian deities are invoked to prevent Silvanus from

harassing a mother and her newborn baby. After the baby is born, three men would strike the threshold with an ax and a pestle and then sweep it with a broom so that Silvanus would not enter the house and violate the mother.[11] In his poem to Faunus, Horace asks the god to pass his estate being gentle (*lenis*) to his flocks, implying Faunus can be dangerous to flocks as well (*Car.* III 18).

Silvanus' danger to women is also testified on Latin inscriptions (CIL VI 576. 579) which repeat Cato's prohibition in a similar way. Notably, there is also a myth where Faunus beats Fauna, identified as being either his daughter or his wife, to death with myrtle sticks (Lact. *Inst.* I 22, 11; Macrob. I 12). We should also consider it to be no accident that in the later Greek interpretation Faunus and Silvanus were identified with Pan who instills panic as the similarities between them involve not only cattle and their abodes, but perhaps as they both share a terrifying aspect as well.[12] Another of Faunus' epithets, *Inuus* (Liv. I 5, 2) describes well his savage nature. The sources derived it from *inire* in the sense 'to penetrate' and Servius explained it as *ab innuendo passim cum omnibus animalibus* (Serv. *A.* VI 775).[13] The wild and uncivilized nature of

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[11] Aug *C. D.* VI 9: *mulieri fetae post partum tres deos custodes commemorat adhiberi, ne Silvanus deus per noctem ingrediatur et vexet, eorumque custodum significandorum causa tres homines noctu circuire limina domus et primo limen securi ferire, postea pilo, tertio deverrere scopis, ut his datis culturae signis deus Silvanus prohibeatur intrare, quod neque arbores caeduntur ac putantur sine ferro, neque far conficitur sine pilo, neque fruges coacervantur sine scopis; ab his autem tribus rebus tres nuncupatos deos, Intercidonam a securis intercisione, Pilumnum a pilo, Deverram ab scopis, quibus diis custodibus contra vim dei Silvani feta conservaretur.*

[12] A parallel between Pan and Faunus was the result of a later Roman tendency to associate their own divinities with those of the Greeks (*interpretatio Romana*). This essay aims at establishing an Indo-European original parallel and does not explore the connection with Pan, although he resembles the same pattern in some respects. However, as Dumézil often asserted, Greek mythology presents us with such a mixture of layers that separation of Indo-European elements among them is quite difficult, especially as Pan's first appearance in literature is in the 5th century BC, as late as Pindar *P* III 78.

[13] Serv. *A.* VI 775: *CASTRVMQVE INVI una est in Italia civitas, quae castrum novum dicitur: de hac autem ait 'castrum Inui', id est Panos, qui illic colitur. Inuus autem latine appellatur, graece* Πάν: *item* Ἐφιάλτης *graece, latine Incubo: idem Faunus, idem Fatuus, Fatuclus. dicitur autem Inuus ab ineundo*

Faunus is also exemplified in his festival, the Lupercalia, where young men, acting as his priests (Luperci), run around naked striking women with goatskin thongs to ensure fertility. Cicero explicitly claimed such a custom is older than civilization itself (Cic. *Cael.* 26).

<div align="center">V</div>

Healing and fertility is another aspect of the multi-faceted Rudra. In the Rig Veda, he is said to have "a healing hand" (II 33, 7) and "a thousand remedies" (VII 46, 3) and invoked to remove sickness and ensure health (VII 46, 2; I 114, 1). He is the greatest physician of physicians (II 33, 4), and that ability is passed on to his sons. In the Sūtras, sacrifices to him are prescribed for removing or preventing disease in cattle (see Macdonell 1897: 76). During the autumnal commemoration of the dead, a ritual to Rudra Tryambaka is performed in which sacrificial flat cakes are offered. One chants to him: "You are medicine: medicine for the cattle, medicine for horse and man, prosperity to the ram and mother sheep". The family goes around the fire three times to the left and three times to the right, clapping their hands on the left and right thighs, while young unwed girls pray Tryambaka to grant them a husband: "I would like to loosen myself from here like the cucumber from its stalk, not from there", i.e. from the parental home, not from the husband's house (ŚB II 6, 2, 10; Oldenberg 1993: 237-238).

Although Faunus' festival, the Lupercalia is a custom with many layers and one of the most discussed issues in Roman religion, it is parallel to the autumnal rite to Rudra Tryambaka as a fertility ritual. It was established to repel the sterility of women and ensure their fertility, although it was also perceived as a cult of ensuring health in general, as told by Livy (Liv frg. 63 Gelas. adv. Androm. 35) and Ovid (Ov. *F.* II 425-452).[14] Another interesting

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passim cum omnibus animalibus, unde et Incubo dicitur.
[14]Gelas. adv. Androm. 35 (=Liv. frg. 63): *Lupercalia autem propter quid instituta sint, (quantum ad ipsius superstitionis commenta respectant) Livius secunda decade loquitur: nec propter morbos inhibendos instituta commemorat, sed propter sterilitatem mulierum, quae tunc acciderat, exsolvendam.*

ritual is the *Fordicidia,* the sacrifice of a pregnant cow to Tellus to ensure the fertility of the fields and cattle. Ovid (*F.* IV 641-672) reports it was the problem of a poor harvest that forced king Numa to invoke Faunus who gave him a mysterious reply:

> *morte bovum tibi, rex, Tellus placanda duarum*
> *det sacris animas una iuvenca duas.* (*F.* IV 665-6)

But how is one heifer to give two souls? The queen realised a pregnant cow should be sacrificed. The fertility of the fields was restored with Vestals performing the ritual. In his essay *Fordicidia,* Dumézil found a parallel to this ritual in Indian *aṣṭāpādi*, a sacrifice offered to the Earth and Maruts to ensure the fertility of both plants and animals (Dumézil 1952: 11-25; Littleton 1973: 112-113). Maruts (or Rudrās) assume a number of functions of their father Rudra, and although *Fordicidia* is offered to Tellus, it was Rudra's counterpart, Faunus who instituted the rite. From this we may conclude that it was originally performed to both Earth (Tellus) and to Faunus[15], as it was to Earth and Rudrās in India, providing yet another parallel between these gods.

As to the healing function of Faunus, however, it is mostly found in his female counterpart Bona Dea, a name whose use is said to be taboo in order not to reveal her real one, Fauna or Fatua (Serv *A*. VIII 314). Along with its auspicious connotation that recalls Fauna, the title Bona Dea and her cult imply a contamination of the goddess' original Roman nature with Italic and Greek elements (Kleine Pauly I 926; Dumézil 1974: 355), although healing is not to be considered a Greek addition (Brouwer 1989: 347). It is interesting to note the fact her cult is accessible only to women while Silvanus' is only accessible to men, which draws another contrastive parallel in terms of cult, like that of favorable Faunus and savage Silvanus in spatial terms. Roman tradition depicts her variously as Faunus'

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[15] Dumézil points out other reductions in this Roman ritual in relation to the Indian sacrifice. In India it was a part of other complex rituals, one of them the institution of the new king while in Rome it was an independent festival not related to kingship.

wife (Arn. I 36; Iust. XLIII 1, 8; Lact. I 22, 11) and daughter (Serv. *A.* VIII 314; Tert. *Ad Nat.* II 9; Macrob. I 12).

Inscriptions from Rome testify that Bona Dea had many smaller shrines and a few temples of which the most famous is situated on the Aventine hill having, according to Macrobius, a pharmacy: *quidam Medeam putant, quod in aedem eius omne genus herbarum sit ex quibus antistites dant plerumque medicinas* (Macrob. I 12). Numerous inscriptions are dedicated to her as healer (Brouwer 1989: 346-347), especially on the Tiber island. We may presume she was associated with the cult of Asclepius whose temple was built on the island in 293 BC, making it a sort of medical center (Suet. *Claud.* 25). It is possible that she herself had a temple nearby in what is now Trastevere (Kleine Pauly I 926). It is no accident that the prior mentioned temple to Faunus was also located on the same island and, thus it too was probably associated with medicine. Here again, we may mention Cato's telling remark on Silvanus' rite as performed *pro bubus uti valeant* (Cat. *A. C.* 83).

VI

It is a known fact that in the case of sylvan deities there is a fluctuation between plural and singular. In Greece these are Silenus and Sileni, Pan and Panes, in Rome Faunus and Fauni, Silvanus and Silvani (West 2007: 281). The male sylvan deity can also have a homonymous female counterpart: Faunus and Fauna, Silvanus and Silvana. This fluctuation is found often and from the oldest Roman sources on Faunus. In his comment on Ennius' famous verse *versibus quos olim Fauni vatesque canebant*, Varro adds: *Fauni dei Latinorum, ita ut et Faunus et Fauna sit* (*L. L.* VII 36). This shift between plural and singular as well as between the sexes is highly unusual in the case of Roman deities and is peculiar to the case of Faunus and Silvanus.

In the Vedic tradition, however, it can hardly be said that deities appearing in group form are exceptional. One such a case is that of Rudra, whose sons the Maruts often have the same function as Rudra, and are then simply referred to in the plural as Rudrās (e.g. RV I 39). As to the

female counterparts of a god, they are quite rare in India, as are goddesses in general. Rudra, however, in the later tradition (the sūtras) has a female counterpart, his wife Rudrānī, whose cultic role is, not incidentally, greater than those of other goddesses named after their husbands (Macdonell 1897: 125), which corresponds to Fauna's importance as Bona Dea in Rome.

<div align="center">VII</div>

The previously described aggressive nature of Rudra places him in relation to war and destruction. Rudra's aggression, however, is like that of a "dread beast of the forest" (RV II 33, 11) so that it must be placated and repelled as opposed to the organized martial exploits of Indra, god of war proper, whose grace needs to be attained for help in battle. The Maruts, Rudra's sons (or simply Rudrās), sometimes display the malevolence of their father and are similarly repelled and deprecated. However, they also employ their skills in useful warfare as warriors who accompany Indra on all his celestial exploits (RV I 100. 101. 165). Generally, they are his constant fighting associates (RV VIII 65; X 113).

It is no accident that in describing the aforementioned ritual, Cato says the offerings are given to *Marti Silvano* (Cato *A. C.* 83), both Mars *and* Silvanus, an obvious asyndeton which was mistakenly interpreted as referring to the same divinity (Mars Silvanus). The genealogy of Latinus, the king who receives Aeneas upon his arrival in Italy, serves as another link between Mars and Faunus. The genealogy is listed in several places with Faunus as the father of Latinus, and Picus as the father of Faunus (e.g. Verg *A*. VII 45-49).[16] Picus, the woodpecker, is the animal sacred to Mars and as such is even listed in Carl

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[16]Virgil's genealogy of Latinus is not the only one. In the genealogy of Dionysus of Halicarnassus (I 31) Faunus is the son of Mars. The idea of gods having lived on Earth in some remote historical period should not surprise us; the same was also said of Saturn. Although not much is said of this allegedly historical Faunus, the fact that the Romans imagined him as an Italic king, who instituted the Lupercalia along with Evander, speaks in favor of the god's ancient, pre-civilized nature, and his relation to Latinus and thus to Aeneas underlies his importance to the Roman people.

von Linné's taxonomy as "Picus Martius". While it is common knowledge that the she-wolf suckled Romulus and Remus, Plutarch relates they were also fed by the woodpecker, which brought them small bits of food (Plut. *Rom.* 4, *Q. R.* 21).[17] Picus and Faunus are again found together in Ovid's vivid description of Numa's arrangement with Jupiter. Numa captured them at the spring where they came to drink, so that they would tell him how to expiate a thunderbolt (Ov. *F.* III 291-322). Furthermore, in the Lupercalia, the priests of Faunus are called *Luperci*, derived from *lupus,* the animal of Mars. The cave Lupercal from which they start their running ritual is said to be the place where Mars impregnated Rea Silvia with Romulus and Remus and located next to the place where they were later suckled by the she-wolf. (Verg. *A.* VIII 630; Serv. *A.* ad loc. Fabius, *Ann. Lat.* fr. 4P) Thus, we find a close association between Faunus and Mars, mostly through Mars' sacred animals. As in India, Mars retains the domain of organized warfare (Indra with the Maruts) while Faunus (Rudra, Maruts alone) has the savage aspect associated with the wild and with animal nature.[18]

VIII

Roman literature was influenced by the Greeks from a relatively early period. It is then no surprise to find Greek patterns in Roman poetry, such as invocation of the Muses, rendered as the native Camenae or Pieridae. In turning to the Greeks, however, Roman poets such as Ennius are still aware that there existed a tradition of Roman poetry with its own customs and patterns. In replacing the native *versus saturnius* with the Greek hexameter, Ennius description of the former is *versibus quos olim Fauni vatesque canebant.* In his comment on this verse, Varro explains that Fauns predicted the future by their speaking (*fāri*) (*L. L.* VII 36).

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[17]Plut. *Rom.* 4: ἐνταῦθα δὴ τοῖς βρέφεσι κειμένοις τήν τε λύκαιναν ἱστοροῦσι θηλαζομένην καὶ δρουκολάπτην τινὰ παρεῖναι συνεκτρέφοντα καὶ φυλάττοντα. νομίζεται δ᾽ Ἄρεως ἱερὰ τὰ ζῷα, τὸν δὲ δρουκολάπτην καὶ διαφερόντως Λατῖνοι σέβονται καὶ τιμῶσιν…

[18]Regarding Roman Mars and Vedic Maruts as warriors of Indra, a proposed common etymology that would yield a PIE **māwort-* is doubtful (Mallory-Adams 2006: 433).

Thus, Faunus was originally also a god of poetry and prophecy[19] (Wiseman 2005: 518). Virgil (*A.* VII 81-101), for example, has Faunus prophesy to his son, king Latinus, the arrival of Aeneas and the rise of the Roman Empire. A clear confirmation of the connection between Faunus and *fāri* can be found in another of Faunus' epithets, Fatuus, which, as opposed to Faunus, really is derived from *fāri*. The original meaning of *fāri* in Latin is to sing or to prophesy as can be seen from another fragment of Ennius (ap. Prob. *Ecl.* 6, 31):

> *…Anchisa, Venus quem pulcra dearum*
> *Fari donavit, divinum pectus habere*
> *face vero quod tecum precibus pater orat.*

Etymological parallels of *fāri* affirm the hypothesis. It is paralleled not only by Greek φημί but also by common Slavic *bajati* which has both the connotations to narrate and enchant (Machek 1971: 42), as in English spell.

In accompanying Indra on his martial exploits, the Maruts do more than simply fight. They also sing hymns of praise and are called the singers of heaven (RV V 57, 5). Their song is perceived as powerful since with it they create Indra-might, cleave a mountain with the sound of the pipe or make the sun shine (see Macdonell 1897: 80). Their prayers, hymns and songs are, alongside their fighting, perceived as assistance to Indra. It is significant that Maruts' sing a hymn of praise just after Indra's slaying of the dragon — Vṛtra (RV V 29, 2; 30, 6). This is one of the numerous attestations of Indo-European oral poetry springing from the praise and glory of warriors' excellence in battle. It is said Fauns were the divine patrons of poetry. Besides being a metaphorical broadside on the poet Gnaeus Naevius, Ennius' verse could also be literally interpreted: '(with) verses which Fauns and poets have once sung'. We have here a confirmation of Fauns not

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[19] The meaning of both poetry and prophecy is also confirmed in the other word used by Ennius — *vates* that preserved the meaning of poet and prophet in later times as well. The same was already said of *fāri*. *Carmen* and *canere* also have the meaning of prophecy, cf. Liv. I 45, 5; V *A.* VI 99, etc.

only having the divine function of poetry, but literally singing/prophesying (*fāri*) themselves as the Maruts sing. Not surprisingly, no more information on the circumstances of their singing survive as original Roman poetry was early abandoned for Greek models, and sadly all that remains are fragments such as the *Carmen Saliare* and the *Carmen Arvale*, scant traces of what must have been an ancient poetic tradition of its own,[20] sung under the auspices of Fauns. Both poetry and prophecy are confounded as a province of Faunus[21] and, although there are no more places where Fauns are said to sing, there are still indications of Faunus' (or Fauns') prophetic function connected to war in Roman history. It is no accident that Faunus' or Silvanus' voice was often heard after a battle (Cic. *Div.* I 101). One such instance is a voice heard from the Arsian forest announcing Roman victory, in a decisive moment when the nascent Republic is fighting against the expelled tyrant Tarquin. Could this be a distant echo of the same tradition whereby Maruts or Rudrās sing hymns of praise after a battle, e.g. when they celebrate Indra's famous victory over the dragon?[22] If so, this would affirm the inseparable connection between war and poetry in the Indo-European world, in this case related to Faunus and Rudra; this issue, however, calls for a separate study.

Finally, while Rudra's connection to Apollo has often been observed based only on their healing aspect and their destructive nature, associated with the picture of the bow (West 2007: 148), this essay demonstrates a more probable Roman parallel to this Vedic deity, especially as many other parallels exist between Roman and Vedic

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[20] For the existence of the old oral Italic tradition see Fisher (2008: 335-355) who recognizes Italic elements in Ennius such as alliteration, phraseology and *figurae etymologicae* that are a continuation of Indo-European poetry.

[21] Varro *L. L.* VII 36: *Fauni dei Latinorum, ita ut Faunus et Fauna sit; hos versibus quos vocant Saturnios in silvestribus locis traditum est solitos fari futura, <a> quo fando Faunos dictos*.

[22] The argument might seem stretched, but not if seen from a Roman perspective. Namely, a number of words that have both the meaning 'to sing' and 'to prophesy' (fn. 15) demonstrate that the two were perceived as closely connected, almost inseparable to the ancients. Thus, in some places Fauns are said to prophesy, but they are also said to sing.

religion.[23] The great number of similarities excludes accidental occurrence and their existence in the opposite ends of the Indo-European continuum argues for the possible existence of a divinity whose traces and manifestations in other Indo-European mythologies remain to be explored.

References

Altheim, Franz
   1938   *A History of Roman Religion.* London: Methuen.

Brouwer, H. H. J.
   1989   *Bona Dea: The Sources and a Description of the Cult.* Leiden: Brill Academic Publishers

Dorcey, Peter F.
   1992   *The Cult of Silvanus: A Study in Roman Folk Religion.* New York: Brill Academic Publishers

Dumézil, Georges
   1952   *Les dieux des Indo-Européens.* Paris: Gallimard
   1974   *La Religion romaine archaïcque.* Second edition, Paris: Payot

Ernoult, Alfred and Antoine Meillet
   2001   *Dictionaire étymologique de la langue latine.* Fourth edition, Paris: Klincksieck.

Fisher, Jay
   2008   Asterisking Ennius: The *Annales* of Quintus Ennius and the Indo-European tradition. *JIES* 36: 333-355

Gonda, Jan
   1962   *Les Religions de l'Inde, vol. I : Védisme et Hindouisme ancien.* Paris: Payot

Latte, Kurt
   1960   *Römische Religionsgeschichte.* München: C. H. Beck'sche Verlagsbuchhandlung

Littleton, C. Scott
   1973   *The New Comparative Mythology: An Anthropological Assessment of the Theories of George Dumézil.* Los Angeles: University of California Press

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[23]Many religious parallels have been found between Sanskrit and Latin, some of which do not exist in other Indo-European languages, e.g. Lat. *pontifex,* Skt. *pathi-kṛt*; Lat. *flamen,* Skt. *brahman-.* For greater detail see Mallory–Adams (2006: 409-413).

MacDonell, Arthur Anthony
  1897   *Vedic Mythology*. Strasburg: Karl J. Trübner

Machek, Václav
  1971   *Etymologický slovník jazyka českého*. Praha: Československá
             akademie věd

Mallory, J. P. and Douglas Q. Adams
  2006   *The Oxford Introduction to Proto-Indo-European and the Proto-
             Indo-European World*. Oxford: OUP

Mayrhofer, Manfred
  1986   *Etymologisches Wörterbuch des Altindoarischen*. Band I.
             Heidelberg: Carl Winter Universitätstbuchhandlung
  1992   *Etymologisches Wörterbuch des Altindoarischen*. Band II.
             Heidelberg: Carl Winter Universitätstbuchhandlung

Meyer-Lübke, W.
  1935   *Romanisches etymologisches Wörterbuch*. Heidelberg: Carl
             Winters Universitätstbuchhandlung

Oldenberg, Herman
  1993   *The Religion of the Veda*. Delhi: Motilal Banarsidass

West, M. L.
  2007   *Indo-European Poetry and Myth*. New York: Oxford University
             Press

Wiseman, T. P.
  1995   The god of the Lupercal. *Journal of Roman Studies* 85: 1-26
  2006   Fauns, prophets, and Ennius's *Annales*. *Arethusa* 39: 513-529

Wissowa, Georg
  1912   *Religion und Kultus der Römer*. München: C.H. Beck

Walde, A. and J. B. Hoffmann
  1938   *Lateinisches etymologisches Wörterbuch*. Heildelberg: Carl
             Winters Universitätstbuchhandlung

Back Into the Fields and Into the Woods: Old Irish *íath* 'land, field' and *fíad* 'wild; deer; uncultivated land' revisited[*]

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Old Irish *íath* u, n. (later m.) 'land, field' from *peytu- and Old Irish *fíad* u, m. 'wild (animal); uncultivated land' from *weyd^{h}u- have been interpreted by Paul Widmer (2004) as acrostatically inflected and internally derived possessive adjectives based on *pitu- > Old Irish *ith* u, n. (later m.) 'grain, corn' and *wid^{h}u- > Old Irish *fid* u, m. 'tree; wood; forest', respectively. Since this would constitute a quite unique derivational pattern, it is argued that one should rather follow the old view that both *íath* and *fíad* are *vṛddhi* formations. For the lack of the expected stem-final thematic vowel *-o-, three different strategies are proposed.

Paul Widmer's remarkable monograph *Das Korn des weiten Feldes*[1] is basically about the mutual relationship between the two Old Irish substantives *ith* u, n., later also m. 'grain, corn', evidently from *pitu-, and *íath* u, n. (later m.) 'land, field', evidently from *peytu-. Widmer's claim is that the latter started out as an *internally* derived and *acrostatically* inflected *possessive* adjective based on the former, which would further show that in PIE, acrostatically inflected adjectives with possessive meaning could be formed from proterokinetically inflected substantives via the principle of internal derivation (see Widmer (2004: 183-185)). Widmer, however, was unable to come up with more than a single plausible parallel, which is constituted by the pair Old Irish *fid* u, m. 'tree; wood; forest'—evidently from a Proto-Celtic stem *wid^{h}u- attested also in

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[1]Widmer (2004). The most detailed review of this book I know of is Nikolaev (2008).

all of the other branches of Celtic— and Old Irish *fíad* u, m. 'wild; wild animals, deer; uncultivated land, a waste spot, a wild woodland', evidently from *weydʰu-.[2] According to Widmer (2004: 187f.), the latter member of this pair likewise started out as a *possessive* derivative of the former (with the original semantics "'mit Baumwuchs, Wald versehen: waldig, unbebaut, brach, überwachsen, wild, ungezämt [sic] etc.'").

Now the fact that this special kind of allegedly PIE derivational pattern would only be preserved in one single branch of Indo-European, viz. Celtic,[3] and quite possibly even only in one single sub-branch of Celtic, viz. Goidelic, should arouse suspicion, especially since it is received doctrine among those who accept the principle of internal derivation for PIE that by that principle, derivatives of precisely the opposite kind were formed, i.e., proterokinetically inflected adjectives in *-*u*- were based on (**o/e*-)acrostatically inflected abstract nouns in *-*u*-.[4]

Moreover, it is quite unnatural to derive an adjective denoting 'wild' that could take on the specialized meaning 'deer' from a *possessive* formation with original semantics such as 'having trees, being provided with wood'; the more natural alternative is rather to reconstruct an adjective of *appurtenance* with the basic meaning 'in the woods, belonging to the woods, of the woods', as has generally been done before Widmer.[5] As for the seemingly parallel

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[2]The latter Old Irish *u*-stem has a clear cognate in Middle Welsh *gwyd* 'wild, untamed, savage, untilled, uncultivated, woody, overgrown, desolate, desert', but it is possible that this British adjective actually started out as an *o-stem. Note that even if a preform *weydʰwo- with the second *-*w*- preserved ought to have resulted in forms other than that actually attested for British (as obviously advocated by Widmer (2004, 186f.), such a form *weydʰwo- could have easily undergone dissimilatory loss of the second *-*w*-; for possible parallels, see, e.g., Szemerényi (1974, 29 = 1987, 1438 with further references).

[3]To be sure, some (other) instances of remarkable archaic ablaut grades are preserved (only) in Celtic; see, e.g., Schmidt (1980); Widmer (2001); Ködderitzsch (2002).

[4]Widmer (2004) is, of course, well aware of this fact and tries to cope with it by an argument that is in my view speculative and arbitrary on the whole (as amply shown by Nikolaev (2008)).

[5]Cf., e.g., Darms (1978, 437): "*'zum Wald gehörig'." This kind of semantics was, of course, required by the analysis of this term as *vṛddhi* formation, which indeed was the standard general approach for the term

peytu-, locatival-genitival "(place) where the corn is, (consisting) of corn" would make as good sense etymologically as possessive "*having/providing grain".

Accordingly, it makes perfect sense and is indeed best to derive both Old Irish *íath* and Old Irish *fíad* from preforms that had the same semantics as the *vṛddhi* adjectives of appurtenance. As for the morphological details of the preforms, their root ablaut must also have conformed to that of the *vṛddhi* type, so that they would have differed from the classical type of *vṛddhi* formation only in the absence of stem-final *-*o*-.[6] But then the obvious morphological solution for the two Old Irish words will be to take them for the outcomes of perfectly regular *vṛddhi* adjectives of appurtenance, while assuming that their (certainly already pre-historical) athematic inflection was due to some inner-Celtic or maybe even only inner-Goidelic development. As far as I can see, there are even three different reasonable strategies available in order to account for the Proto-Celtic or at least Proto-Goidelic *-*u*- instead of expected *-*wo*-:

(1) One could toy with the idea that *-*wo*- was replaced by *-*u*- analogically on the model of *vṛddhi* formations in *-*o*- that were (at least synchronically felt to be) derived from *-*o*-stems, so that an analogical proportion "basic substantive in *-*o*- :: derived *vṛddhi* adjective in *-*o*- = basic substantive in *-*u*- :: *x*, *x* = derived *vṛddhi* adjective in *-*u*-" could have been deduced. As a kind of typological parallel

before Widmer.

[6]To be sure, one can derive *íath* and *fíad* also directly from expected *o-stems **peytwo-* and **weydʰwo-* (at least by assuming for both a dissimilatory loss of the *-*w*-; see fn. 2 above; as for *íath*, at least Old Irish *cethir* '4 (m., n.)' seems to indicate that Proto-Celtic *-*VtwV*- resulted in Old Irish -*Vth*(-) by sound law, but as far as I can see, one could toy with the idea that in Proto-Goidelic *-*w*- was lost after a *-*t*- as a result of a syllabification *-$*twV*-, and that furthermore that *-*ētw*- there was regularly syllabified as *-*ēt*$*w*-, whereas the numeral '4' showed *irregular* syllabification *-*e*$*tw*- in Proto-Goidelic as much as in Proto-Tocharian, for which see Tocharian B *śtwer*, *śtwāra*, Tocharian A *śtwar*, all from Proto-Tocharian *śä$*tw*-) and take their inflection as *u*-stems as due to a secondary switch from the *o*-stem pattern to the *u*-stem pattern. Actually this strategy was adopted by many scholars before Widmer (see Widmer 2004, 186f.) for *fíad* only, but has to be considered completely arbitrary.

one may quote the two Young Avestan *athematic* substantival forms *haosrauuah-* (the name of a mythical figure) and *dōuš.srauuah-* 'bad fame' aptly and thoroughly treated by Rau (2008), which show insertion of an additional Iranian **a* as a marker of substantivization, but do not show the concomitant thematization that is expected on the basis of the one example given for the morphological process of substantivization of athematic adjectives via insertion of an additional PIE **e* by Schindler (1994: 399).[7]

Of course such an explanation would require that in Proto-Celtic times there existed *vṛddhi* adjectives in **-o-* that could be synchronically taken as being based on substantives in **-o-*. As a matter of fact, in Darms (1978: 364f.) there are only two possible formations of this sort, and the second one quoted beside Old Irish *sám, sáim* 'calm, pleasant' is probably better analyzed differently, viz. the Proto-Celtic adjective **dōmo-* 'pertaining/belonging to the house(hold)' that was basic to Old Irish *dám* ā, f. 'retinue, company'/ Welsh *daw*, etc. 'client; son-in-law'. For a long time that **-o*-stem was analyzed as a *vṛddhi* derivative of a PIE *o*-stem **domo-* 'house(hold)'; see the references given in Bammesberger (1999: 25f.) (and in addition McCone (1992: 194f.)). However, as Bammesberger, l.c.,[8] rightly pointed out, it may be safer to derive that Proto-Celtic **dōmo-* from the respective PIE root noun **dom-/*dem-*.[9] This means that for Goidelic **peytu-, *weydʰu-*, in Proto-Celtic there hardly could have existed many possible models with thematic base nouns. On the other hand, beside **dōmo-* I only know of a single other Celtic *vṛddhi* formation based on an athematic stem, viz. the *vṛddhi* adjective **ḱewno-* that according to a suggestion by the late Jochem Schindler (in class) was reflected by Old Irish *cúan* ā, f., later o, m. 'litter (of pups or other young animals); pack (of dogs, wolves, etc.);

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[7]"**h₂wéh₁-ṇto-* zum Ptz. **h₂wéh₁-ṇt-*", and note also the type of thematic adjective abstracts with *vṛddhi* discussed in Rau (2008, 166, fn. 30).

[8]Followed by Widmer (2004, 35); both Bammesberger and Widmer assume that **dōmo-* is also attested in Celtiberian.

[9]See McCone (1992) for another probable reflex of that root noun in Celtic.

family; band, company' and which, of course, was based on the root noun *$\hat{k}$won-/*$\hat{k}$un- 'dog'.[10]

It may have been precisely the rarity of all of these *vṛddhi* formations that did the trick, that is, precisely because there were so few thematic *vṛddhi* formations available as a formal model, speakers of Proto-Celtic or Proto-Goidelic may have concluded that in *vṛddhi* formations it is only the principle of upgraded root ablaut alone that matters, and not thematic inflection as well—note that in Avestan, in fact, only a few thematic models seem to have been available as synchronic models for the formation of *haosrauuah-* and *dạuš.srauuah-* (see Rau 2008: 167).

(2) There may have been a Proto-Goidelic sound change *-wo- > *-u- in word-final syllables. The problem with setting up such a sound change is that there is no further compelling evidence in its favor,[11] and that actually quite a few Proto-Celtic noun stems in *-wo- such as *$ekwo$- 'horse' and *$marwo$- 'dead' resulted in Old Irish *o*-stems rather than *u*-stems (see Old Irish *ech* and *marb*, both still *o*-stems); in the Proto-Celtic ancestor form of the Old Irish *o*-stem *ard* 'high', viz. *$ardwo$-, the *-wo- was even preceded by a dental. Accordingly, such a sound change could only have been optional or sporadic. As a matter of fact, a typologically parallel Proto-Goidelic optional sound change of *-yo- > *-i- in morpheme-final syllables has been tentatively suggested by Uhlich (1993: 366) and was evidently accepted by Uhlich's reviewer Peters (1996: I-31f).[12] The idea of such a sound change was subsequently

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[10] Note that Schindler's *$\hat{k}$ewno- forms a perfect parallel to the Proto-Balto-Slavic *vṛddhi* formation *$\hat{g}^h$ewro- 'cruel' based on the PIE root noun *$\hat{g}^h$wẹr- 'wild animal' that was so brilliantly reconstructed by Young (2002). (Note that the summary of Young's paper at its beginning is quite misleading—the morphologically weird lengthened-grade proto-form "*$\hat{g}^h$ẹwr-" there must be a typo.)

[11] But see the end of this paragraph.

[12] I do not understand the statement by Balles (1999, 7, fn. 6) claiming that "Uhlich äußert sich nicht explizit, doch geht er wohl von einer Kontraktion von -Cyos zu -Cis aus. Die yo- und die i-Stämme wären dadurch bereits im Frühirischen ununterscheidbar zusammengefallen." As a matter of fact, Uhlich was quite explicit at the end of his paper (on p. 366). Similarly McCone (1995, 6 and especially 2006, 270) seems to

rejected by Balles (1999), but I do not think that her alternative accounts of the forms that seem to me to be Uhlich's two finest examples, *bóchaill* 'herdsman' and *cain* 'beautiful', fare any better. As for *bóchaill*, Balles (1999: 9) sets up the following Goidelic sound law: "-*l'yV*- > -*l'l'V*- > -*L'*, wenn ein unbetonter Vokal vorausgeht [...]: **alalyos* > **alal'l'a(h)* > air. *alaill, araill* (danach auch *aill*), **bōχalyah* > **bōχal'l'a(h)*". As a matter of fact, the Old Irish outcome of what according to her own reconstruction had been Proto-Goidelic reduplicated variants of non-neuter **alyos*, **alyā* 'other' (> Old Irish *aile*), viz. **alalyos, alalyā*, was precisely *al/raile*, whereas *al/raill* is only attested as a neuter form, with -*aill* perfectly matching the non-reduplicated neuter form *aill*, and it is quite arbitrary to claim (as Balles seemingly does) that on the one hand the reduplicated non-neuter *al/raile* owes its -*le* to non-reduplicated *aile*, and on the other hand the non-reduplicated neuter *aill* owes its -*ll* to reduplicated *al/raill*. As for *cain*, Balles (1999: 14) sets up a Proto-Celtic "**kani-*" that she says underwent "Thematisierung im Britannischen", but at the same time she is honest enough to admit that one should have expected a Proto-Celtic adjective in *-*yo*- instead: "Das eigentliche Problem hier ist der *i*-Stamm anstelle des durch gr. καινός 'jung, frisch, neu' bezeugten und daher erwarteten *yo*-Adjektivs. Es handelt sich ja um eine Ableitung von einem *i*-Stamm **konh₁i*- 'Jugend, Neuheit, Frische' [...] mittels -*o*-."[13] Therefore,

think that for Old Irish forms such as *bóchaill* 'herdsman' that evidently do not continue an immediate proto-form in disyllabic *-*iyo*-, Uhlich had only suggested preservation of more archaic *-*yo*- and not as well reduction of that *-*yo*- to *-*i̯*-.

[13] As for the Venetic form *kanei* that Balles refers to *l.c.*, this is in all likelihood a *feminine* dative singular form of an adjective (see Lejeune 1974, 301, 331) and a form that descriptively belongs to an *-*i*-stem. However, pace Balles Venetic *kanei* cannot be used as evidence for a respective inherited adjective in *-*i*-, because for Venetic assuming a sound change *-*C(i)yos* > (*)-*Cĭs* is unavoidable (see Lejeune 1974, 114-120), and a Venetic nom.sg. **kanĭs* from former **kanyos* could have easily been reanalyzed as a nom.sg. form of an old *-*ĭ*-stem. As for Ogam Irish *QUNOCANOS* seemingly quoted by Balles as additional support for her setting up a Proto-Celtic adjectival *-*i*-stem **kani*- that had the same meaning as the *-*yo*-stem attested by Greek καινός, it is certainly true that both this Ogam form and also Ogam *DUCOVAROS* are to be taken as

accepting the sound change *-yo- > *-i- suggested by Uhlich seems to me still an attractive way to cope with at least the two words *bóchaill* and *cain*,[14] which then may provide welcome support for assuming a sporadic sound change *-wo- > *-u- to have occurred in the same proto-language.[15]

Note, however, that there can be little doubt that such a sound change *-yo- > *-i- would have to be taken for an import from the more informal styles into the more formal styles[16]—as a matter of fact, in her 1999 article Balles herself felt obliged to resort to a very similar strategy, viz. that of an "Annahme einer vulgärsprachlichen Synkope",[17] in order to come to grips with various British forms that did not meet her expectations about the original distribution of Proto-British *-iyo- and *-yo-, which was the main target of her paper.[18]

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gen.sg. forms of Goidelic *-i-stems, and not for forms belonging to *-(y)o-stems, but the compound in *-i- that is evidenced by *QUNOCANOS* may have started out as a bahuvrīhi compound with a respective *abstract* *-i-stem acting as second member; and even if we should have to do with an old determinative compound in this Ogam form, neither *QUNOCANOS* nor *DUCOVAROS* could prove the existence of respective Proto-Celtic adjectives in *-i-; actually the existence of these two forms could as well be taken as an argument in favor of setting up a Proto-Goidelic sound change *-yos > *-is, as correctly and quite explicitly stated by Uhlich (1993, 366).

[14] To be sure, with respect to the question of the general distribution of *-iyo- and *-yo- in PIE, I certainly rather side with Balles than with Uhlich, and I also subscribe fully to her claim that in Proto-Goidelic PIE *-iyo- and *-yo- had fallen together in monosyllabic *-yo- (for this claim, see now also McCone 2006, 266-270).

[15] See what Lejeune (1974, 114) wrote on the outcome of *-wos in Venetic, and note that Venetic *.e.kvopet*- was subject to a sporadic syncope that turned the word into *.e.kupet*-, *ECVPET*-, *EQVPET*- (and eventually *.e.p.pet*-, *.e.pet*-); see Lejeune (1974, 120f.). In addition, note that in Anatolian beside *i*-stem forms attested for PIE stems in *-(i)yo- (see, e.g., Kimball 1999, 179 with ref.) a *u*-stem for 'horse' (de Vaan 2009, 198 with ref.) is found.

[16] As per Peters (1996, I-31f.).

[17] Balles (1999, 17f.).

[18] As for this issue, in contrast to her I doubt that the PIE distinction made between *-iyo- and *-yo- fared any better in Proto-British than in Proto-Goidelic (see Peters 1996, I-31f. with ref.), and I also doubt that she was more successful in establishing rules for the distribution of Proto-British *-iyo- and *-yo- than Schrijver (1995, 280-324) has been. She also did not

Now given that words denoting 'herdsman' and 'beautiful' constitute the most plausible examples for that sound change, that is, words that may have been used quite often in the vocative, one may toy with the idea that *-yo- > *-i- had started out precisely in the vocative, a case known to undergo irregular reduction quite often.[19] But if one is

take into account the evidence from Continental Celtic. As it seems, the PIE disyllabic suffix *-iyo- forming adjectives of appurtenance (that could even be derived from abstract root nouns, which is the source of the ἅγιος type) could take on the shape *-yo- also in that branch of Celtic: (1) there are some ethnics of obvious Celtic origin attested in the Northeast of Spain in both literature and inscriptions that end in -rro- which clearly comes from *-ryo- and ultimately PIE *-riyo-, as per Prósper (2008); Prósper (2010, 536); (2) in Gaulish personal names, one finds variations such as -bogio-/-boio-, Cagius/Caia, etc. (see most recently McCone 2001, 180; Lambert 2003, 46; Prósper 2008, 40), and it is tempting to derive at least the variants with mere <i> from preforms with *-gy-; actually this is a solution hinted at already by Lambert, l.c. ("le nom des *Boii* […] remonte très certainement à *Bogii* […], ce qui serait une évolution très ancienne (devant /y/)" and also by McCone (1996, 85) ("this Gaulish loss of g might perhaps be compared with Lat. *maius* < *magyos*"); five years later, however, it seems that McCone rather opined those variants without <g> would suggest "that g had previously been lenited to γ intervocalically" (McCone, 2001, 180), and although there is indeed some other evidence for a weakening of intervocalic (*)-g- at least in the context of -u- (Gaulish *Catuenos*, *Mouno*, Celtiberian *tuater-* 'daughter', *Seurrī*, *Seuso*, see Prósper 2008, 40, 51 and also Prósper 2010, 536, 538) and maybe also in the context of syllabic -i- itself (cf. Gaulish personal names with *rio-* that varies with *rigo-*), I think it is rather unlikely that in the course of any weakening process an antevocalic -i- would have remained syllabic and not have turned into -y-. Finally, especially on the evidence of Gaulish *teuoxtoni[o]n* from Vercelli it is quite attractive to join Schrijver (1995, 282) in explaining what is obviously a Common Celtic -n- in the Celtic noun for 'mortal, man, person' by setting up a Proto-Celtic preform *dʰĝʰomyo- > *dʰĝʰonyo- that would have had Proto-Celtic *-yo- as a substitute of PIE disyllabic *-iyo- (differently Balles (1999, 18f.), without mentioning the Gaulish form).

[19] See, e.g., Dressler (1985, 329). One could then further speculate that the Middle Welsh plural ending -ydd (which has been derived by Schrijver (1995, 393f.) from *-iyes < *-eyes) that is actually also found precisely in the most archaic plural form of Middle Welsh *bugeil* 'herdsman, shepherd' (evidently from a proto-form in monosyllabic *-lyo-), viz. *bugelydd*, is in fact the lautgesetzlich result of morphologically more plausible disyllabic *-iyī (as per Uhlich 1993, 354 with ref.) and spread exactly from this word, by assuming that in Proto-British times the word for 'herdsman' had disyllabic *-iyo- in the elevated styles of the upper classes, and that for pragmatic reasons those upper classes used the

indeed willing to accept such a scenario, *-yo-* > *-i-* could hardly be called a fitting parallel for suggested *-wo-* > *-u-* anymore, since neither *íath* nor *fíad* are likely to have been used in the vocative at all, at least as far as every-day speech is concerned.

On the other hand, it should also be borne in mind that to Goidelic adjectives in *-u-* British rather regularly responds with what seem to be adjectives in *-wo-*; see, e.g., Old Irish *tiug* 'fat' < *tegu-* vs. Middle Welsh *tew*, Breton *tev* 'fat' < *tegwo-* and the full list in Balles (1999: 14f.). According to Balles, l.c., the British state of affairs is merely due to secondary thematization in British, but things may not be that simple. Since according to the Schindler-Nussbaum doctrine the PIE pivotal primary-looking and proterokinetically inflecting *u*-adjectives started out as possessive denominals *internally* derived from (*o/e-*)acrostatically inflected *u*-stem abstracts, there would be nothing wrong with the co-existence of *externally* derived variants of those *u*-stem adjectives formed with the possessive suffix PIE *-ó-*, i.e., ending in *-wó-*, and indeed such thematic variants can also be found in other branches such as Greek and Baltic.[20] To be sure, this consideration opens the way for a third kind of possible explanation for the athematic inflection of Old Irish *íath*, *fíad*.

(3) If one is willing to assume that Proto-Celtic had a variation *-u-*/*-wo-* in a certain amount of primary-looking adjectives such as *tegu-*/*tegwo-* 'fat' (cf. Old Irish *tiug* vs. Middle Welsh *tew*, Breton *tev*), either for the reasons suggested immediately above at the end of the preceding paragraph or for some other reason, such as sporadic thematization, it is not unreasonable to suspect that (maybe already in Proto-Celtic times) on the model of this variation, inherited thematic *vṛddhi* formations *peytwó-*, *weydʰwó-* analogically acquired athematic by-forms *peytu-*,

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term almost exclusively in the plural, with the exception of the vocative, where irregular reduction of a lautgesetzlich form could easily take place; see the argument made immediately above on behalf of the Old Irish cognate *búachaill*.
[20] See the detailed argument in Widmer (2004, 96-99).

weyd^{h}u- (whereas other adjectives in *-wo-* such as *ardwo-* 'high' and *marwo-* 'dead' would not have done so). Since from the basic hypothesis it would follow that Goidelic retained the variants in *-u-* and abandoned the ones in *-wo-*, one should then also expect that in Goidelic inherited *peytwó-*, *weyd^{h}wó-* were bound to be given up, and innovated *peytu-*, *weyd^{h}u-* were bound to be generalized.[21]

As far as I can see, none of these three possible strategies is clearly superior to any of the others, and as a matter of fact, they are not mutually exclusive either. At any rate, I hope to have shown that the two Old Irish words revisited in this paper should be taken for old *vṛddhi* adjectives denoting appurtenance, and that their stem-final *-u-* can be accounted for as due to an inner-Celtic, or even inner-Goidelic innovation for inherited *-wo-*.

References

Balles, Irene
  1999   Zu den britannischen *yo-*Stämmen und ihren idg. Quellen, in
            Stefan Zimmer, Rolf Ködderitzsch and Arndt Wigger (eds)
            *Akten des Zweiten Deutschen Keltologen-Symposiums (Bonn, 2.-4.
            April 1997)*, 4-22. Tübingen: Niemeyer (Buchreihe der
            Zeitschrift für celtische Philologie, Bd. 17).

Bammesberger, Alfred
  1999   Der Anfang der Botorrita-Inschrift, in Stefan Zimmer, Rolf
            Ködderitzsch and Arndt Wigger (eds) *Akten des Zweiten
            Deutschen Keltologen-Symposiums (Bonn, 2.-4. April 1997)*, 23-31.
            Tübingen: Niemeyer (Buchreihe der Zeitschrift für celtische
            Philologie, Bd. 17).

Darms, Georges
  1978   *Schwäher und Schwager, Hahn und Huhn. Die Vṛddhi-Ableitung
            im Germanischen.* München: Kitzinger (MSS, Beiheft 9, Neue
            Folge).

Dressler, Wolfgang U.
  1985   On the predictiveness of natural morphology. *Journal of
            Linguistics* 21: 321-337.

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[21] As for the possible status of the Middle Welsh cognate *gwyd* as an old *-o-*stem, see footnote 2 above.

Kimball, Sara E.
    1999   *Hittite Historical Phonology*. Innsbruck: Institut für
                Sprachwissenschaft der Universität Innsbruck (IBS 95).

Ködderitzsch, Rolf
2002   Air. *cáin* f. 'Gesetz, Regel, Steuer, Tribut': aksl. *kaznĭ* f.
            'Strafe, Beschluß, Anordnung', in Lea Sawicki and Donna
            Shalev (eds) *Donum grammaticum. Studies in Latin and Celtic
            Linguistics in Honour of Hannah Rosén*, 183-187.
            Leuven/Paris/Sterling, Virginia: Peeters (Orbis,
            Supplementa, Tome 18).

Lambert, Pierre-Yves
    2003   *La langue gauloise. Description linguistique, commentaire
                d'inscriptions choisies*. Édition revue et augmentée. Paris:
                Éditions Errance (Collection des Hespérides).

Lejeune, Michel
    1974   *Manuel de la langue vénète*. Heidelberg: Winter
                Universitätsverlag.

McCone, Kim
    1992   The etymology of Old Irish *déis* 'client(s)'. *Ériu* 43: 193-197.
    1995   OIr. *senchae*, *senchaid* and preliminaries on agent noun
                formation in Celtic. *Ériu* 46, 1-10.
    1996   *Towards a Relative Chronology of Ancient and Medieval Celtic
                Sound Change*. Maynooth: The Department of Old Irish, St.
                Patrick's College (Maynooth Studies in Celtic Linguistics I).
    2001   Basque *saio* „attempt, try": a Celtic loanword? in Heiner
                Eichner et al (eds) *Fremd und eigen. Untersuchungen zu
                Grammatik und Wortschatz des Uralischen und Indogermanischen
                in memoriam Hartmut Katz*, 175-181. Wien: Edition Praesens.
    2006   *The Origins and Development of the Insular Celtic Verbal Complex*.
                Maynooth: The Department of Old Irish, National University
                of Ireland (Maynooth Studies in Celtic Linguistics VI).

Nikolaev, A. S.
    2008   Gedanken über ein neues Buch, in N. N. Kazansky (ed)
                Colloquia Classica et Indo-Germanica IV, 541-570. St. Petersburg:
                Nauka (Acta linguistica Petropolitana Vol. IV, part 1).

Peters, Martin
    1996   Indogermanische Chronik 35, Teil I, Wiesbaden: Harrassowitz
                (*Die Sprache*, Band 36, Heft 3 [Sonderheft], 1994).

Prósper, Blanca María
    2008   En los márgenes de la lingüística celta: Los etnónimos del
                noroeste de la Península Ibérica y una ley fonética del
                hispano-celta occidental. *Palaeohispanica* 8: 35-54.

2010   Toponimia celta en la inscripción de Fuentes de Ropel: *Seguisona* y sus correlatos europeos", in Francisco Cortés Gabaudan and Julián Víctor Méndez Dosuna (eds) *DIC MIHI, MVSA, VIRVM. Homenaje al profesor Antonio López Eire*, 533-540. Salamanca: Ediciones Universidad de Salamanca (Acta Salmanticensia, Estudios filológicos, 326).

Rau, Jeremy
2008   YAv. *haosrauuah-* and *dōuš.srauuah-*. *KZ* 120: 159-168.

Schindler, Jochem
1994   Alte und neue Fragen zum indogermanischen Nomen (Erweitertes Handout), in Jens Elmegård Rasmussen (ed) *In honorem Holger Pedersen. Kolloquium der Indogermanischen Gesellschaft vom 26. bis 28. März 1993 in Kopenhagen*, unter Mitwirkung von Benedicte Nielsen, 397-400. Wiesbaden: Reichert.

Schmidt, Karl Horst
1980   Zur keltischen und indogermanischen Vorgeschichte von gallo-lateinisch *cammīnus* 'Weg', in Hans Dieter Bork et al (ed) *Romanica Europaea et Americana. Festschrift für Harri Meier 8. Januar 1980*, 536-541. Bonn: Bouvier Verlag Herbert Grundmann.

Schrijver, Peter
1995   *Studies in British Celtic Historical Phonology*. Amsterdam/Atlanta: Rodopi (Leiden Studies in Indo-European 5).

Szemerényi, Oswald
1974   Greek πολύς and πολλός. *KZ* 88: 1-31 = Szemérenyi 1987, 1410-1440.
1987   *Scripta Minora. Selected Essays in Indo-European, Greek, and Latin*, ed. by P. Considine and J. T. Hooker. Innsbruck: Institut für Sprachwissenschaft der Universität (IBS 53).

Uhlich, Jürgen
1993   Die Reflexe der keltischen Suffixvarianten *-yo-* vs. *-iyo-* im Altirischen, in Martin Rockel und Stefan Zimmer (eds) *Akten des Ersten Symposiums deutschsprachiger Keltologen (Gosen bei Berlin, 8.-10. April 1992)*, 353-370. Tübingen: Niemeyer (Buchreihe der Zeitschrift für celtische Philologie, Bd. 11).

Vaan, Michiel de
2009   The derivational history of Greek ἵππος and ἱππεύς. *JIES* 37: 198-213.

Widmer, Paul
2001   Air. *tál* 'Zimmermannsaxt', in Heiner Eichner et al (eds)

Fremd und eigen. Untersuchungen zu Grammatik und Wortschatz des Uralischen und Indogermanischen in memoriam Hartmut Katz, 293-302. Wien: Edition Praesens.

2004   *Das Korn des weiten Feldes. Interne Derivation, Derivationskette und Flexionsklassenhierarchie: Aspekte der nominalen Wortbildung im Urindogermanischen.* Innsbruck: Institut für Sprachen und Literaturen der Universität (IBS 111).

Young, Steven
    2002   Lithuanian *žiaurùs : žvėrìs. Acta linguistica Lithuanica* 47: 109-115.

The "Saussure effect" in Greek: a reinterpretation of the evidence[1]

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In its most common formulation, the "Saussure effect" (henceforth SE) states that a PIE laryngeal is lost in the environments *#*HRo*- and *-*oRHC*-. The phenomenon was discovered by Ferdinand de Saussure in 1905. Since the seminal treatment by Nussbaum 1997, it is now generally referred to by the name "Saussure effect". Although SE is accepted and used as a research tool by almost all scholars, there are a number of problems with it. First, it is not well understood how SE may have worked phonetically. Second, as the name "Saussure *effect*" indicates, scholars hesitate whether the phenomenon should be understood to have been a regular sound change.[2] Third, there is no consensus about the date and spread of the phenomenon: examples have been adduced from Anatolian (Melchert 1994: 49-51), Balto-Slavic (recently Yamazaki 2009), Italic (Nussbaum 1997), Celtic, and Indo-Iranian. Some scholars have claimed, for this reason, that SE was a PIE sound change.

In this article, I will focus on the Greek material exclusively, while Tijmen Pronk's article elsewhere in this volume (Pronk 2011) deals with the material in languages other than Greek. After a scrutiny of the material, I will argue that the laryngeal loss in Greek is not due to the *o*-grade of the root. Instead, I will advance the hypothesis that the laryngeal was lost in the environment *-*VLHNV*-, where *L* = *r*, *l* and *N* = *m, n*.

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[2]Nussbaum 1997 uses at least three terms: "effect", "phenomenon", and "syndrome".

1.1. Precise formulation of SE. We might define SE by the following pair of sound changes that are supposed to have operated either in Proto-Indo-European or in one or more of its daughter languages:

(a) *HRŏ- > *Rŏ-, loss of initial laryngeal before an *o*-grade root[3], where *R = r, l, m, n, u (on i, see below), and *H = *h₁, h₂, or h₃. An example in Greek is ὁμείχω 'to urinate' (Hes.+) beside μοιχός 'adulterer' (Ion.-Att.).

(b) *(C₁...Cₘ)oRH-C- > *(C₁...Cₘ)oRC-, loss of a root-final laryngeal in an *o*-grade root, when followed by a consonant[4] (*C₍ᵢ₎ = any non-vocalic segment). A Greek example is τόλμα 'courage' (Ion.-Att.) beside τελαμών 'carrying strap' (Hom.).

I depart from the following conditions for SE. It is commonly assumed (e.g. Beekes 1969, Schrijver 1991) that the laryngeal loss took place at least when *R was a liquid, a nasal or u. Rasmussen 1989 includes one Greek example for *i (οἶμος < *uoih₁-mo-), but Nussbaum 1997 explicitly states that SE operated in Greek for *R = i as well, at least in internal position. Because the material for *i (both initial and internal) is potentially ambiguous, I will treat this in a separate section (see below sub 2.).

There are hardly any cases of *CoTH-C- > *CoTC- (*T = any stop). The only potentially good example I have found in the literature is πότμος 'fate', which could be considered related to πίπτω, cf. the semantics of Lat. *cāsus*, G. *Fall*. It is uncertain, however, that we need to reconstruct *poth₁-mo-, since the root may have been *pet-.[5]

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[3] As most instances concern *o*, not *ō*, I will henceforth refrain from writing ŏ, and simply write *o* when referring to the conditions of SE.

[4] If the consonant following the laryngeal is *i, we might also ascribe the laryngeal loss to Pinault's rule (Pinault 1982). Such examples will therefore not be treated here.

[5] This example is mentioned by Saussure (1905: 511 fn. 2), who did not yet consider the *R to be the conditioning factor for SE, and by Rasmussen (1989: 178, 198). Both derive πότμος from the root of πέταμαι 'fly', which I consider to be semantically weaker than the connection with πίπτω 'fall'. But the roots 'fly' and 'fall' were perhaps ultimately identical: *pet-. As an example, in πτερόν 'feather', we find no trace of a laryngeal either. Therefore, it remains unclear whether the

Such cases are usually not thought to be examples of SE,[6] and I will leave them out of further consideration.

1.2 History of research and problems with the SE. Ferdinand de Saussure was the first (1905: 511 fn. 2) to discover a peculiarity shared by a number of Greek words. While their roots contained the "coefficient sonantique", these words did not show a reflex of it. After comparing the examples, de Saussure suggested that the differing reflexes were due to the loss of the "coefficient" when the root contained an *o*-grade. The phenomenon discovered by de Saussure gained a place in Hirt's handbook on Indo-European vocalism (1921: 185-186); hence the name "Saussure-Hirt's Law" that used to be current.

The SE was given a prominent place in Beekes' study of the development of the laryngeals in Greek (1969: 238-242). Beekes retained a rather limited number of examples, but did not explicitly pronounce himself on the regularity of the effect and remained sceptical. In subsequent treatments, Peters 1980 and Rasmussen 1989: 175ff. collected more material and confidently made use of SE to propose new etymologies. Since then, the *communis opinio* (Schrijver 1991, Melchert 1994: 49-51 and Nussbaum 1997, among others)[7] on de Saussure's rule seems to have become that the laryngeal loss in the environments defined in 1.1. was regular. De Lamberterie has collected a number of Greek examples for the effect in *Chronique d'étymologie grecque* 9, and his contributions have recently been reprinted in the Supplement of *DELG*. It is fair to state that SE has become common knowledge.

Only few dissenting voices have been heard. Ruijgh 1997: 277 speaks of the "absence étonnante d'une trace de la laryngale (…) dans quelques noms isolés comportant le degré *o* de la racine", to remark that "il ne peut pas s'agir d'une perte phonétique de la laryngale". He adduces the counterexample of $\pi(\tau)\acute{o}\lambda\epsilon\mu os$, which to my mind is not decisive (see below). Unfortunately, Ruijgh is not very

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pre-form of $\pi\acute{o}\tau\mu os$ really contained a laryngeal. Cf. the remarks by Collinge 1994: 46.
[6]An exception is Rasmussen, l.c.
[7]See also Meier-Brügger 2002: 119.

explicit on the prehistory of forms like τόλμα, πόρνη.[8]

Concerning the interpretation of the material, a few points deserve special attention. First, de Saussure's suggestion was based on the comparison of just a few forms, all of which turned out to contain an *o*-grade. This does not mean that the *o*-grade *must* be the conditioning factor of the laryngeal loss in these forms, as shall become clear below.

Second, while de Saussure only posited the phenomenon for Greek, the rule was quickly applied in other languages as well, and the laryngeal loss was reinterpreted, though not universally, as a Proto-Indo-European sound change.[9] The evidence for SE from Indo-European languages other than Greek is discussed in a separate contribution by Tijmen Pronk (Pronk 2011). He concludes that there is no secure evidence in favor of SE in any of the language families he considers (Indic, Italic, Anatolian, Balto-Slavic, Celtic). Moreover, the only example that seems to show loss of the laryngeal across different branches (*sol(H)uo-* 'whole')[10] is shown to be a later thematicization that occured independently in the daughter languages.

Third, a major difficulty with SE is that the phonetic loss of the laryngeal segment would be caused by a non-contiguous *o*. This has been a hard nut to crack for its proponents. Nussbaum (1997: 185-6) has pointed to the fact that in most good examples of SE, one expects a

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[8]Since the *o*-vocalism of the root, in his view, points to an earlier root noun, Ruijgh departs from old root nouns with lengthened *ō*-grade. Here, the word-final laryngeal would have been lost after long vowel plus resonant (example: *tōlh₂ > *tōl). But Ruijgh does not explain how or why the suffixes of τόλμα, πόρνη came into being: one only reads that "…*tōl doit avoir été [la réalisation] de *tol, forme qui figure dans τόλμᾱ." (l.c.). In the absence of further substantiation, this scenario remains speculative.
[9]In the most recent treatment of the Effect, Yamazaki (2009: 430) states: "The fact that the effect is observed in several Indo-European branches suggests that it took place at the stage of Proto-Indo-European". Cf. Nussbaum 1997: 182: "… it is not only in Greek that the laryngeal in the inherited sequences #HRo- and -oRHC- fails to be reflected in the usual way. And this naturally suggests (…) that the Saussure syndrome reflects something that happened, or failed to happen, already in the proto-language."
[10]This example will also be discussed below.

syllabification in which the *H* and the *o*-grade are not only non-contiguous, but even heterosyllabic. Phonetically, therefore, it is highly improbable that the *o*-vocalism would be the cause for the non-vocalization or loss of the laryngeal. A related problem that was brought to attention by Nussbaum is the following: a laryngeal is assumed to be lost in *HRo-* when it is initial, whereas word-internal *-HRo-* does not undergo the same treatment (e.g. in *Ro-*adjectives derived from roots ending in a laryngeal). As Nussbaum remarks (1997: 184), "obvious examples of such a treatment of analogous, word-internal *-CHRŏ-* have not really turned up".

In the fourth place, the Greek examples for SE are much more numerous than those in Latin, Balto-Slavic, or Hittite. On the one hand, this abundance of examples can be ascribed to the fact that the lack of a laryngeal reflex can be relatively easily recognized in Greek (as opposed to, e.g., the situation in Baltic, where the possibility of metatony severely complicates matters): one simply expects interconsonantal laryngeals to vocalize as *a*, *e* and *o*. Moreover, Greek is probably the best-documented Indo-European language. On the other hand, the Greek lexicon is notoriously full of words without a good etymology. As a consequence, the opportunities for etymologizing are almost infinite, especially when one takes into account information from lexicographical sources without further questioning. It is important to eliminate the uncertain and wrong etymologies from the material first. This is the first objective of this paper.

I will investigate both the evidence for laryngeal loss in initial position and loss in word-internal position. For each of these environments, my main questions will be, after a sifting of the material: (A) Is there enough evidence in Greek to speak of laryngeal loss induced by regular sound-change? (B) If so, does the evidence really point to the *o*-grade as the environment determining the laryngeal loss?

For initial laryngeals, question (A) will be answered negatively, and for word-internal position, (B) will be denied. The plan is as follows: in 2., I will point out why the case *R* = *i̯* will be left out of consideration. Then, I

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As a second point, when dealing with initial *$*Hio$-*, it is difficult to decide whether a laryngeal reflex is missing as long as the distribution between ζ- and *h*- is subject of debate. And in any case, the material is too scanty (perhaps ζόφος and ὅς, see below). It is probable, to my mind, that the reflex of PIE *$*HiV$-* was PGr. *$*\underset{.}{i}V$-*, as against PIE *$*iV$-* > PGr. *$*d^{\underline{i}}V$-*.[13] And the non-vocalization of *$*H$* in PIE *$*HiV$-* may in principle have preceded the operation of SE in early Proto-Greek, in which case no trace of the latter change can be expected.[14] This means that counter-examples cannot be relied upon either.

For the sake of completeness, I have gathered the following instances that may be of relevance. For *$*Hio$-*, ζόφος 'darkness, west' (Hom.+, poet.) has been etymologized as *$*h_3iób^h$-o-* 'entering', from the root of οἴφω 'to have sexual intercourse' which probably derives from *$*h_3e$-h_3ib^h-e/o-*.[15] This etymology, however, is not without semantic problems, and the fact that Greek also has δνόφος and κνέφας in the same meaning does not inspire confidence either.

The relative pronoun ὅς may reflect *$*h_1i$-o-*, a thematization of the pronominal stem *$*h_1i$-* (as in Lat. *is / ea / id*). Since PIE words could not begin with a vowel (cf. Beekes 1995: 162), one could be inclined to reconstruct

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optative ending -οι (pers. comm.): the disyllabicity of the 3sg. opt. ending -οι may also be understood if it does not directly reflect *$*$-o-ih_1-t*, but rather represents re-shaped *$*$-o-$ī$-t* (the zero grade allomorph of the optative suffix may have been taken from e.g. the optative of the sigmatic aorist). The accentual difference between the loc.sg. and nom.pl. of the *o*-stems has a similar origin: the originally disyllabic loc. derives from a post-PIE formation *$*$-o-i* and differs from monosyllabic nom.pl. τοί < PIE *$*tói$*. Therefore, *$*$-oih_1t* isn't decisive evidence for the outcome of *$*$-$ViHC$-* either.

[13] In view of the convincing etymology of ὑγιής < *$*h_2iu$-g^wiH-es-* proposed by Weiss (1994), and that of εὐθύς < *$*Hieud^h$-u-* proposed by Willi (2001), the root *$*Hieud^h$-* probably being an enlargement of *$*h_2iu$-*.

[14] An early date for the development of *$*HiV$-* would at least be compatible with the fact that in *$*Hue$-* the initial laryngeal vocalizes. The development of *$*HiV$-*, like SE, probably preceded the vocalization of initial pre-consonantal laryngeals.

[15] For the reconstruction of οἴφω, see Cheung (2007: 175), followed by Beekes *EDG* s.v. οἴφω.

an initial laryngeal in order to account for full-grade forms of the type Skt. *áyam*, which are found in various daughter languages. It could then be argued that the thematization *h_1i-o-* goes back to a stage when the laryngeals were still present, in view of the correspondence between ὅς and Skt. *yáḥ*.

For *-oiHC-*, a number of words have been derived from pre-forms containing a root-final laryngeal in PIE, but without justification. For instance οἶσος 'chasteberry' (Thphr.), related to OCS *větvь* 'branch'[16] which is supposed to derive from **uoiH-tu-*. But the Slavic verbal paradigm (e.g. Ru. *vilá* 'she twisted') shows no trace of Hirt's retraction law, which would be expected if the pre-form were **uiH-lā́*, as has been shown by Kortlandt (an overview of his arguments is found in Schrijver 1991: 228). This shows that the root 'to twist, wind' was not **ueih₁-*, but **uh₁i-* (i.e. **uh₁-i-*), cf. Schrijver 1991: 245. In οἴνη 'ace', no internal laryngeal is needed to explain the Balto-Slavic cognates, and we may reconstruct **Hoi-no-* (see Pronk 2011 and fthc.). The same holds for ὄα 'elderberry tree' < **Hoi-u-h₂-*, and οἶος 'alone' < **Hoi-uo-*.

Apart from the 3sg. ending of the thematic optative, there is one word which possibly contained a sequence *-oiHC-*: οἶμος 'track, streak, etc.'. The hiatus in δέκα οἶμοι ἔσαν μέλανος κυάνοιο (*Il.* 11.24) has been taken to point to initial digamma. This has led Rasmussen 1989: 198 to reconstruct **uoih₁-mo-*, from **ueih₁-* 'to pursue' (cf. *DELG* s.v.). An alternative etymology departs from the root **h₁ei-* 'go'.

3. Examples in favor of SE in word-initial position. In this section, I will discuss the examples for SE in word-initial position. By comparison, the first two examples are strongest.

(a) οὐρέω 'to urinate' (Hes., Hdt., Ion.-Att.), οὖρον 'urine' (Hdt.+). The verb is usually interpreted as an iterative **Huors-ei-e/o-* related to ἐέρση 'rain, dew' (*Il.*+).[17]

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[16] See *DELG* s.v. οἶσος.
[17] E.g. Rasmussen (1989: 176), Nussbaum (1997: 181). The relation

The initial *H- should be reconstructed as *h_1-.[18] (Within Homer, ἐέρση is clearly an archaic form compared to ἔρση, which occurs only once in the Odyssey, in the specialized meaning 'young animal' < 'drop'. Thus, ἔρση was probably imported from the continuant of ἐέρση in the living vernacular; both derive from the same pre-form.)[19]

(b) ὀμείχω 'to urinate' (Hes.+) is often compared with μοιχός 'adulterer' (Ion.-Att.).[20] I am not convinced by the semantic side of this comparison. Cognates of ὀμείχω < *$h_3meig\hat{h}$-e/o- mean 'to piss' in all languages, but are never used for adulterers. Since μοιχός denotes someone committing a legal or religious offense, I do not expect a semantic derivation from the physical act. Proponents of the equation may assume a development 'piss' → 'use the penis' → 'use the penis in an improper way'.[21] Note that the etymology dates from the time when Greek forms with and without "prothetic vowels" could still be equated without further ado. This becomes clear, for example, in the reasoning followed by *DELG* s.v. μοιχός.

It is highly suspicious that both examples involve roots meaning 'to urinate'. Words with this meaning may easily

between the verb and the noun οὖρον 'urine' (Hdt.+) is not clear, as Nussbaum remarks. But note that οὖρον can hardly be derived from *Huórso- given that -*rs*- seems to be preserved as -ρσ- if the accent was on the directly preceding vowel.

[18] Previously, *h_2- was reconstructed because of ἄερσαν· τὴν δρόσον 'dew(drop)' (Cretan *apud* Hsch.), ἀέρσην (pap.), with vowel assimilation (cf. Nussbaum l.c. with fn.). However, such vowel assimilations are doubtful (see Van Beek 2011). The initial ἀ- in these late and unreliable attestations may rather be due to contamination with ἀήρ 'mist, haze' (Tijmen Pronk, pers. comm.).

[19] ἔρση does not lack a reflex of the laryngeal, but is probably the result of the early contraction of like vowels (*ewe > *$\bar{e}$) and subsequent shortening before ρ plus consonant in Ionic, cf. Att. εἴργω beside Ion. ἔργω 'to ward off'. See Peters 1980: 316-318.

[20] E.g. Rasmussen 1989: 176, Nussbaum 1997: 181. The etymology was recently defended by de Lamberterie in *CEG* 9, cf. *DELG Supp.* s.v.

[21] In Dutch, the expression *naast de pot pissen*, lit. "to piss beside the toilet", is used for adultery. However, the element of adultery is *not* expressed by the verb *pissen*, but by *naast de pot*, which indicates that a rule is broken. Therefore, this expression cannot be used to bolster the etymology proposed for μοιχός.

undergo irregular developments due to taboo. Therefore, they do not present us with clear evidence of SE for initial laryngeals. (For a different proposal concerning οὐρέω and οὖρον, see 5.3. below.)

The following examples have also been adduced as positive evidence. They are much weaker, however, in view of the speculative phonetics or semantics, or unclear attestations:

(c) οὖλος 'curly, woolly' (*Il.*+, mainly poetic, a separate entry from οὖλος 'pernicious' discussed further below) has been reconstructed as *h_2uolh_1-no- and compared with the etymon of Skt. *úrṇā-*, Gr. λῆνος, Lat. *lāna*, OIr. *olann* and Hitt. *ḫulana-* 'wool'. The reconstruction of the initial laryngeal is based on the appurtenance of Hitt. *ḫulana-*, and has been invoked to explain OIr. *olann*, but Greek λῆνος rather points to a reconstruction *ulh_1-n-. *EDHIL* s.v. *ḫulana-* discusses the problems pertaining to the Anatolian words.

Another point is that οὖλος need not be genetically related to λῆνος, and *h_2uolh_1-no- would be a root etymology at best. At least as plausible would be *uol-no-, i.e. derivation from the *aniṭ* root *uel- 'to twist, turn' (or even *uol-u-o-, if the word is epic-Ionic in origin), an alternative also proposed by *DELG* s.v. οὖλος. The latter root does not contain an initial laryngeal, and οὖλος is therefore not a conclusive example in favor of SE in initial position.

(d) The etymology connecting λοιγός 'ruin, death' (*Il.*+) with ὀλίγος 'little, inferior' (*Il.*+)[22] is called "douteux" by *DELG*, and to my mind rightly so.[23] The paroxytone accentuation on the zero grade of ὀλίγος is unexpected[24],

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[22] Rasmussen 1989: 176, Nussbaum 1997: 181.

[23] The semantic connection is possible, but not evident. Yamazaki (2009: 2) translates λοιγός as 'decimation', but there is no indication in Homer that the word means anything else than 'ruin (pestilence), destruction (e.g. of ships), death'.

[24] If barytone, Greek tribrachs with initial vowel usually have proparoxytone, not paroxytone accentuation, cf. ἄραβος, ἄραβος, ἄρακος, etc. This is even the case if the penultimate syllable has an etymological full grade, as in ὄροφος 'roof' beside ἐρέφω 'to cover', PIE *h_1reb^h-.

and words for 'big' and 'little, small' are easily borrowed (cf. Fr. *petit*). For λοιγός, I propose the following etymological analysis: it is an old agent noun to the root of Lith. *líegti* 'to suffer from severe illness', *nulíegti* 'to become tired or exhausted', and Lith. *ligà* 'illness', Latv. *liga* 'illness, bad luck, ill fate', etc. This Baltic verbal root could perhaps be related to Lat. *ligāre* 'to bind, tie' (so far without cognates, cf. *EDL* s.v.): for the semantics, see Gr. πένθος 'suffering' beside the old perfect πέπονθα 'am bound' > 'suffer'.

(e) The comparison of the epithet νώροπι (*Il.*, of unclear meaning)[25] and the gloss νωρεῖ· ἐνεργεῖ 'is active' (Hsch.)[26] with ἀνήρ < *h_2ner- can hardly be taken seriously. The etymology is highly problematic in view of the unmotivated lengthened grade that has to be assumed in νωρεῖ and/or νώροπι, and the semantics are not compelling at all.

(f) Peters 1980: 61 fn. 30 (followed by Rasmussen 1989: 176) states that the gloss βωτεάζειν· βάλλειν (Hsch.) "zeigt (…) regulären Laryngalschwund vor -ŏ- (cf. νωρεῖ < *$h_2nōr$-) und kann sehr gut ein deverbales intensives *$h_2uōt$- reflektieren (…)." He assumes that the gloss βωτεάζειν is related to ὠτειλή 'wound' and οὐτάω 'to wound, hurt, strike' (both *Il.*+). Assuming that this combination is correct (which is not certain), the following counterarguments can be adduced.

First, ὠτειλή and οὐτάω lack a convincing Indo-European etymology (pace Peters 1980: 60f., who follows a suggestion by Pokorny), and it is therefore difficult to give a reconstruction. Peters argues that Homer has an old root aorist 3sg. οὖτα, but this does not automatically imply a PIE reconstruction *$h_3(e)uth_2$-: οὖτα, with its strange morphophonology, may be a substrate word or another kind of borrowed element that was reinterpreted as a root aorist. Now, even accepting a reconstruction *$h_3(e)uth_2$-, it is highly suspicious that ὠτειλή < *owat-elnā (vel sim.)

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[25]A discussion of Kuiper's article on νώροπι χαλκῷ is found in Beekes 1969: 75.

[26]E.g. in Peters 1980: 61 fn. (see f. below), Rasmussen 1989: 177, Nussbaum 1997: 181.

would require an *a*-grade, phonologically impossible in the Leiden framework, but morphologically difficult to motivate in any case. The fact that Peters reconstructs *$h_2u\bar{o}t$-* for $\beta\omega\tau\epsilon\acute{a}\zeta\epsilon\iota\nu$, but *$h_2u\bar{a}t$-* for the supposed Baltic cognates (see below) only arouses further suspicion. Finally, the morphology of *$owat$-$eln\bar{a}$* itself remains obscure (Peters' comparison with $\grave{a}\acute{\epsilon}\lambda\lambda\eta$, p. 61 fn. 30, does not help much). In view of these objections, it is impossible to relate $\grave{\omega}\tau\epsilon\iota\lambda\acute{\eta}$ and $o\grave{\upsilon}\tau\acute{a}\omega$ to each other by means of regular Greek processes. They *could* be compared, but only as substrate words.

From an Indo-European perspective, Pokorny's comparison with Lith. *votìs, vótis* 'offenes Geschwür' and Latv. *vâts* '(eiternde) Wunde' ("erscheint in lautlicher wie semantischer Hinsicht plausibel wie wünschenswert" – Peters, 61) is impossible in view of the acute root in Baltic, which asks for a reconstruction *$(H)ueh_2$-ti-*. This implies that both $\grave{\omega}\tau\epsilon\iota\lambda\acute{\eta}$ and $o\grave{\upsilon}\tau\acute{a}\omega$ remain without IE cognates.[27]

I have dwelt a bit longer on this example, because it has found its way into the handbooks: *LIV²* reconstructs a lemma *h_3uath_2-* based on Peters' discussion.

(g) The connection of $a\grave{\upsilon}\delta\acute{\eta}$ 'voice', aorist $a\hat{\upsilon}\delta a$ (Hom.+), with $\gamma o\delta\hat{a}\nu\cdot \kappa\lambda a\acute{\iota}\epsilon\iota\nu$ 'to weep' (Hsch.) and other glosses (Peters 1980: 14) is uncertain: the glosses have no clear initial ϝ- (cf. *DELG* s.v. $a\grave{\upsilon}\delta\acute{\eta}$). There is no ascertained Indo-European etymology. *LIV²* posits a root *h_2uedH-* 'tönen, sprechen' on the basis of the comparison between of $a\grave{\upsilon}\delta\acute{\eta}$ and $\grave{a}\acute{\eta}\delta\omega\nu$ 'nightingale' with the Vedic verbal root *vad* 'to speak, discuss'. However, the Schwebeablaut and

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[27] Not to mention the Schwebeablaut involved. The only sensible comparison for the group of Lith. *votìs, vótis* 'ulcer' would be that with Hom. $\grave{a}\acute{a}o\mu a\iota$ 'to be blinded or misled' (of the mind), $\check{a}\tau\eta$ 'disaster' < *$awat\bar{a}$*, if from a root *h_2ueh_2-*, with a *t*-stem *h_2ueh_2-t-* in Baltic. This root etymology could perhaps work phonologically, assuming that Greek continues a zero grade *awa-* (analogically created? – a full grade *h_2euh_2-* would be much easier for Greek, cf. Beekes *EDG* s.v. $\grave{a}\acute{a}\omega$). The etymology is not particularly strong, since the semantics are not self-evident (though certainly possible, cf. $\beta\lambda\acute{a}\pi\tau\omega$ 'to damage, mislead', both physically and mentally), and since the distribution of the material is limited.

the lengthened grade in ἀήδων are highly suspicious.[28]

(h) ῥοχθέω 'to rush, roar (of sea-waves)' (*Od.*+) beside the sound verb ὀρεχθέω (*Il.*+, meaning not clear) is adduced by Rasmussen 1989: 176. As sound-verbs of unknown etymology (see Beekes *EDG* s.v. ὀρεχθέω), I leave this pair aside.

(i) λοῖσθος 'the last, utmost' (*Il.*+) is compared with ὀλισθάνω 'to slide' (see Beekes *EDG* s.v.) and adduced as evidence for SE by Rasmussen 1989: 176. But two root variants *h_3leisd^h- (ὀλισθ-) and *$(h_3)sleid^h$- (Skt. *sredh*-) are found side by side [29], where contaminations are a good possibility. For instance, λοῖσθος could be from *$sloid^h$-*to*- > λοῖστος, and then have its -τ- influenced by ὀλισθ-. It is best, therefore, not to use λοῖσθος as evidence.

4. Counterexamples to word-initial SE. Forms where a verbal root synchronically exists beside a τομος-type noun do not make good counterexamples. This holds for all cases like ἀμοιβή beside ἀμείβω, ἀγορή beside ἀγείρω, etc. Such thematic derivations may have been formed at a later stage, as the τομος-type was productive for a long time. The following two counterexamples, however, seem to be particularly strong:

(a) ὄνυξ 'nail' < *h_3nog^{wh}-. In order to explain the presence of a reflex of the initial laryngeal, Vine (1999: 559f.) assumes paradigmatic leveling of *h_3nog^{wh}-s, *h_3ng^{wh}-*os* > (Lex Rix in the oblique cases, SE followed by Cowgill's Law[30] in the nominative) *nuk^hs, *$onk^{wh}os$, which was then leveled in more than one step to *$onuk^hs$, *$onuk^hos$. This is

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[28]The connection of αὐδή with Hitt. *u̯ātarnaḫḫ-ⁱ* 'to order, instruct' is doubtful too (*EDHIL* rejects a connection with Hitt. *uttar* 'word'): the long vowel in *u̯ā*- is problematic, and the morphological analysis of *-rna-* is unclear.

[29]In ὀλισθεῖν, the *-d^h- could be the same enlargement as in a number of other Greek thematic aorists. Compare αἰσθέσθαι < *h_2euis-d^h- (Lat. *audiō*), μαθεῖν < *mn-d^h- (beside *mns-d^h-), etc.

[30]Cowgill's Law states that *o appears as Gr. υ in certain phonetic environments, mostly defined as "between a labial and a resonant" (Sihler 1995: 42). Its precise conditions are the subject of Vine's 1999 paper.

a rather complicated scenario: one wonders why Greek would have generalized neither *nuk^hs* nor *$onk^{wh}os$*, but rather a combination of the two. Vine proposes an alternative (following Nussbaum 1997: 183[24]): *o/e*-ablaut in an old root noun *$h_3nóg^{wh}$-s*, gen. *$h_3nég^{wh}$-s*. Other branches, however, offer no indications for an *e*-grade root in this word. (It would be *ad hoc* to date Cowgill's Law before SE.) I conclude that a regular development *h_3nog^{wh}-s* > ὄνυξ is the most likely scenario for this word, which makes it a strong counterexample.

   (b) Homer has two homonyms ἐρωή: 1. ἐρωή 'impulse', and 2. ἐρωή 'rest'. The first stands beside a verb ἐρωέω 'to flow, gush forth' (*Il.* 1.303 = *Od.* 16.441). ἐρωή 1. may be derived from PIE *h_1roh_1s-eh_2*-: a similar form *h_1reh_1s-eh_2*- seems to be found in Gm. *$r\bar{e}s\bar{o}$-* > OE *r$\bar{æ}$s* (m.) 'run, race, attack', ON *rás* (f.) 'run', and in the verbs ON *rasa* (v.) 'to fall down', MoHG *rasen* 'to rage'. Together, Greek and Germanic point to an IE root *h_1reh_1s-*. The second word, ἐρωή 'rest', together with the verb ἐρωέω 'to rest', may be derived from a pre-form *h_1roh_1-u-eh_2*- and be connected with Gm. *$r\bar{o}w\bar{o}$-* as in OHG *ruowa*, OE *row*, ON *ró* (f.) 'rest', beside OHG *rāwa* 'id.' < PGm. *$r\bar{e}w\bar{o}$-*. In neither of these homonyms do we find a trace of ablaut within Greek. Consequently, one would expect the laryngeal to be dropped before the *o*-grade in ἐρωή.

   Although the following counterexamples are much less evident than ὄνυξ and ἐρωή, they do deserve mention here:

   (c) ἄορον· μοχλόν ('bolt'), πυλῶνα, θυρωρόν ('doorkeeper'). Κύπριοι (Hsch.), which is derived from the root to be reconstructed as *h_2uer-* 'to close' (see Lubotsky 2000), is probably a productive deverbal formation from a stage when the laryngeals had already been lost. If ἀείρω 'to attach, bind together' continues the root *h_2uer*- mentioned, ἄορον is simply an example of the type with productive ablaut just discussed.

   (d) ὀμόργνυμι 'to wipe off, make dry' (*Il.*+, also with ἀπ-; the simplex is only epic). This verb is clearly related to Skt. *marj-*, 1sg. pres. *márjmi* 'to wipe, cleanse', Av. 3sg. pres.

marǝzaiti 'touches lightly, grazes', from a root **Hmerĝ-* 'to sweep, wipe'.[31] The *o*-vocalism in the root of ὀμόργνυμι is hard to explain (it might be oldest in the *s*-aorist ὀμορξ-), which makes this rather uncertain as counterevidence.

(e) αὖλαξ (Hes.) 'furrow', acc.sg. ὦλκα, pl. -ας (both Hom.), have been reconstructed as **h₂ulk̥-s, *h₂uolk-m* and have been considered to be a possible counterexample by Rasmussen and Nussbaum.[32] Apart from the fact that the vocalization **h₂ul̥ks* assumed for αὖλαξ is not without problems, Beekes has convincingly pointed out that the variant forms ἄλοξ, gen. -κος (trag., com.) and εὐλάκᾱ 'plough', αὐλάχα· ἡ ὕννις 'ploughshare' (Hsch.) point to substrate origin (*EDG* s.v.). Therefore, this word cannot be used in the discussion.

The evidence for SE in word-initial position is very meager. The best examples, by comparison, are μοιχός and οὐρέω.[33] But ὀμείχω 'to urinate' and μοιχός 'adulterer' are not semantically close enough to be compelling. I have already noted that both examples belong to a peculiar semantic field, and may have been subject to taboo. Important counterexamples are ὄνυξ and ἐρωή (which in both meanings seems to have a Germanic cognate).

5. SE for root-final laryngeals. In the discussion of SE for root-final laryngeals, I will start by eliminating the weaker examples (5.1-5.4). After that, the stronger examples that remain shall be listed (6.), and I will discuss a few counterexamples to SE (7.), none of which is convincing. Then, a new interpretation of the stronger examples in favor of SE will be advanced (8.).

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[31] The connection with ἀμέργω (Sapph.+) 'to pick flowers, squeeze olives' (cf. Peters 1980: 24) is quite possible semantically (cf. Hitt. *u̯aršⁱ* 'to reap, harvest, wipe' beside Lat. *verrere* 'to sweep clean'), but contradicted by the deviant initial vowel (see Van Beek 2011). Therefore I will leave it out of consideration.

[32] See Rasmussen (1989: 222ff.), who argued that the **ó* in acrostatic root nouns does not trigger SE, and Nussbaum 1997: 183[24].

[33] A speculative possibility is that οὐρέω and οὖρον derive from the PIE word **uh₁-r-* 'water', see 5.3 below.

5.1. The following examples can be dismissed because the reconstruction involving the sequence -*oRHC*- cannot be upheld:

(a) οὐλαί 'barley corns' (*Od.*+) has been connected with ἀλέω 'to grind' since Schmidt (1893: 382). In laryngealist terms, ἀλέω goes back to a root *h_2elh_1-, so the comparison would require a reconstruction *h_2olh_1-*u-eh_2*-. The etymology is not evident, however: οὐλαί are *unground* barley corns that were roasted and strewn between the horns of the sacrificial animal (Frisk s.v.). Substrate origin is much more probable, in view of the by-form ὄλπα (Hsch.), cf. Furnée (1972: 155 and 240), followed by *EDG* s.v.

(b) πόλτος 'porridge' (Alcm.+) has been connected with πάλη 'fine dust, fine flour' (Hp.) and with Lat. *pulvis* 'dust', *pollen* 'flour, powder'; Ru. *polóva* 'chaff', Skt. *paláva-* 'chaff', etc. (cf. the discussion in Schrijver 1991: 257). Within Greek, the verb παλύνω 'to disperse flour, etc.' (*Il.*+), which is found beside πάλη, could be taken to point to the prior existence of an *u*-stem *παλύς 'fine, dispersed' < *plH-*u*-. Both Schrijver and Nussbaum (1997: 197f.) question the necessity to connect the words for 'chaff' with those meaning 'dust, flour', and Nussbaum gives a number of possible objections to adducing *pulvis* and *pollen* as evidence for SE in Latin.

There is no obvious verbal root to which πόλτος could be connected as an old *to*-derivative: derivation from *$pelh_1$- 'to swing' remains hypothetical (see *EDL* s.v. *pollen*, with the remark that only an original root meaning 'pulverize, grind' could account for the various meanings).[34] Thus, I agree with Schrijver (1991: 257) about *pollen* beside πόλτος

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[34]Nussbaum (1997: 197) remarks: "Against the combination [of words meaning 'chaff' with words meaning 'flour'] is the semantic argument that 'chaff' and 'hay' are not so similar to 'flour' and 'dust' that an etymological identification is compelling. Perhaps slightly for it is the formal parallelism of *pulvis* (< *$pol\acute{v}ui$-) with Skt. *paláva-*." To my mind, it would be possible to understand the identification of 'chaff' and 'flour' (thence 'dust, powder') if we depart from the process by which both are separated: winnowing. Both are in some sense the product of winnowing (for which there is a different verbal root, *$kreh_1(-i)$-).

that "the reconstruction of the laryngeal only rests on a somewhat far-fetched root etymology".

Within Greek, πόλτος could belong to πλάθανον 'cake mould' (Theoc.), παλάθη 'cake made of conserved fruits' (Hdt.+), in which case the variation πλάθ- / παλάθ- / πόλτ- points to substrate origin (cf. *EDG* s.v.: variation τ/θ, a/o is frequent in such words). This is favored by the semantic field (the word denotes a kind of dish). Alternatively, the combination of Lat. *puls, pultis* 'porridge' with πόλτος could point to a common pre-form **polt-* or to a Mediterranean substrate word (a loan from Greek is difficult, as one would expect it to be borrowed as an *o*-stem, see *EDL* s.v. *puls*).

(c) About the gloss νεώβορτον· νεωστὶ βεβρωμένον 'eaten recently' (Hsch.), Rasmussen (1989: 178) remarks: "Endglied sicher **gʷór-to-* zu Wz. **gʷerh₃-*". It cannot be used as evidence, however, as νεώ- is not a well-formed first member of a compound. It is therefore quite possible that the gloss contains an error. To my opinion, it could well stand for **νεόβρωτον*.

(d) ὑψι-βρεμέτης 'thundering on high' beside βροντή 'thunder' (both *Il.*+), which was already adduced by de Saussure (1905: 511), does not stand up to scrutiny.[35] The suffix of -βρεμέτης must be -έτης (as in a different epithet of Zeus, νεφεληγερέτης 'cloud-gatherer'), for the simple suffix -της is found in related compounds like ἀργι-βρέντᾱς (Pi., with *e*-grade root!). Finally, there is no further indication that the root of βρέμω (which has no good etymology, see *EDG* s.v.) contained a laryngeal.

(e) ὅλμος 'mortar, etc.' and ὅρμος 'chain, necklace' are left out of consideration here because there is no clear evidence (contra Rasmussen 1989: 178, 198) that the Greek continuants of **uel-* 'to roll' and **ser-* 'to insert' had a root-final laryngeal. In Homeric Greek, we find the middle perf. ptc. ἐελμένος and the aor. ἔλσαι, and from the root **ser-*, Homer has only middle perfect forms: ἔερτο, ptc. ἐερμένος. Rasmussen's suggestion that ἔρματα 'earrings' (Hom.) was influenced by the present εἴρω (post-Hom.) is

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[35] Thus already Beekes (1969: 239).

not viable: this present and the corresponding *s*-aorist are attested later than the Homeric middle perfect forms, and were probably built on them. The Baltic items adduced by Rasmussen l.c. (e.g. Latv. *sẽrt* "Getreide zum Trocknen zurechtlegen", Lith. *pasártis* 'reck') must therefore be explained differently.

5.2. In the following examples, a different reconstruction is possible or necessary. Therefore, they are not decisive evidence.

(a) οὖλος 'woolly, curly': rather from **uol-no-* or **uol-u-o-* (root **uel-* 'to wind') instead of **h₂uolh₁-n-o-*, see 4. above.

(b) κόρση 'temple, hair on the temple' (*Il.*+) is often compared with κέρας 'horn' and Skt. *śíras-* 'head' etc. < **ḱ(e)rh₂-s-(n-)*. On the other hand, it may be connected at least as plausibly with the root **kers-* 'to cut'. Compare Att. κουρά 'cropping of hair, pluck of wool, etc.' which may continue **kors-h₂-* or be derived directly from κείρω 'to shave, cut' as an action noun, if this continues a thematic root present **kers-e/o-*; cf. the old compound ἀ-κερσε-κόμης 'with uncut hair' (Hom.) beside ἀ-κειρε-κόμης (Pi.).[36] This root is also found in Hitt. *karš-ᶻⁱ* 'to cut off' and in Toch. A and B *kärs-* 'to know'.

(c) ὁρμή 'urge, impulse, attack' is reconstructed by *LIV²* as **sorh₃-meh₂-* and derived from the root of ῥώομαι 'to rush on, storm', Hitt. *šarḫiie/a-ᶻⁱ* 'to attack'. But again, there is a good alternative etymology: derivation as **orsmā-* < **h₃(e/o)r-smeh₂-* from the root **h₃er-* 'to rise, arise' (note meaning III of ὁρμή in LSJ: 'setting oneself in motion, start'). It is difficult to decide between these alternatives – but if the first is to be preferred, see 8. below.

(d) For the feminine stem πολλή 'much, many', Nussbaum 1997: 184 fn. 24 accepts the reconstruction **poluii̯ă̆-* (which goes back to Schulze, and has been advocated by de Lamberterie 1990: 632f.). The form

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[36]I accept the rule that Greek regularly preserved the cluster IE **-rs-*, unless the accent was on the following vowel, in which case the **s > *h* was lost with compensatory lengthening. See Miller (1976).

poluii̯ằ- is supposed by Nussbaum to be a "remodeled continuator" of a Proto-Indo-European feminine also continued in Skt. *pūrvī́-*, Av. *paoirī-*. By 'remodeled continuator', he means that *poluii̯ằ-* presupposes a stem form *polu̯-*, "with an unambiguous Saussure-effect outcome of *pol(h₁)u̯-*."

There are at least three reasons why πολλή cannot be considered a probable example of SE. First, assuming that Nussbaum is right in assuming that πολλή presupposes a stem *polu̯-*, the examples of δόρυ, pl. δοῦρα and γόνυ, pl. γοῦνα show that the stem form of the nom.-acc. sg. ntr. could be used to form the other cases. There is nothing to suggest that the creation of such paradigms within Greek preceded the loss of prevocalic laryngeals.

Second, in view of the diverging root vocalism of Greek and Indo-Iranian (πολλή would require *polh₁-u-ieh₂-*, while Skt. *pūrvī́-* points to *plh₁-u-ih₂*), the thesis that a separate PIE feminine inflection may be reconstructed for this adjective requires special pleading. For πολλή, Nussbaum (l.c.) first argues that "since this form has no competitor of the predictable shape (*πολεῖα or the like), it is reasonable to entertain the idea that πολλή is itself not simply analogical to masc.-neut. πολλό- (beside which πολύ- survives), but is rather the remodeled continuator of the PIE fem. reflected by Skt. *pūrvī́-*." I find it difficult to understand, however, why the fact that no *u*-stem forms like *πολεῖα are found would favor the idea that πολλή continues a PIE form. On the contrary, it seems attractive to assume, with Szemerényi 1974: 18, that the thematic and feminine forms of the Greek paradigm of πολύς were built on the ntr. pl. πολλά. The latter form is by far the most frequent thematic form of the paradigm in the Homeric epics, and could very well have served as a pivot, e.g. for creating the ntr. sg. (and adverb) πολλόν, and then the other cases.[37]

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[37] Nussbaum (l.c.) also tries to bolster the existence of a PIE feminine in *-ih₂* to this root as follows: "... the antiquity of [Skt. *pūrvī́*] is indicated by the contrast between (...) *pŭrú-* : *pūrvī́-* and *gŭrú-* : *gŭrvī́-* (with *gŭr-* analogical to the masc.-neut.)." This contrast, however, only shows that the

As a third point, the easiest explanation for the fact that the Homeric feminine has no *u*-stem forms is that there was no separate feminine before the rise of the thematic forms. There is strong evidence for this in Homer: the verse-final formulae πουλὺν ἐφ' ὑγρήν and ἠέρα πουλὺν ἔχευε (cf. Chantraine 1958 I: 254) seem to contain a common gender form of the adjective in coordination with a feminine noun. In view of the metrical lengthening of πουλὺν, these formulae could well be quite old,[38] and on the other hand, there is no compelling evidence for the assumption that πουλὺν stands for older *πολλάν (as is maintained, e.g., by de Lamberterie, l.c.).[39]

If one accepts that the ntr. pl. πολλά is the origin of the feminine πολλή, and that the latter form and Skt. *pūrvī́* may well be post-PIE formations, the evidence for laryngeal loss in a pre-form *$polh_1$-u- disappears. Whether or not one accepts Szemerényi's explanation for the geminate in πολλά from an *u*-stem form *πολέα is a different matter.

(e) Recently, de Lamberterie (2004) has discussed the words θρόνος 'throne' and θρᾶνος 'footstool, bench, etc.'. He remarks that θρᾶνυς, already found in Myc. *ta-ra-nu-we*, is attested earlier than θρᾶνος. The pair θρόνος, θρᾶνυς is analyzed as *$d^h orh_2$-no-, *$d^h r̥h_2$-nu-, with root ablaut. In order to make this work, de Lamberterie argues that the Homeric (and later) form θρόνος replaces earlier

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form *pūrvī́*- preserves a phonological archaism in comparison with *gurvī́*-; it does not show that its formation is older, nor if either formation goes back to PIE. In fact, there is no way to exclude that Skt. *pūrvī́*-, Av. *paoirī*- was formed in Proto-Indo-Iranian as a motional feminine *$prHu$-iH- to *$prHu$- (> Skt. *purú*-, etc.).

[38] Cf. Chantraine 1958: 252, who mentions the fem. sg. θῆλυς, -υν beside the plur. θήλειαι, -ᾱς (but once the [dactylic] *u*-stem form θήλεας), and the isolated form ἡδὺς ἀυτμή (*Od.* 12.369, probably an old formula). While de Lamberterie 1990: 887 is right in pointing out, following Sommer, that ἡδὺς ἀυτμή is non-probative, it seems that the feminine gender of θῆλυς is an archaism, preserved by the fact that there was no need to re-characterize its gender with the suffix PGr. *-i̯a.

[39] Note that the reconstruction *$polu$-i̯ă̆- obscures the fact that the feminine only has nom. πολλή, acc. πολλήν (not **πολλά, πολλάν).

*$\theta\acute{o}\rho\nu o\varsigma$, which according to him is attested in Myc. *to-no* and indirectly in the Cypr. gloss $\theta\acute{o}\rho\nu a\xi\cdot$ $\acute{\upsilon}\pi o\pi\acute{o}\delta\iota o\nu$ (Hsch.). In other words, the Achaean forms are supposed to continue an *o*-grade, not a zero grade root as is often thought. In Myc. *to-ro-no-wo-ko* one might recognize the later form $\theta\rho\acute{o}\nu o$-, which de Lamberterie assumes to be secondary after the initial cluster of $\theta\rho\hat{a}\nu\upsilon\varsigma$.

Although I admit that the scenario proposed by de Lamberterie would be a possible (though not evident) way of explaining the Greek words, there is a problem with the IE etymology. The verbal root *$d^h er$- from which the forms are derived (Skt. *dhar-* 'support') is *aniṭ*, a problem not discussed by de Lamberterie. In view of this, I regard this example as highly uncertain.

(f) $\mu o\rho\phi\acute{\eta}$ 'beauty, shape, appearance' has been compared (by Rasmussen 1989: 178) [40] with the root of Lith. *márgas* 'motley', 3sg. pres. *mìrga* 'blinks, lights up'. In view of the acute accent in Lithuanian, the root has been set up as *$merHg^{wh}$-, with loss of laryngeal in Gr. $\mu o\rho\phi\acute{\eta}$. The root structure *$merHg^{wh}$-, however, is awkward because of the full grade slot *CVCCC-. This difficulty would be avoided if the Baltic acute intonation is taken to point to a root *$merg^w$-, by Winter's Law (for its formulation, cf. Kortlandt 2009: 65-76). In fact, such a root exists outside Baltic in the group of OIc. *myrkr* 'dark'.

As far as $\mu o\rho\phi\acute{\eta}$ is concerned, it may have an inner-Greek cognate in the gloss $\grave{a}\mu\epsilon\rho\phi\acute{\epsilon}\varsigma\cdot$ $a\grave{\iota}\sigma\chi\rho\acute{o}\nu$ 'ugly' (Hsch.), an *s*-stem compound adjective which suggests that $\mu o\rho\phi\acute{\eta}$ is an old verbal noun. If the gloss is to be considered a genuine attestation, it shows that $\mu o\rho\phi\acute{\eta}$ never contained a laryngeal (it is ad hoc to assume, with Rasmussen l.c., that $\grave{a}\mu\epsilon\rho\phi\acute{\epsilon}\varsigma$ lost the laryngeal because it is a compound, cf. $\grave{\epsilon}\nu\delta\epsilon\lambda\epsilon\chi\acute{\eta}\varsigma <$ *-$delh_1$-g^h- where it is preserved).

I tentatively suggest that the root of $\mu o\rho\phi\acute{\eta}$ is also continued in Lith. *mergà* 'girl' < *$merg^{wh}$-h_2- 'appearance, beauty' with a non-acute root, and perhaps also in Lat. *fõrma* if this derives from *$g^{wh}erm$-h_2-, with an early

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[40] *DELG* s.v. $\mu o\rho\phi\acute{\eta}$ rejects the connection: "Le radical **merg^{wh}*- que l'on a posé ne mène nulle part."

metathesis of *$merg^{wh}$-h_2-.[41]

(g) ὀργή 'temperament, impulse' has been compared (e.g. Beekes 1969: 241) with Skt. *ū́rj-* 'strength, power, nourishment'. The forms are assumed to reflect PIE *$uorHĝ$-. The most frequent impulse or temperament denoted by ὀργή is clearly *anger, wrath* (*LSJ* mg. II). I assume that ὀργή is a feminine action noun derived from the root *$uerĝ$- 'work, be active'. For the semantic derivation of 'anger' from 'activity', compare OIr. *ferg* 'anger' beside W. *gwery* 'active', OBret. *guerg* (gl. efficax), all from Proto-Celtic *wergā-. Although the comparison of ὀργή with the Sanskrit root noun *ū́rj-* remains possible, it is not necessary.[42] It therefore does not provide evidence for SE.

(h) ὀρθός 'upright, right, straight' beside Skt. *ūrdhvá-* 'high, upright' has been reconstructed as *$u(o)rHd^huo$- (cf. Nussbaum 1997: 187; an extensive discussion of the IE reconstruction is given by Schrijver 1991: 312-13).[43] A number of objections can be put forth against such a pre-form.

First, there is no reflex of an internal laryngeal in YAv. ərəδβa- 'risen, upright, erect', Lat. *arduus* 'high, elevated, lofty, steep', OIr. *ard* 'high, elevated', Lith. *ar̃dvas, er̃dvas* 'spacious'.[44] The Baltic material is most

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[41] The long *ō* in *fōrma* is assumed to be secondary, see *EDL*. The accepted etymology for Lith. *mergà* is to assume a root *mer- 'young' as found in Gr. μεῖραξ 'unmarried girl' < PGr. **mer-ja-(k-)* vel sim., with an extension in -g^h- in Baltic, beside an extension with a different velar -*k*- as in Celtic (W. and Bret. *merch* 'girl' < Proto-Celtic *merkā), as proposed by Fraenkel (1962 s.v. *mergà*). In my opinion, it is awkward to assume various different "suffixes" -g^h-, -*k*- beside the unextended root.

[42] It is interesting to note that a different etymology for *ū́rj-* has been proposed by Scharfe 1985: since the word only appears in the oblique cases and never in the nom. sg., while *rā́j-* 'power' only occurs in the nom. sg., he assumed that these still formed a paradigm nom. *rā́ṭ*, obl. *ū́rj-* in the RV. Scharfe derives this root noun from the root *$h_2reh_1ĝ$-, as in Gr. ἀρήγω and Ved. *rā́ṣṭi*. Against this etymology, it can be argued that *$h_2r̥h_1ĝ$- would have to yield *ŕ̥j-*, but Scharfe's analysis of *rā́ṭ* and *ū́rj-* forming one paradigm is not affected by this objection, as far as I can see.

[43] Schrijver (l.c.) remarks that the etymology of Lat. *arduus* and its cognates "is beset with problems."

[44] The meaning of the Baltic adjective is different from 'high, upright',

straightforwardly explained by a laryngeal-less pre-form, in view of the circumflex accent. [45] In view of their clear semantic proximity, it is impossible to separate ὀρθός and ūrdhvá- from these words (or to separate ərəδβa- and ūrdhvá-, see below). Second, the group of YAv. ərəδβa-, Lat. *arduus*, etc. shows no trace of initial u̯-. There is no evidence for initial digamma in ὀρθός either (Chantraine 1958, I: 125), nor in Myc. *o-two-we* /ortʰwōweh-/ 'with upright ears'.[46] This leaves only the Skt. word as evidence for PIE *u̯-. But poetic phraseology should be taken into account as well: we find Av. ərəδβā̊ hištəṇta beside Skt. ūrdhvá- sthā-, and Hom. στῆ δ' ὀρθός. The word clearly belongs to Indo-Iranian and Indo-European poetic diction. There is only one possible conclusion: the reconstruction *u(o)rHdʰuo- is to be abandoned, and a different reconstruction *h₃rdʰuo- should be envisaged, leaving the exact origin of ūr- in ūrdhvá- as an inner-Sanskrit problem (cf. Lubotsky 1988: 94 fn. 22 and 104 fn. 24).

The most important problem left is how to reconstruct the root vocalism. YAv. ərəδβa- points to a zero grade *Hrdʰ-, while Latin is unclear but compatible with *Hrdʰ-

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but not different enough to invalidate the comparison.

[45] The acute accent of these words, which occur beside circumflex ones (*árdvas* beside *ar̃dvas, er̃dvas*, cf. also *érdvė* 'space'), can be ascribed to the influence of Lith. *ìrti* 'to disintegrate' (Derksen 1996: 356).

[46] Although initial wŏ̆- seems to have yielded ŏ̆- at an early date in some words, other words do show traces of digamma (e.g. ὄσσα 'voice' in Hes. *Th.* 10 περικαλλέα ὄσσαν ἱεῖσαι; it seems to me that the discussion of the reflex of *wŏ̆- by Chantraine, l.c., can be improved on a number of points.) Therefore, a reconstruction *h₃rdʰuo-, without initial *u̯-, would be the most straightforward option for Greek.

I leave Ϝορθεια (and variants), a Laconian epithet of Artemis, out of the discussion. Interpretations of this epithet as 'the upright one' (or: 'the lofty one') would be possible at best, but not compelling at all. (The alternative interpretation by Ruijgh – Ϝορθεια would be a 'déesse de la croissance', and the epithet derive from the root *uerdʰ- 'grow' (1967: 158 fn. 315) – is difficult if the root of Vedic *várdhate* actually reflects *Hueldʰ-. Of course, it cannot be excluded that Ϝορθεια, like Artemis herself, is a Pre-Greek deity: see Beekes *EDG*.) Further, the gloss βορθαγορίσκια (Hsch.) beside ὀρθαγορίσκος (Ath.), together with its folk-etymological explanations in the lexica (see *EDG* s.v.), is too uncertain to be relied upon.

(Schrijver, l.c.). OIr. *ard* could point to zero grade *Hrd^h-* as well. On the other hand, Baltic (Lith. *ar̃dvas, er̃dvas*) and Germanic (OIc. *o̧rðugr* 'steep') seem to have a full grade *h_3er-*. Greek, of course, is compatible with both zero grade and full grade. Unless one is prepared to accept that the Baltic and Germanic forms have secondary full grades, the root ablaut is most straightforwardly explained by assuming thematization of older ablauting *h_3rd^hu-*. The meaning of ὀρθός and cognates, of course, would perfectly suit the root *h_3er-* 'to rise'.

5.3. οὖθαρ **and IE ablaut.** The word οὖθαρ 'udder' is reconstructed, since Schindler (1975: 7-8), as *$H(e/o)uHd^h$-r/n-*, an ablauting heteroclitic paradigm with static inflection. The internal laryngeal is reconstructed on account of Skt. *ū́dhar* 'id.'. For οὖθαρ, which seems to contain an *o*-grade but shows no trace of the internal laryngeal, this reconstruction would imply that SE has been at work (Nussbaum 1997: 182).[47] Reconstructing an *e*-grade would be possible for Greek (reconstructing initial *h_3*), but not for Germanic, in view of material pointing to *eu-* (Old Norse *júgr*, Old Saxon *ieder*).

The Skt. paradigm is generally thought to continue zero grade *$HuHd^h$-r*. The zero grade yielding a long vowel is also found in Balto-Slavic: Lith. *ūdróti* 'to be with young' (presupposing an older nominal stem *$ūdr$-* meaning 'udder'), and Russian *vými̯a* 'udder', a *mn*-stem that replaced the heteroclitic inflection in Slavic. It has long been thought that the acute Proto-Balto-Slavic *$ū$-* must derive from *HuH-*, like the Sanskrit form. As Pronk has shown, however, this *$ū$-* may have arisen due to metathesis of stressed *$HúC$-*, yielding an acute long vowel in Proto-Balto-Slavic (Pronk fthc.). Thus, for Slavic one may reconstruct either *$HuHd^h$-men-* or *$Húd^h$-men-*.

Beside these zero grades, we seem to find two different ablaut grades: *e*-grade in Germanic (Old Norse *júgr*, Old Saxon *ieder*), *o*-grade in Greek. Latin *ūber* may derive from a zero grade *HuH-* according to Nussbaum

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[47]This analysis is now accepted by de Lamberterie in *DELG Supp.* s.v. οὖθαρ. The vocalization of a laryngeal in *-euHC-* is found in Myc. *re-wo-to-ro-ko-wo* /lewotro-kʰowoi/ 'pourers of bath-water', from *$leuh_3$-tro-*.

1997, but may also contain full grade of the root (*e-* or *o-* grade), see the discussion in Pronk 2011. In Germanic, beside **eu-* we also find material with **ū-* (e.g. Swiss German *ūter*, Dutch *uier*).

There is a number of problems with the reconstruction of this word. First, it is supposed that we find *e*-grade, *o*-grade and zero grade within one paradigm. Most scholars would agree that the distribution of these ablaut grades in the original paradigm remains enigmatic. Schindler reconstructs sg. nom.-acc. **(h₁)óu̯Hdʰr̥*, gen. ***(h₁)éu̯Hdʰn̥-s* (replaced by forms with zero grade root, e.g. **(h₁)uHdʰn-és*), coll. nom.-acc. **(h₁)éu̯Hdʰōr*, gen. **(h₁)uHdʰn-és*. He explicitly states that the full grade root of Germanic (Old Saxon *ieder*) directly continues the PIE collective, although there is no clear evidence that this was the original situation.

Second, there are hardly any parallels for the *o*-vocalism of Greek *οὖθαρ*. Of course, the *o*-vocalism is considered to be in accord with a static paradigm, and a static paradigm is also implied by the root accent of the Skt. paradigm. But in such a paradigm, the almost pan-IE generalization of the zero grade is rather embarassing. In particular, there is no evidence in the 'udder' word to substantiate the assumption that the gen.sg. was originally **(h₁)éu̯Hdʰn̥-s*, before it was replaced by **(h₁)uHdʰn-és*.[48]

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[48] As a tentative proposal, one might consider the following. Since there are no parallels in other languages for the iterative formation **(H)u̯ors-éi̯-e/o-* reconstructed for *οὐρέω* (cf. 3. above), it is conceivable that *οὖρον* is a primary formation and the base word for *οὐρέω*, which in this case would be a denominative of a productive type. Although *οὖρον* is attested later (Hdt.+) than *οὐρέω* (Hes.+), it may well be older (cf. Nussbaum 1997: 181). But it is difficult to derive *οὖρον* from **(H)u̯órso-*, since we would expect the -*rs*-cluster to be retained when directly preceded by an accented vowel (cf. *ὄρσος* 'arse' beside *οὐρά* 'tail'). It is therefore worth considering whether *οὖρον* can be related to **uh₁-r-* 'water', and in particular whether OIc. *úr* 'rain' < **uHro-* continues the same formation. This could be the case if we posit a sound change **(H)uHC-* > Gr. *οὐC-*, via an intermediate stage **ūC-*, with diphthongization of **uwC-* to *owC-*. This would have the advantage that we are able to derive *οὖθαρ*, plur. *οὔθατα* from the same static paradigm as Skt. *údhar*, gen. *údhnas*: non-ablauting **(H)úHdʰ-r/n-* would directly yield *οὖθαρ*. There is no counterevidence to the sound change **ūC- > οὐC-*

Finally, the most important question to be answered is what the element *(h₁)uHdʰ-* is. Melchert has assumed a root *(h₁)euh₁/₃-* with enlargement *-dʰ-*,[49] based on his interpretation of Hitt. *u̯a-* as 'nurse' and the word for 'water' and 'milk' continued in Luwian *va-a-ar*, Skt. *vā́r*, Av. *vāra-* 'rain' and OIr. *fír* 'milk', which he reconstructs as *h₁u̯eh₁-* (see the recent discussion of the evidence in Vine and Yokoyama 2010). But apart from the Schwebeablaut that Melchert has to assume, it would be unattractive to separate Luwian *va-a-ar* etc. from the other word for 'water', *ud-r/n-*, which has no laryngeal. Moreover, the interpretation of Hitt. *u̯a-* as 'nurse' is not certain, see *EDHIL* s.v.

The fact that the morphological problems just discussed remain unsolved severely reduces the value of οὖθαρ as an example for SE.

5.4. Greek has a number of *wo*-adjectives that are derived from a root ending in a laryngeal, but in which the laryngeal has left no trace. I will discuss the following

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proposed here (all examples of initial *hū̆-* in Greek derive from *sū̆-* or from compensatory lengthening of *us-* before a resonant).

There are also two less attractive sides to this proposal. The sound change *ūC- > οὐC-* can only be assumed for initial position, since the normal result of internal *-uH-* is obviously Gr. *ū̄* (as in θυμός), leaving aside uncertain examples of 'laryngeal breaking'. For a possible cause of a divergent treatment in word-initial position, one could think of the influence of an automatic glottal stop in this position. Furthermore, it remains to be shown that *uHC-* does indeed yield *ūC-* and not *wVC-*. Beekes has argued for the latter development (on the basis of ἄστυ < *uh₂stu-*, ἄγνυμι < *uh₂ǵnu-*). I hope to treat these questions in the near future. Summarizing, the proposal to derive οὖθαρ from *(H)úHdʰ-r* by regular sound change would not only explain οὖρον, which cannot derive from *(H)u̯órso-*, but it would also have the advantage of clarifying the PIE paradigm of 'udder', aligning it with normal heteroclitic inflection (only *e*-grade and zero grade). Needless to say, the proposal needs further elaboration.

[49] The compound may have been transformed into an *r/n*-stem after other names of body parts, such as 'liver'. A different analysis of 'udder' as a compound could be to assume as a first member the root *h₁euH-* 'to assist' (Skt. *avⁱ-*), if this meaning developed from earlier *'to grant, provide'. One might even consider dissimilation of the internal laryngeal in *h₁euH-dʰh₁-*, as in *u̯erh₁-dʰh₁-o- > *u̯erdʰh₁o-* > Lat. *verbum*.

examples: ὅλος 'whole, entire', κούρη 'maiden', θοῦρος 'impetuous', οὖλος 'baneful'.[50]

Lubotsky has recognized that these formations cannot all be old: "As a matter of fact, several adjectives formed with the suffix -*u*- became thematicized in Greek, merging with the inherited category of adjectives in -*u̯o*- such as οὖλος 'whole' (Skt. *sárva*-), ὀρθός 'straight' (Skt. *ūrdhvá*-), etc." (1988: 122).[51] Lubotsky distinguishes four types of adjectives in -*u̯o*- which can be shown to be of recent formation: (1) the old *u*-stem is preserved within Greek, e.g. τανυ- < *tnh₂-u- as a first member of compounds beside ταναός 'thin' (thematicized from *tanaw- < *tnh₂-eu-). (2) the old *u*-stem is preserved in or presupposed by other IE languages, e.g. λεῖος 'smooth' < *leh₁i-uo- beside Lat. *lēvis* 'id.' < *leh₁i-u-; (3) two or more ablaut grades of the suffix and/or root are found in Greek, e.g. κενεός 'empty' < *kenewo- beside κεινός < *kenwo-; (4) an earlier *u*-stem must be assumed in order to explain the Greek form, as is the case with the vocalism of σῶς, σάος 'healthy' < Proto-Greek *sawo-. This form, which is probably related to Skt. *tavⁱ*- 'be strong' and within Greek to Hsch. ταΰς· μέγας, πολύς, can only be understood if we start from a paradigm with nom. *tueh₂-u-s.

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[50] I exclude from the discussion οὐροί 'furrows for drawing a ship to the sea (or ashore)' (*Il.* 2, 153). García Ramón 2004 has shown that οὐροί is an agent noun belonging to ἐρύω 'to draw' (semantic parallels: ὁλκός 'drawing machine for ships' to ἕλκω 'to draw', and κελέτρα 'fishing device' to (ὀ)κέλλω 'to put ashore'). This verb ultimately goes back to PIE **u̯erH-u̯*-, but in Proto-Greek the verbal root seems to have been *werw- already. Note that the word for 'wool', εἶρος ('that which is plucked'), probably belongs to the same root and does not show a trace of the laryngeal either. Thus, to my mind οὐροί is not a formation in -*ϝo*-, but simply a thematic agent noun of the type τομός, derived from a verbal root within Greek. Inner-Greek origin cannot be surprising, given the highly specialized meaning.

[51] With regard to their accentuation, Lubotsky remarks (loc. cit.): "As these recent *ϝo*-adjectives show both accentuations [i.e. barytone and oxytone], I assume that the thematicization of *u*-stem adjectives is anterior to the generalization of the oxytonesis in this category. If this is correct, the recent *ϝo*-adjectives have preserved the original accentual distribution of *u*-stem adjectives."

We will now argue that all four examples ὅλος, οὖλος, θοῦρος, and κόρη are *u*-stems in origin, rather than old thematic *uo*-derivations. (The same may be true, as we have seen, of ὀρθός: cf. supra, 5.2 h.)

(a) Att. ὅλος, Hom. Ion. οὖλος 'whole, entire' is derived from a root **selH-* (often equated with **selh₂-* 'to restore order, appease' as found in ἵλαος 'merciful', ἱλάσκομαι 'to appease'). In my treatment of this word, I depart from Nussbaum's discussion of the Italic material relating to *sollus* and *salvus* (1997: 186ff.).[52] Hittite has an adjective *šalli-* / *šallai-* 'great, important, chief'. Both this form and OIr. *slán* 'complete, sane' reflect a root-final laryngeal: **slH-i-* and **slH-no-*, respectively. According to the *communis opinio*, this means that in Skt. *sárva-* and Gr. ὅλος, which both seem to reflect PIE **sól-uo-*, the original laryngeal that is expected on account of the root etymology (**solH-uo-*) was lost due to the *o*-grade.

Although the comparison with Skt. *sárva-* may seem to imply the reconstruction of a thematic pre-form PIE **sólH-uo-*, there is an important reason why we have to assume thematization of an older *u*-stem: the Italic evidence (Lat. *salvus*, Osc. σαλαϝς), which requires a PIE *u*-stem **slH-u-*. I refer to Pronk 2011 for detailed argumentation concerning the Italic forms. For PIE, Pronk departs from an adjectival paradigm nom. **solH-u-s*, acc. **slH-eu-m*, gen. **slH-eu-(o)s*.

Within Greek, too, indications may be found to suggest that ὅλος is a thematicization of older **sólH-u-*. First, its barytone accentuation could point to an old neuter noun **hólu*, as in μοῦνος 'alone' which could be a thematization of older **mónu* (see Ruijgh 1987: 537).

Second, Hsch. seems to preserve the full grade of the suffix in ὀλοεῖται· ὑγιαίνει 'is healthy', which could be a denominative to **holowo-*. Taking this gloss at face value[53],

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[53] It cannot be completely ruled out that the form stands for **ὀλϝεῖται*.

the occurrence of *$holwo$-* beside *$holowo$-* points to ablaut in an earlier stage of Greek, and therefore to a PGr. *u*-stem.[54]

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[54] The reconstruction of the PIE *u*-stem paradigms (notably the difference between adjectives and substantives) cannot be dealt with extensively at this point, and it would certainly deserve a fresh treatment. By way of digression I will give a very brief sketch of my ideas about this topic.

It seems quite possible that the *o*-grade root in ὅλος points to the existence of a nom.-acc. sg. of a neuter *u*-stem noun, as in *dor-u* 'wood', *h_2oi-u* 'lifespan, good health, etc.' (similar in meaning to Lat. *salvus*), *$ĝon$-u* 'knee', etc. For *salvus*, this suggestion is also made by *EDL* (s.v.): "Both PIt. *$salu$-* and IIr. Gr. *$solwo$-* can be interpreted as deriving from a n. noun *$sólH$-u- / *slH-u-* 'wholeness', with an ins. sg. *slH-u-h_1* from which *salū-t-* and *salū-pli-* were derived," with reference to a lecture by Pike at the 2007 East Coast Indo-European Conference. The forms in *salū*-presuppose a verb *saluere* derived from an adj. *$salu$-* (like *arguere* to *$argu$-* 'bright'), cf. *EDL* s.v.

Some case forms of the neuter noun (e.g. the loc., but perhaps also the gen.) must have had *slh_2-eu-* (giving PIt. *$salau$-*, with *au* developing to *ū* in an internal syllable – in this version, we do not need the instrumental to arrive at the Latin -*ū*-). This ablaut form is supported by the Skt. form *prasalaví-* 'towards/on the right side', which is thought to continue a locative *$s(o)lH$-eu-i* (Plath 2000). It is also consistent with the type *$doru$* (Gr. δόρυ), gen. *dreus* (continued in e.g. Goth. *triu*). I therefore assume an original neuter nom.-acc. *$sólh_2$-u*, loc. *slh_2-éu-i* (and, perhaps, gen. *slh_2-éu-s*), which may account for the forms attested in Italic (*sollus*), Greek and Indo-Iranian by independent thematicizations.

Elaborating on Ruijgh's suggestion cited above, I suppose that beside the neuter substantive *$sólH$-u* 'a whole (of)', PIE may have had an adjective *slH-u-* 'whole'. This *slh_2-u-* > *$salu$-* | _*C* yielded Latin *salvus* after thematicization. Since an old thematicization *$saluo$-* of *$salu$-* would have led to geminated **$sallo$-, it is necessary to assume that the thematicization of PIt. *$salu$-* to *$saluo$-* is recent (Nussbaum 1997, cf. *EDL* s.v. *salvus*). This situation (adj. beside neuter) would be paralleled by the *u*-stem adjective *plh_1-u-* 'much, many' > Skt. *purú-*, where Gothic has *filu* (+ gen.) 'a lot (of)', which behaves as a substantive (Schmidt 1893: 382). Perhaps it could be assumed that Greek πολύ also continues an older substantive. It may not be a coincidence that πολύ has an *o*-grade root, if it derives from a nom. sg. ntr. *$pólh_1$-u* 'a lot of' (the oxytone accent could be a consequence of the reanalysis as an adjective).

Thus, I arrive at a reconstruction ntr. *$pólh_1$-u* beside adj. *plh_1-u-* and ntr. *$sólh_2$-u* beside adj. *slh_2-u-* (the two pairs are close, both semantically and formally). I suspect that ultimately, a syntactic difference (attributive vs. predicative use) could be at the basis of the different ablaut forms and thematicizations (cf. the difference between strong and weak declension in Germanic and Balto-Slavic). Needless to say, this is a suggestion for which further argumentation will have to be provided.

(b) οὖλος 'pernicious, baneful' < earlier *olwo- to the root *h_3elh_1- 'to fall, perish', mechanically < *h_3elh_1-uo-. An earlier athematic *u*-stem is particularly clear in this case, for we also find the epic word ὀλοός 'pernicious' << PGr. *ol-Vw- with a different ablaut grade. The example belongs to Lubotsky's category 3 (it is discussed in Lubotsky 1988: 122), and the mechanical reconstruction of a proto-form is invalid.[55]

(c) θοῦρος 'impetuous, furious' < *t^horwo- to the root *d^herh_3- 'to jump', mechanically < *d^horh_3-uo-. The word is old within epic Greek, in view of the athematic feminine θοῦρις which is formulaic in the verse-final genitive θούριδος ἀλκῆς 'furious resistance'. But θοῦρις proves that the ϝo-stem cannot be old. Lubotsky (l.c.) already suggested loss of the laryngeal in the nominative *d^horh_3-u-s. As has been suggested above for ὅλος, one could prefer to start from the neuter *d^horh_3-u, if this form is indeed the origin of the *o*-vocalism in the root.[56]

(d) Att. κόρη 'maiden', epic (Ion.) κούρη, Arc. Cor. κόρϝα etc. from a pre-form *korwā-, to the root *$k̂erh_1$- 'to bring forth' as in Lat. *creō* 'to grow', Arm. *serem* 'to produce' (rather than from IE *$k̂erh_3$- 'to satisfy, feed' — if these

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[55] It is conceivable that the root was not *h_3elh_1-, but rather *h_1elh_3-, in view of the Greek νν-present. This would presuppose that the sigmatic forms (aor. ὀλέσαι etc.) are the oldest formations, in which the metathesis of *o* and *e* first occurred. In this case, the *nu*-present would have taken the vocalism of the aorist, like in pres. θόρνυμαι beside aor. θορεῖν.

[56] A different analysis of the adjectives in -ϝo- is found in García Ramón (2000), who reconstructs οὖλος and θοῦρος as old derivatives in -υό-. According to him, these forms are "quasi-partizipiale Bildung[en] der Struktur *CoC-υό-", a type of formation which he separates from primary adjectives (e.g. ὅλος) and from denominal adjectives like ἴσος 'equal', which are supposed to have parallel formations in other IE languages. However, it seems doubtful that the suffix *-υό- dealt with here was really accented in all examples. García Ramón argues that οὖλος and θοῦρος are Aeolic forms that underwent retraction of the accent. While such an analysis is possible in the case of Homeric forms, the accent of Attic ἵλεως < *$hi-hlā-wo$- is a tougher nut to crack. In view of the quantitative metathesis it underwent, ἵλεως seems an inherited Ionic-Attic form, not a borrowing from (epic) Aeolic.

two roots can be distinguished at all).[57] The fact that Mycenaean already has both *ko-wo* /korwo-/ 'boy' and *ko-wa* /korwā-/ 'girl' suggests that this pair is of adjectival origin. This adjective **korwo/ā-* may itself be a thematicization of a neuter PGr. **kóru* < PIE **kórH-u* 'growth, produce'. (There is no decisive argument to prove the last statement, but there is no evidence either to support the reconstruction of an old form **k̑orH-uo-*, because the formation is restricted to Greek.)

None of the four examples of Greek ϝo-stems furnishes compelling evidence for SE in Greek. In all cases, there is concrete evidence pointing in the direction of later thematicizations. This is not a surprise, in view of the general tendency of Greek to get rid of its *u*-stem adjectives.[58]

6. Strong examples for loss of root-final laryngeal. In the following examples, the root-final laryngeal is lost in the Greek reflexes. I consider them to be the best evidence for what has been called the "Saussure effect".

(a) τόλμᾱ (Pi.), τόλμᾰ (Ion.-Att.) '(over)boldness', derived from the root **telh₂-*. A monosyllabic root τελ- does not occur in Greek (we only find τελα- and τλη-).[59]

(b) τόρμος 'socket in which a pin is fixed' (Hdt.+),

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[57] The reconstruction of **k̑erh₃-* is largely based on κορέσαι 'to satisfy', a type of aorist which comprises roots originally ending in **h₃*. The reconstruction of **k̑erh₁-*, on the other hand, is mainly based upon Latin forms like *crēvī*, *crēscō*, which cannot be derived from a root **k̑erh₃-* but with great difficulty. This matter cannot be pursued here. The important fact is that the Greek words derive from a root ending in a laryngeal.

[58] It cannot even be excluded that the lack of a laryngeal reflex in some of the derivatives in **-wo-* should be explained differently, namely by loss of laryngeal in an environment comparable to Pinault's Law (Pinault 1982). That is, one might wonder whether the laryngeal could be lost not only in PIE **-CHiV-* (as in e.g. τείρω 'to wear out'), but also in PIE **-CHuV-*. A strong piece of evidence for this could be the 2pl. middle ending -σθε < PGr. **-sᵗʰwe* << **-tʰwe*, which in view of Hitt. *-ttuma* must derive from **-dʰh₂ue* – see *EDHIL* s.v. *-ttuma(ri)*, *-ttumat(i)*. This matter cannot be pursued here; and the argument does not depend on it.

[59] But note that according to Beekes (1969: 240), "The comparison with OHG *hamma* < **konHm-a* (s.v. κνήμη) and OHG *halm* etc. < **k̑olh₂m-* (s.v. κάλαμος) suggests a noun **tolh₂m* **tl̥h₂m-*".

derived either from *$terh_1$- ($\tau\acute{\epsilon}\rho\epsilon\tau\rho\sigma\nu$ 'drill, borer', $\tau\rho\eta\tau\acute{o}s$ 'bored through') or from *$terh_3$- (as in the aor. $\tau\sigma\rho\epsilon\hat{\imath}\nu$ 'to pierce'). The etymological connection with Hitt. *tarma*- 'peg, nail' (see *EDHIL* s.v.) is highly probable, that with PGm. *parma*- 'intestine' possible. It presupposes an action noun *$tórh_1$-mo- 'piercing'. The loss of the laryngeal in Hittite is due to the environment between resonants and may be post-PIE (see *EDHIL* loc. cit.). Since *-mo-* was not a productive suffix in Greek (cf. Chantraine 1933: 151f., where incidentally $\tau\acute{o}\rho\mu\sigma s$ is not mentioned), this is probably an old etymon, without a trace of the laryngeal.

(c) The same holds for $\tau\acute{o}\rho\nu\sigma s$ 'knife, lathe' (Thgn.), whence $\tau\sigma\rho\nu\acute{o}\sigma\mu\alpha\iota$ 'to draw a circle': the primary suffix *-no-* was not productive in Greek[60], and the formation *$tórH$-no- is therefore probably old.

(d) Ion.-Att. $\pi\acute{o}\rho\nu\eta$ 'whore' belongs to the root *$perh_2$- 'to sell', found in the nasal present $\pi\acute{\epsilon}\rho\nu\eta\mu\iota$ 'id.', aor. $\pi\epsilon\rho\acute{a}\sigma\alpha\iota$ (Hom.). An outer-Greek cognate is OIr. *renim* 'id.' < PIE *pr-$n(e)$-h_2-. Judging by the glosses $\pi\sigma\rho\nu\acute{a}\mu\epsilon\nu\cdot\ \pi\omega\lambda\epsilon\hat{\imath}\nu$ 'to sell', $\pi\sigma\rho\nu\acute{a}\mu\epsilon\nu\alpha\iota\cdot\ \pi\omega\lambda\sigma\acute{\nu}\mu\epsilon\nu\alpha\iota$ 'being sold' (Hsch.), this nasal present was also found in Aeolic or Achaean (-$\sigma\rho$- continuing *-$\underset{\circ}{r}$-). It would not be possible, however, to derive $\pi\acute{o}\rho\nu\eta$ from this nasal present directly. Therefore, it seems that $\pi\acute{o}\rho\nu\eta$ continues an old formation *$porh_2$-neh_2.

7. Possible counterexamples to SE for root-final laryngeal.
It is difficult to find good counterexamples to the Saussure effect, and this is certainly one of the reasons why SE has been embraced with so much enthusiasm for Greek. I did not manage to find any decisive counterexamples to *-$oRHC$- > *-oRC- either. Still, the following words deserve to be mentioned.

(a) The adj. $\acute{o}\mu\alpha\lambda\acute{o}s$ 'level' could theoretically be analyzed as continuing *$somh_2$-lo-. But an ablauting root is suggested by Lat. *similis* < PIt. *$semali$- (cf. *EDL* s.v.), OIr.

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[60] "En grec le suffixe *-no-* n'a pas été productif pour la formation de substantifs; seule l'étymologie peut nous faire reconnaître, plus ou moins probablement, des formes affectées de ce suffixe qui n'a jamais été vivant dans le grec historique." (Chantraine 1933: 191).

samail 'likeness', Goth. *simle* 'once'. Moreover, it is quite possible that ὁμαλός continues older **hamalo-*, the *-o-* being taken e.g. from ὁμός. Since the pre-form was probably different, e.g. **smh₂-el-*, ὁμαλός cannot be used as counterevidence.

(b) Within Greek, δολιχός 'long' should first be compared with the *s*-stem adjective ἐνδελεχής 'continuous', which probably derives from **-delh₁gʰ-s-*. There are outer-Greek comparanda in Skt. *dīrghá-* 'long', Ru. *dólgo* (adv.) 'id.', and Lith. *ìlgas* 'id.' (with loss of initial **d-*), all of which may derive from **dlHgʰó-*, with BSl. retraction of the accent to an acute syllable by Hirt's Law. Greek is the only language to show an *o*-grade in this word. This seems to point to a reconstruction **dolh₁gʰó-*.

Peters (1988: 374 fn. 3) has adduced this word as an example in favor of SE, as it would show the development of an anaptyctic vowel in δολιχός < **dolkʰó-* < **dolh₁gʰ-ó-*, while the laryngeal reflex is seen in ἐνδελεχής < **delh₁gʰ-s-*. To my mind, assuming an anaptyctic *-ι-* in δολιχός is an ad hoc solution. In fact, had the laryngeal been lost, it does not seem very probable that an anaptyctic vowel *-ι-* would have developed in Greek, seeing that nothing similar happens in clusters with voiceless stop like *-λκ-*. It seems more plausible that the *-ι-* is somehow related to the *preservation* of the **-h₁-*. But how exactly the *-ι-* arose must remain an open question, and therefore the word cannot be used as a counterexample.[61]

(c) For πόλεμος 'war' (also Hom. πτόλεμος), Ruijgh reconstructs a root **tpelh₁-* 'défendre' (1997: 277) in an attempt to etymologically connect πόλις with πόλεμος. He explicitly argues, on this basis, that πόλεμος is a counterexample against SE ("il ne peut pas s'agir d'une perte phonétique de la laryngale", l.c.). This etymology is hardly convincing, because a verbal root **tpelh₁-* is not attested anywhere.[62] It is therefore unknown whether the

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[61] Strunk (1969, 1970) famously explained *-ολι-* as the regular reflex of **Clh₁C*, but this matter cannot be discussed within the scope of this paper.

[62] On the other hand, in view of the forms with *ππ-*, derivation of πόλεμος from the root **pelh₁-* 'to swing' (comparing πελεμίζω 'to shake, vibrate')

-ε- in πόλεμος reflects an interconsonantal laryngeal.

(d) A different argument against a purely phonetic form of SE was pointed out to me by Prof. Pinault: the middle present participle *-mh₁no- (> Gr. -μενος, Lat. *fēmina*, Toch. B -*māne*, etc.) not only shows that the word-internal sequence *-HRo- does *not* undergo SE; the correspondence of thematic forms such as Gr. ἀγόμενος beside Toch. B *akemāne* < *h₂eĝ-o-mh₁no- could also be used as a counter-argument against SE for *-oRH- (at least for non-root *o*).[63]

After a scrutiny of the evidence for and the counter-evidence against the Saussure effect in Greek in word-internal position (sections 5.-7.), my first major conclusion is that much evidence is of doubtful value or open to different explanations. However, some serious examples for the loss of word-internal laryngeal persist. This group consists of τόλμα, τόρμος, τόρνος, πόρνη. Counterexamples against SE-loss of word-internal laryngeal are not particularly numerous or convincing. It could now be argued, following the traditional interpretation, that a group of four solid examples, with no obvious counterexamples, forces us to accept SE as a regular phenomenon. But it is not necessary to embrace this conclusion if a different explanation can be given for those four forms.

In the remaining pages, I will defend the thesis that the environment *-VLHNV- (rather than the *o*-vocalism of the root) is responsible for the loss of laryngeal in forms like τόλμα. In other words: PIE *-VLHNV- > Greek *-VLNV-. In order to bolster this hypothesis, I will first provide evidence for laryngeal loss in *-eLHNV- as well. After this (sub 9.), a discussion of possible counter-evidence to Greek laryngeal loss from PIE *-eLHNV- will follow.

8. Proposal for a new solution. In the commonly accepted formulation of SE for internal laryngeals, a conditioning

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is not evident either.
[63] The anonymous referee suggests to me that the thematic middle ptc. suffix may have been restored from the suffix in athematic forms (in Greek, found in root formations and in the middle perfect).

environment *-oRHC-* is found. In the four examples under 6. that have survived the scrutiny under 5., it may be noted that:

(1) the suffixal consonant is always a nasal,
(2) the resonant found in the root is always a liquid,
(3) the suffix is always of the shape -*CV*-.

This means that the environment conditioning the laryngeal loss could in fact be much more specific than is usually thought. The possibility to re-formulate this conditioning environment as *-oLHNV-* leads to the question whether the same may have happened in *-eLHNV-*.

I therefore propose a new explanation for forms of the type τόλμα: any laryngeal drops between a liquid and a nasal in the sequence *-VLHNV-*. Note that it is possible, within the terms of this new proposal, to accommodate for the etymologies of *θορνός (= Myc. *to-no*) and ὁρμή that were discarded as compelling evidence under 5.3 above. If these etymologies are correct, they may represent *$d^h orh_2$-no-* and *$sorh_3$-mo-*, respectively.

Phonetically, a sound change *-VLHNV-* > *-VLNV-* is much more attractive: unlike in the commonly accepted formulation of SE, the segmental loss of the laryngeal is now conditioned by contiguous phonemes. One could object that laryngeals are always vocalized in interconsonantal position in Greek. I will comment on the question of vocalization below; first, the new hypothesis will be tested. It turns out that laryngeal loss in *-eLHNV-* may also be found in:

(a) στέρνον 'chest, breast' < *$sterh_3$-no-* (*Il.*+), cf. OHG *stirna* (f.) 'forehead'. Scholars usually start from the root *$sterh_3$-* 'to spread out' found in Gr. στρωτός 'extended' (cf. *EDG* s.v. στέρνον). Compare εὐρύστερνος (Hes.) 'with a wide chest' for the chest as something which is extended. The loss of the laryngeal has remained without explanation so far.[64]

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[64]One might also adduce στόρνη 'belt, ζώνη' (Call.+), which is usually assumed to derive from the same root (*GEW, DELG, EDG*), and which

(b) τέρμα 'end, highest point' (*Il*.+) and τέρμων 'limit, boundary' (A.+) are related to Lat. *termō* (m.), *termen* (n.) 'boundary (stone)'. I derive these as *$terh_2$-mn-* from the root *$terh_2$-* 'to cross, overcome' found in Skt. *tiráte* 'to cross, overcome', *tirás* 'across', OIr. *tar* 'id.' < *trh_2-ós*, Lat. *trāns* 'id.' < *trh_2-nt-s*, and with an *u*-extension in Hitt. *tarḫu-*, Skt. *tūr(v)-* 'to overcome' < *$t(e)rh_2$-u-*.[65] Alternative etymologies have to start from other roots that contain a laryngeal, namely *$terh_1$-* and *$terh_3$-* 'to pierce'. [66] Therefore, this etymon shows loss of the root-final laryngeal after an *e*-grade in any case.

It seems that the correspondence between Greek and Latin could point to an early loss of the laryngeal in this environment, perhaps in late PIE. The same conclusion seems to follow from Skt. *su-tárman-* 'having a good crossing', which is unlikely to contain the *o*-grade of the root.[67]

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reminds of πόρνη. It is unlikely that this is an old formation, however, in view of the late attestation.

[65] Cf. Nussbaum 1997: 184 with fn. 26. I do not think that τέρμα and Lat. *termen* belong together with Hitt. *tarma-* 'peg, nail' (*EDL* s.v. *termen*). This would presuppose that the meaning shifted from 'pole' > 'boundary pole' > 'boundary', then to 'boundary stone' in Latin, which seems artificial to me. De Vaan (*EDL*, l.c.) argues that "The Hittite noun and the usage in Latin suggest that the PIE word denoted a concrete object which came to refer to a boundary-stone. For this reason, the etymology deriving *termen* from the PIE root *$terh_2$-* (…) is unattractive." I do not see, however, why the Latin usage could not point to a basic meaning 'boundary'. As I have argued above (6.), Hitt. *tarma-* should be connected with Gr. τόρμος 'socket'. This has two advantages: first, τόρμος and *tarma-* may continue exactly the same action noun *$torH$-mo-* 'piercing'. Second, Latin does not attest the meaning 'pole' (but 'boundary stone'), and the Homeric meaning 'turning point in a chariot race' does not necessarily point to a pole. On the other hand, the meanings 'highest point, supreme power' attested for τέρμα in Pindar and tragedy would be difficult to explain from 'pole'. But these meanings can be understood very well if we connect the words with the root of Skt. *tiráte* 'to cross, overcome' and Hitt. *tarḫu-* 'to overcome, overpower'. For these reasons, I reconstruct a PIE *mn*-stem *$terh_2$-mn* 'crossing, boundary'.

[66] Nussbaum (1997: 184) mentions the example τέρμα, τέρμων, but rejects an explanation in terms of the suffixal *o*-vowel of τέρμων.

[67] Hackstein 2002: 2 explains τέρμα as *$terh_2$-mn-* (with loss of laryngeal in the environment *CH.CC). However, this rule still awaits a critical survey of all the evidence and counterevidence (note the counterexamples

(c) A possible example is ἐλλός (*Od.*) 'deer-calf' beside ἔλαφος 'deer (m., f.)' (*Il.*+). The acute of the related Balto-Slavic forms Lith. *élnis* 'deer', PSl. **òlni* > Ru. *lan'* 'doe', dat.sg. *láni* points to a laryngeal (see Derksen 2007 s.v. *òlni*, who reconstructs **h₁el-h₁n-ó-*, with the Hoffmann suffix). It is now possible to assume that ἐλλός derives from **h₁el-h₁n-ó-* as well. Another possibiliy would be to reconstruct **h₁elh₂-no-*, in which case ἔλαφος could be from **h₁elh₂-bʰo-* (instead of the traditional reconstruction **h₁el-n-bʰo-*).[68]

(d) τέρνακα· τῆς κάκτου τοῦ φυτοῦ καυλός 'stalk of the cardoon-plant' [69] (Hsch.) can be analyzed as replacing **τέρνο-* < **terH-no-* (**terh₁-* or **terh₃-* 'to pierce'), to which a Greek suffix **-ak-* (frequent in plant names) was secondarily added. But the evidence of **tr-no-* 'thorn' (found in Skt. *tŕ̥ṇa-* (n.) 'grass, blade of grass', PSl. **tьrnъ* (accent paradigm b, cf. *EDSIL* s.v.), and the Germanic group of Goth. *þaurnus* (m.) 'thorn') suggests that a pre-form without a laryngeal would also be possible for τέρνακα.[70]

9. Counterexamples to **-eLHNV-* > **-eLNV-*. In this section, I will discuss cases where traditionally the laryngeal is assumed to be vocalized between liquid and nasal (when the root has *e*-grade). Such cases may receive an alternative explanation in two different ways:

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mentioned by Hackstein, op. cit. 19). Also, the attested Greek declension does not show this environment, as all cases have **terh₂-mn̥(t)-*. I therefore prefer the inclusion of τέρμα as an example of the rule proposed here. Another explanation of Skt. *su-tárman-* would be to assume laryngeal loss in a compound, but I am reluctant to assume such loss without prior necessity.

[68] Another related form, which might derive from the same pre-form as ἐλλός, is Arm. *ełn* 'deer'. The word for 'deer' may be related to the color term Skt. *aruṇá-* 'reddish brown', OAv. *auruna-*. If so, we are probably dealing with the interchange of suffixes *-u-/-n-* frequent in animal names (cf. Lat. *corvus* 'raven' beside *cornīx* 'crow', etc.).

[69] *Cynara Cardunculus*, especially its uncultivated varieties, has thorny stalks.

[70] The evidence of κέρνα (n.pl.) or κέρναι (f.pl.) 'transverse processes of the vertebrae' (Poll.) is too uncertain to take into account; in any case, it could continue a root form **ker-* 'head / horn' without laryngeal.

(a) Generalization of paradigmatic ablaut. For Greek
γέρανος 'crane' (*Il.*+), the most obvious reconstruction
*$\hat{g}erh_2$-no- would contradict the rule proposed here. A Celtic
group of cognates (e.g. W. *garan*) is often explained from
*$\hat{g}erh_2$-no- as well, with Joseph's rule (followed by Matasović
2008 s.v. *$garano$-), and directly equated with the Greek
forms.

There are several indications that γέρανος does not
directly continue *$\hat{g}erh_2$no-. First, the Greek word probably
was originally athematic, given that an *n*-stem form γερήν is
attested in Hsch. Therefore, one could consider departing
from a hysterodynamic paradigm nom. sg. *$\hat{g}erh_2$-ēn, acc. sg.
and nom. pl. *$\hat{g}rh_2$-en-, obl. *$\hat{g}rh_2$-n- (or the like). An *n*-stem
formation also appears in Germanic (*$kran$-, pointing to
*$\hat{g}r$-on-), though the loss of laryngeal is unexplained.

As a second point, a number of other IE languages
have *u*-stem forms (Lat. *grūs*, Lith. *gérvė*, SCr. *žȅrāv*, Arm.
kŕunkʿ) instead of *n*-stem forms. Kortlandt (1985: 120)
reconstructs a paradigm nom. *$\hat{g}érh_2$-ōu, gen. *$\hat{g}rh_2$-u-ós for
these *u*-stem forms. Since an alternation between *u*- and *n*-
stem forms seems to have been typical for bird names in
PIE (*-u- originally denoting the male and *-n- the female
of a species, as in Lat. *corvus* 'raven' : *cornīx* 'crow'), it is
highly improbable that Celtic and Greek underwent a
common innovation *$\hat{g}erh_2$-no- in this word. Both derive
from certain *n*-stem forms within the paradigm. The
question is: from which forms? As long as this remains
uncertain, γέρανος cannot be used as counter-evidence to
the rule proposed.[71]

(b) The formation is derived from a synchronically

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[71] A parallel case for an *n*-formation which was thematicized within Greek
is the word for 'acorn', Lith. *gìlė* < *$g^w lh_2$- continuing the plain root, and
Gr. βάλανος perhaps deriving from earlier *βάλανα < *$g^w lh_2$-en-h_2. Note
that the feminine gender of βάλανος supports the analysis as an old
collective, and that there are compounds with βαλανη- (Alc., Hdt.).
Various results of thematicization may coexist within Greek: e.g. ὠλένη
'elbow' beside ὠλλόν· τὴν τοῦ βραχίονος καμπήν 'the curve of the upper
arm' (Hsch.). This points to an old *n*-stem ὠλήν, -ένος that is in fact
preserved as such in Suidas. We lack a comprehensive study of nominal
thematicization in PIE and its daughter languages, in spite of (or perhaps
due to) the fact that it was so frequent.

existing verbal root. At first sight, it seems that τελαμών, gen. -μῶνος 'carrying strap' (*Il.*+), 'base of a column' (inscr.), also the name of the father of Ajax, derives from a PIE formation *$telh_2$-mon- "carrying".[72] Within Greek, (πολυ-)τλήμων 'enduring' is clearly formed with the productive root shape τλη-, and the productive meaning 'endure'. But while τελαμών preserves a trace of the older root meaning 'to carry, bear' and may claim greater antiquity than τλήμων, it does not follow that it continues a pre-from *$telh_2$-mon- dating from the time when the laryngeals were still present.[73]

Within Greek, the (accented) suffix -μών, gen. -μῶνος differs from -μων, -μονος, which is a productive way to form agent nouns and is mostly (but not always) unaccented.[74] For -μών, -μῶνος there are only five examples in Homer: beside τελαμών, only λειμών 'meadow', θημών 'heap', χειμών 'winter', κευθμών 'hideout', see Risch 1973: 51-3. Post-Homeric, but certainly old in view of Skt. *prathimán-* 'extension', is πλαταμών 'flat surface' (*h.Merc.*+); further, -ών, -ῶνος, as in αἰών, ἀγών, etc. is frequent. It seems clear that the non-ablauting suffix -μών, -μῶνος, which is limited to Greek, originated within the prehistory of that language (although the reasons for its origin are

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[72] OIr. *talam* 'earth' (*n*-stem) could theoretically be compared, but *n*-stems were a productive category in that language, and the meaning of *talam* is quite different from that of τελαμών.

[73] This seems to have been doubted by Nussbaum 1997: 184 as well, but on different grounds. In dealing with the question whether a suffixal *o*-vowel could also induce SE, he remarks that "… stem shapes like τελαμών can reasonably be explained by invoking paradigmatic ablaut (*$telh_2$-mon-/*tlh_2-mn-, cf. τλήμων 'patient')". I doubt, however, that τλήμων and τελαμών were ever part of the same paradigm.

[74] See Chantraine 1933: 170-74. There, Chantraine suggested that oxytone ablauting μών-stems like ἡγεμών 'leader', δαιτυμών 'participant at a common meal' and κηδεμών 'who takes care of' are archaic formations, while barytone formations would be more recent. But many nouns with stem accentuation look archaic too: ἥμων 'spear-throwing' (only in ἥμονες ἄνδρες, *Il.* 23.886), αἴμων 'desirous' (only in αἴμονα θήρης *Il.* 5.49) from the root *sh_2i- of ἵμερος, δαίμων 'chthonic god', etc. It is unclear what the origin of the difference in accentuation is.

unclear). While λειμών and χειμών do not derive from a verbal root and are certainly old,[75] θημών and especially κευθμών may have been built on a synchronic verbal root.

The same may be assumed for τελαμών. The root τελα- is continued in the Homeric *s*-aorist ἐτάλασσα << *ἐτέλασσα, replacing an older root aorist 3sg. *e-telh$_2$-t > *e-tela). The *e*-grade root is expected on etymological grounds, but also attested in Hsch. τελάσσαι· τολμῆσαι, τλῆναι.[76] Thus, τελαμών may have been derived from the root *tela- as long as this old full grade was present. Contrast τέρμων, where there was no synchronic verbal root in Greek, so that the reflex of the laryngeal could not be restored.

A number of other examples of -*a*- between liquid and nasal are most probably of substrate origin, e.g. κέραμος 'potter's earth' (see Beekes 1969: 191 and *EDG* s. v.).

10. Notes on the conditioning of the laryngeal loss. The sound change *-VLHNV- > *-VLNV- may be obtained by taking the intersection of all examples (in 6.) that probably show regular laryngeal loss. One could wonder, however, why the conditions for the proposed sound law are so specific. That is, if the laryngeal drops in *-VLHNV-, wouldn't the expectation be that, more generally, the laryngeal drops in the position between two *resonants* (*-VRHRV-)? The condition that the *second* resonant is a nasal cannot be distilled from the material: it could theoretically also be a liquid, but I have found no examples to show the opposite.[77]

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[75] Of course, χειμών derives from a PIE *m*-stem *ĝʰi-m- > Skt. *himá-*, Russ. *zimá*, Gr. δύσ-χιμος. The Skt. loc. *héman* 'in winter' may have been the origin of the *n*-stem forms which are found, beside χειμών, in Hittite loc. *gimmi* 'in winter', *gimaniie̯/a-ᶻⁱ* 'to spend the winter', Alb. (Gheg) *dimën* 'winter'.

[76] The generalized *a*-vocalism of the aor. ταλασ- may have been taken from the 3pl. *e-tlh$_2$-ent > *e-talan, or from compounds in *ταλα-, cf. ταλασί-φρων.

[77] If the second consonant is a yod (*-VLH*i̯*V-), we have a special case of the so-called Lex Pinault (Pinault 1982, e.g. τείρω 'to rub, wear out' < *terh$_1$-ie/o-). Given that Lex Pinault is usually thought to be a pan-IE

About the restriction on the first resonant, more precision is possible. The middle ptc. of the thematic present (e.g. $*h_2e\hat{g}$-o-mh_1no- > Gr. ἀγόμενος, Toch. B *akemāne*) could show that the laryngeal was not lost if the first resonant was -*m*-. But as the referee points out to me, the suffix of the thematic middle ptc. may have been restored on the basis of the athematic middle ptc.

Another possible counterexample against $*$-*VmHNV*- > $*$-*VmNV*- is τέμενος 'sacred precinct' (*Il.*+) < $*temh_1$-*nos*-. This word derives from the root of Att. ἔτεμε 'cut' < $*(h_1e)$-$temh_1$-*t*, an old root aorist, and the suffix $*$-*nes*-, which is found in words indicating types of property in Sanskrit, too (*rékṇas*-, *drávinas*-, *párīnas*-). The suffix -*νος* enjoyed limited productivity in Greek (cf. Chantraine 1933: 420, Risch 1973: 80), but it seems that τέμενος was the origin of a number of other formations rather than the other way round: cf. κτῆνος 'possession' (post-Homeric), but especially ἄφενος 'wealth' (*Il.*+), which could have taken its -ε- from τέμενος, beside Pi. ἄφνος. I conclude that τέμενος is probably old, though post-PIE derivation from the PGr. root $*teme$- cannot entirely be excluded.

For $*$-*VnHNV*- > $*$-*VnNV*-, ἄνεμος 'wind' is a counterexample, but only apparently so, as this may in principle owe its ε to a pre-form $*h_2nh_1$-*mo*- rather than $*h_2enh_1$-*mo*- (cf. the vocalization of $*h_3nh_3$-*mn*-), or to the thematicization of an older *m*-stem $*h_2onh_1$-*m*, obl. $*h_2nh_1$-*em*-, cf. Arm. *hołm* 'wind', and Lat. *animus* beside *anima*. On the other hand, inclusion of $*$-*VnHNV*- would perhaps allow us to explain γέννα 'race, descent', e.g. as $*\hat{g}enh_1$-*n*-h_2 (which would be an old collective).[78]

It is not possible, at this moment, to conclude with full confidence that $*$-*VLHNV*- is *the* conditioning environment. But for the time being, I depart from the

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effect, it does not seem probable that it is a special case of the effect discussed here.

[78] A different proposal for the origin of the geminate of γέννα was made by Hackstein (2002: 2), who reconstructs $*\hat{g}enh_1$-*mn*-eh_2- with regular loss of the laryngeal in a sequence PIE $*CH.CC$. The *CH.CC*-rule has recently become a popular research tool, but in my view, it still awaits a critical survey of all the evidence and counterevidence.

best examples for the laryngeal loss under discussion, and these happen to be in the sequence *-VLHNV-. For this reason, I will refrain from more precise statements about the phonetic background of the laryngeal loss. In general, I subscribe to Nussbaum's words about SE (1997: 186), which he formulated without reference to the *o*-vocalism: "To state the relatively obvious, it would seem either that laryngeals were simply dropped in the relevant environments, or that the anaptyctic *ə*'s that normally developed around laryngeals (…) did not develop when the *H* was in a Saussure environment."[79]

Finally, a comment on the supposition that the laryngeal in the cluster *-LHN- was only lost if this cluster was preceded *and* followed by a vowel, and not if another consonant followed. The amount of evidence where *-VLHN- is not followed by a vowel is not very large. Still, there are some examples that may speak against a general loss of the laryngeal in *-VLHN-. A probable case is ἀτέραμνος 'hard, stubborn, merciless'. Although this could ultimately be based on an aorist stem *τερα- 'to cross' ("who/which cannot be overcome"), there is no direct evidence for this verbal root in Greek, as has been pointed out earlier. Another case is βέλεμνα (n. pl.) 'projectiles, arrows' (*Il.*), which is an Aeolic (or even Achaean) derivative of βάλλω 'to throw, hit'.[80]

11. Conclusion. A scrutiny of the Greek evidence adduced for SE has shown that many examples are unreliable and can be explained otherwise. Especially for initial position,

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[79] One could speculate about the reason why epenthetic vowels did develop in *-THT- (where *T* is a stop, as in δοτήρ 'giver' < *dh₃ter-), but not in *-VLHNV-. The cause for the different treatment of *-VLHNV- as compared with *-CLHNV- > *-CL$_ə$HNV- could be the smaller size of the consonant cluster (and a different realization of *L). The cause for the different treatment of *-VLHNV- as compared with *VTHCV- > *VTH$_ə$CV- (e.g. aor. σκεδασα-) may perhaps be sought in the sonority of *L and *N with respect to that of the stops.

[80] However, even in the case of βέλεμνα it is unclear whether a direct reflex of the PIE laryngeal has been preserved: it may have been built on the old root aorist *gʷele < *gʷelh₁-t found in ἔζελεν· ἔβαλεν (Hsch.), before the oblique cases of the neuter *mn*-stems adopted the *nt*-stem inflection.

there is hardly any convincing example (best by comparison are μοιχός and οὐρέω), while there are two good counterexamples (ὄνυξ, ἐρωή).

On the other hand, for laryngeal loss in internal position quite a few examples have survived our critical examination. The rule proposed in this article, PIE *-*VLHNV*- > PGr. -*VLNV*-, provides a different explanation for all these examples (τόλμα, τόρμος, τόρνος, πόρνη). At the same time, it explains the lack of a laryngeal reflex in material with *e*-grade root (especially στέρνον and τέρμα, τέρμων). In cases where a laryngeal has so far been assumed to have vocalized in the environment *-*VLHNV*-, e.g. γέρανος and τελαμών, we have shown that their formation is not certain to be of PIE date, and may postdate the rule defended here.

In conclusion, I hope to have shown that the non-adjacent *o*-vowel was not necessarily the cause of the laryngeal loss in the Saussure effect forms, and that the alternative proposal *-*VLHNV*- > PGr. -*VLNV*- is at least compatible with the evidence.

Bibliography:

Abbreviations:
DELG (Supp.) = Chantraine 2009
EDG = Beekes 2010
EDL = de Vaan 2008
EDHIL = Kloekhorst 2008
LIV² = Rix, Kümmel, et al. (eds.) 2001
Pokorny = Pokorny 1959

van Beek, Lucien
   2011   Vowel assimilations in Greek: a revision of the evidence. In T.
           Krisch et al. (eds.), *Akten der XIII^ten Fachtagung der*
           indogermanischen Gesellschaft. Wiesbaden: Reichert.

Beekes, Robert S. P.
   1969   *The development of the Proto-Indo-European laryngeals in Greek*.
           Den Haag: Mouton.
   1995   *Comparative Indo-European Linguistics: An Introduction*.
           Amsterdam/Philadelphia: John Benjamins.
   2010   *Etymological Dictionary of Greek*. Leiden: Brill.

Chantraine, Pierre
   1933   *La formation des noms en grec ancien.* Paris: Honoré Champion.
   1958   *Grammaire homérique.* Paris: Klinksieck.[3]
   2009   *Dictionnaire étymologique de la langue grecque: histoire des mots.*
             Nouvelle édition avec supplément. Paris: Klinksieck (= *DELG*).

Cheung, Johnny
   2007   *Etymological dictionary of the Iranian verb.* Leiden: Brill.

Collinge, Neville E.
   1994   Further Laws of Indo-European. In: Winter, Werner (ed.) *On
             Languages and Language* (= Trends in Linguistics 78), 27-52.
             Berlin: Mouton de Gruyter.

Derksen, Rick
   1996   *Metatony in Baltic.* Amsterdam: Rodopi.
   2007   *Etymological Dictionary of the Slavic Inherited Lexicon.* Leiden:
             Brill.

Fraenkel, Ernst
   1962   *Litauisches etymologisches Wörterbuch.* Heidelberg: Carl Winter.

Furnée, Johan E.
   1972   *Die wichtigsten konsonantischen Erscheinungen des Vorgriechischen.*
             Den Haag: Mouton.

García Ramón, José Luís
   2000   Homerisch οὖρος 'Fahrtwind', θοῦρος 'ungestüm', οὖλος
             'verderblich' (...). In: Hintze, Almut and Eva Tichy (eds.)
             Anusantatyai. Festschrift für Johanna Narten zum 70. Geburtstag
             (*MSS Beiheft* 19), 63-77. Dettelbach: Röll.
   2004   Homerisch οὐροί 'Kielfurchen, Landgraben' (…). In:
             Hyllested, Adam et al. (eds.), *Per aspera ad asteriscos. Studia
             indogermanica in honorem Jens Elmegård Rasmussen sexagenarii
             idibus Martiis anno MMIV,* 145-154. Innsbruck: IBS.

Hackstein, Olav
   2002   Uridg. *CH.CC > *C.CC. *Historische Sprachforschung* 115: 1-22.

Hirt, Hermann
   1921   *Indogermanische Grammatik. Teil II: Der indogermanische
             Vokalismus.* Heidelberg 1921.

Kloekhorst, Alwin
   2008   *Etymological Dictionary of the Hittite Inherited Lexicon.* Leiden:
             Brill.

Kortlandt, Frederik F. H.
   1985   Long vowels in Balto-Slavic. *Baltistica* 21/2: 112-124 (= 2009:
             51-60).

1992   The Aeolic Optative. In: R. S. P. Beekes et al. (eds.) *Rekonstruktion und relative Chronologie*, 235-39. Innsbruck: IBS (= 2010: 111-115).

2009   *Baltica & Balto-Slavica*. Amsterdam: Rodopi.

2010   *Studies in Germanic, Indo-European and Indo-Uralic*. Amsterdam: Rodopi.

de Lamberterie, Charles

1990   *Les adjectifs grecs en -υς: sémantique et comparaison*. 2 Vols. Louvain-la-neuve: Peeters.

2004   *Sella, subsellium, meretrix*: sonantes voyelles et 'effet Saussure' en grec ancien. In: J. Penney et al. (eds.) *Indo-European Perspectives. Studies in honour of Anna Morpurgo Davies*, 236-253. Oxford: Oxford UP.

Lubotsky, Alexander M.

1988   *The System of Nominal Accentuation in Sanskrit and Proto-Indo-European*. Leiden: Brill.

2000   The Vedic root *vr̥-* 'to cover' and its present. In: B. Forssman et al. (eds.), *Indoarisch, Iranisch und die Indogermanistik (…)*, 315-325. Wiesbaden: Reichert.

Matasović, Ranko

2008   *Etymological Dictionary of Proto-Celtic*. Leiden: Brill.

Meier-Brügger, Michael

2002   *Indogermanische Sprachwissenschaft*.[8] Berlin: Walter de Gruyter.

Melchert, H. Craig

1994   *Anatolian Historical Phonology*. Amsterdam/Atlanta: Rodopi.

Miller, D. Gary

1976   Liquids plus *s* in Ancient Greek. *Glotta* 54: 159-172.

Nussbaum, Alan J.

1997   The 'Saussure Effect' in Latin and Italic. In: Lubotsky, Alexander (ed.) *Sound Law and Analogy*, 181-203. Amsterdam/Atlanta: Rodopi.

Peters, Martin

1980   *Untersuchungen zur Vertretung der indogermanischen Laryngale im Griechischen*. Wien: Verlag der Österreichischen Akademie der Wissenschaften.

1988   Zur Frage strukturell uneinheitlicher Laryngalreflexe. In: A. Bammesberger (ed.) *Die Laryngaltheorie und die Rekonstruktion des indogermanischen Laut- und Formensystems*, 373-381. Heidelberg: Carl Winter.

Pinault, Georges-Jean
    1982   A neglected phonetic law: the reduction of the Indo-
             European laryngeals in internal syllables before yod. In: A.
             Ahlqvist (ed.) *Current Issues in Linguistic Theory* 21, 265-272.

Plath, Robert
    2000   Altpersisch *fraharavam* und vedisch *prasalavi*. In: Hintze,
             Almut and Eva Tichy (eds.) *Anusantatyai. Festschrift für
             Johanna Narten zum 70. Geburtstag* (*MSS Beiheft* 19), 63-77.
             Dettelbach: Röll.

Pokorny, Julius
    1959   *Indogermanisches etymologisches Wörterbuch.* Bern: Francke.

Pronk, Tijmen
    2011   The Saussure Effect in Indo-European languages other than
             Greek. *Journal of Indo-European Studies* 39: XXX-XXX.
    fthc.   On the accentuation of initial *Hu, *Hi and diphthongs in
             Baltic and Slavic. In: *Accent Matters: Papers on Baltic and Slavic
             Accentology* (= *Studies in Slavic and General Linguistics* 37).
             Amsterdam: Rodopi.

Rasmussen, Jens E.
    1989   *Studien zur Morphophonemik der indogermanischen Grundsprache.*
             Innsbruck: IBS.

Risch, Ernst
    1973   *Wortbildung der homerischen Sprache*. Berlin: de Gruyter.[2]

Rix, Helmut, Martin J. Kümmel et al. (eds.)
    2001   *Lexikon der indogermanischen Verben. Die Wurzeln und ihre
             Primärstammbildungen*. Wiesbaden: Reichert.[2]

Ruijgh, Cornelis J.
    1967   *Études sur la grammaire et le vocabulaire du grec mycénien.*
             Amsterdam: Hakkert.
    1987   À propos de Ϝισϝο- (*wi-so-wo*-), ἐϜισυ- (*e-wi-su*-) et hom.
             ἐ(Ϝ)εισάμενος. *Minos* 20-22: 533-544.
    1997   Les lois phonétiques relatives aux laryngales et les actions
             analogiques dans la préhistoire du grec. In: Lubotsky,
             Alexander (ed.) *Sound Law and Analogy*, 263-283.
             Amsterdam/Atlanta: Rodopi.

de Saussure, Ferdinand
    1905   D' ὠμήλυσις à Τριπτόλεμος. Remarques étymologiques. In:
             Mélanges Nicole, 503-514. Genève.

Scharfe, Hartmut
    1985   The Vedic word for 'king'. *Journal of the American Oriental
             Society* 105: 543-548.

Schindler, Jochem
    1975   L'apophonie des thèmes indo-européens en *-R/N. Bulletin de la Société de Linguistique de Paris* 70: 1-10.

Schmidt, Johannes
    1893   Assimilationen benachbarter, einander nicht berührender vocale im griechischen. *KZ* 32: 321-394.

Sihler, Andrew
    1995   *New Comparative Grammar of Greek and Latin*. Oxford: Oxford UP.

Strunk, Klaus
    1969   Verkannte Spuren eines weiteren Tiefstufentyps im Griechischen. *Glotta* 47: 1-8.
    1970   Über tiefstufige *seṭ*-Wurzeln im Griechischen. *Münchener Studien zur Sprachwissenschaft* 28: 109-127.

Szemerényi, Oswald
    1974   Greek πολύς and πολλός. *Zeitschrift für vergleichende Sprachforschung* 88: 1-31.

de Vaan, Michiel
    2008   *Etymological dictionary of Latin and the other Italic languages*. Leiden: Brill.

Vine, Brent
    1999   On 'Cowgill's Law' in Greek. In: Eichner, Heiner, Hans-Christian Luschützky (eds.) *Compositiones Indogermanicae in memoriam Jochem Schindler (1944-1994)*, 555-599. Praha: Enigma.

Vine, Brent and O.T. Yokoyama
    2010   PIE $*(h_1)euh_1$-d^h- 'excrete liquid' and Russian Dialectal *udut* (3pl.). In: T.M. Nikolaeva et al. (eds.), *Issledovanija po lingvistike i semiotike. Sbornik statej k jubileju Vjač. Vs. Ivanova*. Moskva: Jazyki slavjanskix kul'tur.

Weiss, Michael
    1994   Life Everlasting: Latin *iūgis* 'everflowing', Greek ὑγιής 'healthy', Gothic *ajukdūþs* 'eternity' and Avestan *yauuaējī-* 'living forever'. *Münchener Studien zur Sprachwissenschaft* 55: 131-56.

Willi, Andreas
    2001   Lateinisch *iubēre*, griechisch εὐθύς und ein indogermanisches Rechtskonzept. *Historische Sprachforschung* 114: 117-146.

Yamazaki, Yoko
    2009   The Saussure Effect in Lithuanian. *Journal of Indo-European Studies* 37: 430-461.

The "Saussure effect" in Indo-European Languages Other Than Greek[1]

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The "Saussure effect" is a sound law that has been proposed to explain the loss of a laryngeal in the vicinity of an *o*-grade in Proto-Indo-European. The present article is a critical analysis of the material that is supposed to have undergone the "Saussure effect" in Indo-European languages other than Greek. It is concluded that the facts do not support the assumption that the "Saussure effect" has taken place in these languages.

1. The "Saussure effect"

In 1905, Ferdinand de Saussure observed that a root-final vowel was dropped if the root had *o*-grade: "Le type τόρ-νος en regard de τέρεθρον n'a pas à passer pour fortuit ou anormal, mais pour RÉGULIER"(511, fn. 2). The focus of de Saussure's formulation is of course Greek, since that was the language which provided evidence for the root-final vowels which we now know to be reflexes of the laryngeals. In laryngealist terms, de Saussure's observation was described by Nussbaum as follows: "*H* shows a vocalic outcome in neither the environment #_Ro nor in the environment oR_C. " (1997: 182). In a very thorough article on the subject, Nussbaum coined the term "Saussure effect" for this phenomenon (further "SE"). Since Meillet, it has been observed that the rule might apply to Indo-European languages other than Greek as well. Today SE is applied throughout Indo-European whenever we expect a trace of a laryngeal in the vicinity of an *o*-grade but do not find one.

It is immediately obvious that the conditions for the application as formulated by Nussbaum are peculiar at best. He discusses other sequences containing a laryngeal and an *o*-grade and concludes that in these sequences no regular laryngeal loss can be observed. One does wonder, though, if the **o* caused the loss of the laryngeal, why then is the laryngeal preserved adjacent to **o* in, e.g., Greek ἐγώ < **h₁eĝ-oh₂*, Greek πῶυ 'herd', Sanskrit *pāyú-* 'guard' < **poh₂-i-u-*, *gáya-* 'life' < **gʷoih₃-o-* etc.? The only phonetic explanation given for this laryngeal loss that I am aware of is Rasmussen's theory of the consonantal **o*. In his discussion of SE, Rasmussen concludes the following: "Es scheint also ein Laryngal nach dem Infix-*o* zu schwinden, wenn er der mittlere von drei Konsonanten war. Dieser Schwund ist offenbar von der schweren Konsonantenanhäufung hervorgerufen: Vor der Vokalisierung des konsonantischen Infixes hatten alle Beispiele mindestens fünf Konsonanten im Anlaut" (1989: 180). Accordingly we find Greek τόρμος 'nave' < **tor̥h₁-m(n)-o-*. In similar initial clusters without an **o*, however, the laryngeal appears to be generally retained, cf. Sanskrit *śīrṣṇáh* gen.sg. 'head' < **ḱr̥h₂sn-*, *arítra-* (with secondary *a-*), Lith. *ìrklas* 'oar' < **h₁r̥h₁tro-*, Gr. νώνυμος 'nameless' < **nh₃nh₃mno-*. Rasmussen's formulation therefore ultimately still depends on the presence of an **o* in the root, as far as I can see and, as a consequence, does not explain how the SE worked phonetically.

The phonetic improbability of the effect thus invokes skepticism about its reality and warrants another look at the data. This is especially important in view of the readiness with which SE is applied in the literature. SE provides us with a very powerful tool to explain alternations and should therefore be based on a number of rock solid examples. Such examples should in principle have the following features: A. they should contain an *o*-grade which can be traced back to Proto-Indo-European with some confidence. B. the presence of a laryngeal in the root should be beyond doubt. In the following I will show that there are in fact few such examples, and that there is an acceptable alternative for all adduced examples of SE outside Greek. The Greek material will be ignored here and is treated by Lucien van Beek in this volume. It is clear that there are cases of

laryngeal loss in Greek that appear to be related and require an explanation. I adhere to van Beek's view that the laryngeals were regularly lost between a liquid and a nasal, rather than in the vicinity of an *o, but this is irrelevant for the present discussion. I will first discuss the most convincing or widely accepted examples of SE in Indo-European languages other than Greek, and then discuss the Latin material which is supposed to show the effect best. More dubious examples will be left out of the discussion, and I will also omit most cases in which the loss of a laryngeal in a form without an *o*-grade is thought to be analogous to (often unattested) forms with an *o*-grade.

2. Hittite

In Hittite, SE is applied by Melchert (1994: 49f. with reff.) to account for the absence of *h- in *warša*- 'rain', *wašt(a)*- 'to sin', *kalmara*- 'beam', and *paluae*- 'to cheer, shout for joy'. In all these cases we would be dealing with *h_2, since the other two laryngeals probably would not be preserved anyway. In the case of *warša*- 'rain', an initial *h_2 is reconstructed only in order to account for the initial *a- of Greek ἀέρση 'dew'. The variant ἐέρση with initial *e- < *h_1, however, is much more frequent and attested earlier. The *a- of ἀέρση must come from ἀήρ 'mist, air'. Since the *h_1- would be lost anyway in the Hittite word, one cannot tell whether SE applied in this word.

Hittite *wašt(a)*- 'to sin' is allegedly related to Greek ἄτη 'error, blindedness', αὐάτα (Alcaeus) which would require loss of the initial laryngeal in Hittite, but the Greek word is clearly derived from the verb ἀάω 'to mislead', which makes the etymology impossible (Kloekhorst 2008: 986).

Hittite *kalmara*- 'beam, ray' is related to *kalmi*- 'piece of firewood', which makes the connection with e.g. Greek κάλαμος 'reed' semantically less likely (idem: 431). In addition, there is no indication that a laryngeal would be retained in this environment anyway. Even if the etymology is correct, there is no reason to assume SE.

Hittite *paluae*- 'to cheer, shout for joy' would require laryngeal loss if it derived from *$polh_2$-ueh_2 and thus be related to the word for the palm of a hand, e.g. Greek παλάμη. The semantic development would then be 'palm' >

'clap' > 'cheer'. Semantically much more satisfying and formally equally possible is Kloekhorst's proposal to derive the verb from $*b^hlh_1\text{-}uo\text{-}i\acute{e}/\acute{o}\text{-}$ to the verbal root $*b^hleh_1\text{-}$ 'to cry out', cf. Latvian *blêju* 'I bellow' (idem: 623).

A final example from Hittite is *uttar-* 'word', which would reflect $*h_2uodh_2\text{-}r$ with a secondary zero grade according to Eichner (1980: 146), who connects the word to Greek αὐδή 'voice' and Sanskrit *vad^i* 'to speak'. This etymology requires a substantial amount of analogical replacement to arrive at the attested forms (see the discussion in Kloekhorst 2008: 932f.). Kloekhorst connects the word to Latin *vetō*, Middle Welsh *dy-wed-* 'to say' < $*ueth_2r$, which seems preferable.

It is clear that none of the Hittite examples warrants the assumption that the SE worked in Anatolian.

3. Sanskrit

In Sanskrit there are two alleged examples of SE which deserve mentioning. Rasmussen adduces *darmá-* 'Zerstörer', which would lack the laryngeal allegedly reflected in *dárīman-* 'Zersprengen'. The *seṭ*-forms of this root are, however, secondary, as has been shown by Praust (2000).

Jasanoff invokes SE to account for the lack of a laryngeal in Sanskrit *válgati* 'move up and down', where the laryngeal is reconstructed on the basis of Tocharian B *woloktär* 'rests, stays' (2003: 76, fn. 29). Quite apart from the uncertainty of this etymology, the reconstruction $*uolHg\text{-}$ for *woloktär* is doubtful. There are three verbs of the *woloktär*-type within Tocharian B, of which only *koloktär* 'follows' has a Tocharian A variant, viz. *kälk-*, which shows no trace of a laryngeal. Whatever the explanation of the Tocharian B formation, the Sanskrit example cannot be adduced in favor of SE.[2]

Apart from the two examples mentioned and dealt with, there is one other word in Sanskrit that would show the effect, viz. *sárva-* 'whole', which will be discussed together with its Latin and Greek cognates later on.

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[2] Furthermore, in Sanskrit the laryngeal would drop before the unaspirated voiced stop in those forms where the root was followed by a consonant (cf. Lubotsky 1981).

4. Balto-Slavic

In Balto-Slavic, the evidence for SE is of a different nature. There the absence of an acute accent may indicate that a laryngeal has been dropped. It is, however, important to realize that certain accentual paradigms were productive in certain formations, so that an accent cannot be used on its own as evidence in favor of or against SE. The most important publication to date about these productive types in Baltic is Derksen (1996). The main body of Balto-Slavic evidence for the effect was gathered by Rasmussen (1989: 181ff.) and Yamazaki (2009). In spite of the large number of examples they give, it is doubtful whether any of them can really be used as evidence.

A number of the Slavic examples Rasmussen adduces are mobile, rather than oxytone as he suggests, which means that they provide no direct evidence about the presence of a laryngeal (e.g. Russian *storoná*, acc. *stóronu* 'side'; Russian *kólos* 'ear'). Other examples are either of debatable origin, or they did not have a root-final laryngeal in the first place, like in Slavic **polvъ* 'fallow' < **pol-u-* (cf. Sanskrit *paruṣá-* 'grey, dirty') and **věnъ* 'wreath' < **uoh₁i-no-* (cf. Schrijver 1991: 245).

Somewhat more solid evidence in favor of SE is provided by Slavic **koltъ* 'piece of wood' and **moltъ* 'hammer'. The former appears to belong to the Slavic accentual paradigm *b*, which would at first glance rule out a laryngeal. The second word may also belong to accentual paradigm *b*, but there is stronger evidence for original mobility (cf. the discussion in Derksen 1996: 117ff., 2008: 231, 324). The accentuation of **moltъ* is therefore probably inconclusive. The Baltic cognates of **koltъ* all have an acute accent in combination with an *o*-grade: Lith. *kálti* 'beat, forge', *káltas* 'chisel', Latv. *kaĩt, kaĩts.* There is no indication that these forms would reflect the zero grade of the root in, e.g., the participle, as Rasmussen proposes (1989: 183). The accentuation of Slavic **koltъ* must be explained as a result of inner-Balto-Slavic processes (cf. Derksen, ll.c.) and is unlikely to reflect an Indo-European alternation. The laryngeal is faithfully reflected by the Baltic cognates.

Yamazaki discusses several of Rasmussen's Baltic examples. In many cases she clearly shows that the examples

given by Rasmussen fall short of being certain. I will limit myself to those examples of SE adduced by Rasmussen which Yamazaki finds "plausible": *karnà* 'bark', *spartà* 'speed', *šaũnas, šaunùs* 'brave', *narsà, naг̃sas* 'courage' and *baĩsas* 'voice'.

The etymology of *karnà* 'bark' is uncertain. The connection with Latin *carō* 'meat, flesh' as 'that what is cut off' is not impossible, but hardly compelling. One could also derive the word from PIE **(s)kert-* 'to cut' (which is reflected without final **-t-* in Baltic, cf. Lithuanian *kiг̃ti* 'to hew', *kiг̃vis* 'axe'), in which case the non-acute root is regular.

Lithuanian *spartà* 'speed' is either derived from *spartùs* 'fast', with a non-acute root, or directly from the verb *spìrti* 'to spur on'. Both *u*-stem adjectives and deverbatives in *-a* are categories in which metatony is very productive in Lithuanian and the non-acute root can never be used as an argument against a laryngeal at an earlier stage (cf. Derksen 1996: 128ff., 158f.). The same applies to examples like Lithuanian *kalvà* 'hill' and *tamsùs* 'dark' which are adduced by Rasmussen. In Latvian we do find, e.g., *kaĩva* 'hill, small island' with the expected acute accent (thus also Yamazaki 2009: 443).

The adjectives *šaũnas* and *šaunùs* 'hasty, impetuous, splendid, good' may very well have been affected by metatony if the root was acute at some stage. In addition, it is not quite certain that the words are of Indo-European origin. They may derive from Lithuanian *šáuti* 'to shoot' (thus Rasmussen), which has no cognates outside Balto-Slavic. Pokorny connects *šaũnas* and *šaunùs* with Greek κυέω 'to be(come) pregnant' and Sanskrit *śav^i̯-* 'to swell, become strong' < **ḱeuh₁-*. For the semantics one may compare Sanskrit *śávas-* 'power, might'. If this is correct, one would have to assume SE or metatony in the Baltic form. The former is problematic because the formation and *o*-grade of *šaũnas* and *šaunùs* are purely Baltic (Sanskrit *śū́na-* 'emptiness' bears no semantic similarity to the Baltic words and is therefore unrelated).[3]

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[3]Both semantically and formally it is also possible to derive the Baltic adjectives from the word for 'dog'. In that case the full grade of the root

Lithuanian *baĩsas* 'voice' is certainly not of Indo-European origin either. In any case, there is no evidence that the root was acute. The acute tone of *bìlti* 'to speak' comes from the *sta*-present *bìlsta*.

Finally, the nouns *narsà* and *naȓsas* 'courage' are probably related to Sanskrit *nā́*, Greek ἀνήρ 'man', Old Irish *nert* 'strength, might' etc., which do not contain a root-final laryngeal.

In short, none of the examples above can be adduced in favor of SE in Baltic. Yamazaki also provides some new examples that would show SE in Baltic. The most convincing of those are Lithuanian *gaudùs* 'sonorous' and Latvian *gàuds* 'miserable', which derive independently from the verbal root found in Lithuanian *gaũsti, gaudžiù* 'to make a sound, hum', Latvian *gãust* 'to wail', also *gàust*.[4] The verbal root may derive from **gouH-dʰh₁-* and be compared to Sanskrit *jóguve* 'to call', Greek γοάω 'to lament', Slavic **govoriti* 'to speak', Old High German *gikewen* 'to call', *kūma* 'lament' as Yamazaki suggests (2009: 444). The root-final laryngeal is suggested by the Germanic noun. It is, however, not evident that the non-acute root in the Baltic verb is caused by SE. Firstly, the formation **gou(H)dʰ(h₁)-* is clearly a Baltic-Slavic innovation. It is therefore not imperative that the *o*-grade should be of Indo-European date (the same applies to the *o*-grade in the Greek cognate γοάω). Secondly, the Latvian form with an acute root requires an explanation. It may reflect other forms of the verbal paradigm that are now lost, but it may also be old. An alternative explanation for the loss of the laryngeal in Baltic may be to assume that it had already been lost in a thematic formation or in the nasal present found in Slavic before the suffix **d* was added, but this is of course an ad hoc assumption.

The other examples Yamazaki provides, Lithuanian *garbẽ* and *tárpas*, are unconvincing. Lithuanian *garbẽ* 'honor'

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must probably be an instance of inner-Baltic ablaut and the non-acute accentuation is expected.

[4]The verbal root is related to Slavic **gǫsti*, 1sg.pres. **gǫdǫ* 'to play an instrument, hum', which probably has mobile accentuation, cf. Polish *gaść*, 1sg.pres. *gędę*. The Slavic verb does not tell us whether it was acute or not. It probably reflects a nasal present **gund-*, cf. **bǫdǫ* 'I will be' < **bund-* to **byti* 'to be'.

is related to the verb *ger̃bti* 'to honor', Old Prussian *gērbt* 'to speak'. Here we have a circumflex root with an *e*-grade, which rules out SE. Since the verb occurs in Old Prussian as well, this seems to be the oldest form and *garbě* can easily be a later derivative.[5] It is quite possible that the root is somehow related to Lithuanian *gìrti* 'to praise', Sanskrit *gūrtí-* 'praise' < $*g^werH$-, in which case Baltic $*gerb$- may be based on the *yod*-present $*g^w(e)r\text{-}i^e/_o$- (Lithuanian *gìria*), where we find regular loss of the laryngeal.

Lithuanian *tárpas*, dialectally also *tar̃pas*, means 'space between two objects, interval'[6] and is cognate with Latvian *star̃pa* 'idem', which corresponds to the Lithuanian variant with acute intonation. Non-acute intonation is further found in the preposition *tar̃p* 'between', where the circumflex is secondary, cf. the broken tone of Latvian *star̂p* 'between'. These words may be connected with South-Slavic $*trapъ$ 'pit', which has acute intonation, cf. Serbo-Croatian *tr̈ap*. I see no reason why Latvian *tārps* 'worm' should be related. Whether or not the Baltic words derive from $*terh_1$- 'to wear down' (or $*terh_2$- 'to cross'?) remains speculative, because the -*p*- is unexplained. In any case, they do not constitute evidence in favor of SE.

There are two more cases which deserve some attention. In his Slavic etymological dictionary, Derksen reconstructs $*HiH\text{-}n$- for Lithuanian *víenas*, Latvian *viêns* 'one' and Slavic $*jìnъ$ 'other' and $*h_1eiH\text{-}ueh_2$ for Lithuanian *ievà* (2, 4), dial. *íeva, jèva* (1), Latvian *iẽva* 'bird-cherry', Slavic $*jìva$ 'idem' (2008: 212, 216). In Latin and Greek there are cognates of these words with an *o*-grade in the root and no trace of a laryngeal: Old Latin acc.sg.m. *oino*, later *ūnus* 'one', Greek οἴνη 'one (on dice)', Latin *ūva* 'bunch of grapes', Greek ὄη, ὄα, οἴη, ὄϝα 'service tree'. For the proposed reconstruction to work, one is thus forced to assume SE in Latin and Greek. Derksen reconstructs an *n*-stem and a *u*-stem respectively, because the roots $*HeiHn$- and $*HeiHu$- seem to have an impossible root structure in

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[5]Leaving aside the fact that dialectally the word belongs to accentual paradigm 3 and the possibility that the circumflex is metatonical, as in *kilmě* (accentual paradigm 4) 'origin' from *kìlti* 'to arise'.
[6]But not 'hole', cf. Fraenkel 1962-1965 s.v. *tárpas*.

Indo-European with their three root-final consonants.

To my mind, these forms are more easily explained from the stems *$h_1$ei-n-* and *Hei-u-*, without an internal laryngeal. The acute accentuation in Balto-Slavic should be explained from the zero-grade of the root. Derksen has shown that word-initial stressed *i-* is reflected as acute in Slavic (2003). I have argued elsewhere (Pronk 2011) that this rule applies to stressed *Hu-* and *Hi-* in Balto-Slavic already. The process can be identified with what is often referred to as "laryngeal metathesis", the metathesis of a sequence of a laryngeal plus *i* or *u*, which took place in Balto-Slavic after the application of Hirt's law. In paradigms with an ablauting initial syllable, the acute intonation was generalized, probably in the form of glottalization. In both examples under investigation, the initial zero-grade is attested in Slavic, where the acute accent is expected, and the full grade is attested in Baltic, which shows the secondary acute accent. Since no laryngeal has to be reconstructed in these roots, SE is not called for in Latin *ūnus*, Greek *οἴνη* 'one (on dice)', Latin *ūva* 'grape' and Greek *οἴη*.

Apart from the fact that most - if not all - apparent examples in favor of SE in Balto-Slavic are incorrect or inconclusive, Balto-Slavic also has a significant number of counterexamples, such as Russian *koróva*, Lithuanian *kárvė* 'cow', Latvian *saĩms*, Russian *solóma* 'straw', Lithuanian *žarnà* 'intestine, hose' (accentual paradigm 3), Latvian *zar̂na*, cf. Sanskrit *hirā́-* 'vein', Lithuanian *kálnas*, Latvian *kal̂ns* 'hill', Lithuanian *garnỹs* (accentual paradigm 3, secondarily also 4) 'heron' etc.

For all these counterexamples, it is possible to argue that the acute intonation originates in a zero-grade or *e*-grade root variant, as Yamazaki does for Lithuanian *kálnas* and Latvian *kaĩva* (2009: 453ff.). This is not disputed. In fact, it would be very difficult to find an Indo-European counterexample that could not be explained through inner-paradigmatic leveling with forms with other ablaut grades. It remains remarkable, however, that in formations with good Indo-European pedigree, the Balto-Slavic material offers only counterexamples to SE and not a single example that unequivocally speaks in favor of it.

5. Celtic

In Celtic, SE is held responsible for the loss of a laryngeal in Old Irish *oll* 'ample', comparative *(h)uilliu* by Matasović in his Celtic etymological dictionary. He derives *oll* from Proto-Celtic **folno-*, i.e. PIE **pol(h₁)no-*, with the root of Greek πολύς, and separates it from Old Irish *(h)uile* 'whole, all', Middle Welsh, Breton *(h)oll*, Cornish *hol, oll.* Matasović (s.v. **olyo-*) connects the latter group of words either to Gothic *alls* 'all' < **h₃ol-io-* (an etymology going back to Morris Jones 1913), or to Latin *sollus*, which would, again, require SE. Schrijver (1995: 323) also considers reconstructing **solh₂-no-*. [7] Since generalization of the lenited variant **hol-* at the expense of the root **sol-* in Goidelic is exceptional,[8] the connection with Gothic *alls* seems more attractive. If Schrijver (1995: 19, 321ff.) is correct in assuming that British **lį* would yield *-ll-* after the second syllable, but not after the first, Middle Welsh *(h)oll* 'all' etc. must reflect **olno-*. In that case, the *įo*-stem of *(h)uile* must be separated from the British forms and OIr. *oll* 'ample' may be cognate, in spite of the minor semantic difference. Neither the forms with, not those without initial *h-* in British can easily be explained as secondary, so perhaps we should reckon with conflation of earlier **sol-* and **(p)ol-* in British, an option considered by Nussbaum, too. The uncertainty about the origin of the Celtic forms renders them at best possible examples of SE.

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[7] Other proposals in the literature are the following: Thurneysen (1946: 500) connects the words to Latin *ollus* 'that' < **ol-no-* and the Old Irish preposition *al* 'beyond'. Pokorny (s.v. *al-* 1, *ol-*) takes Old Irish *oll* and *(h)uile* etc. together as derivatives of **al-* 'darüber hinaus', which would form the basis of PIE *alįos* 'other'.

[8] Notice, however, that *(h)uile* is one of a few adjectives that can stand before the noun they qualify in prose (Thurneysen 1946: 229), and that it is always used with an article (idem: 297), which makes it likely that a preform **solįo-* was more often in a position where it would be lenited than other adjectives (cf. idem: 142). In addition, *huile* can be used independently, also in positions where one expects lenition, e.g., *is and atá gním tengad **isind huiliu** labramar-ni* "That is the doing of the tongue, in all that we speak" (Ml 31ᵇ23). Therefore, it cannot be ruled out completely that the lenited form was in fact generalized and the form with initial **s-* lost. A similar explanation might apply to the British forms, but cf. the discussion in Nussbaum 1997: 189f., fn. 89.

6. Latin

Of all the languages that preserve traces of the laryngeals best, Latin and Greek appear to show the most reliable reflexes of SE. In his 1997 article, Nussbaum gives a meticulous overview of the Latin material involved. He argues that SE can be shown to have affected four examples that are "certain enough" and four more which "become possible once the Saussure effect has been established" (l.c.: 186). The four best examples are *sollus* 'whole', *meditullium* 'inland part of a country', *collis* 'hill' and *collus/collum* 'neck'. I will discuss them one by one.

Latin *meditullium* 'inland part of a country' has a clear cognate within Latin, namely *tellūs, -ūris* 'ground, earth'. The etymon is related to Old Irish *talam* [m. n] 'earth' < *tlh₂em-*, Old Prussian *talus* 'ground', Lithuanian *tìlės* pl. 'flooring', *tìltas* 'bridge', Serbo-Croatian *tlo* 'floor', and Old Norse *þel* 'floor'. The formations of both Latin cognates are unexplained (cf. De Vaan 2008: 609) and they can hardly be treated separately from each other. The ablaut they show can be compared to *terra* 'land' - *extorris* 'exiled' < *ters-*, *tors-/*tr̥s-*. The Indo-European cognates show a number of different formations, which makes it impossible to tell which formation may have caused the geminate *-ll-* in *tellūs* and *meditullium.* The geminate may come from the *n*-present reflected in *tollō* 'to raise' < *tel-nh₂-*, but it may equally be from *-ls-* in analogy to *tersa.* It seems problematic to me to explain *meditullium* from *-tolHu-iio-*, with loss of the laryngeal because of the *o*-grade, while leaving *tellūs* hanging in mid-air as preferred by Nussbaum.

Latin *collus, collum* 'neck' has one apparent direct cognate, viz. Gothic, Old High German, Old Norse *hals* 'neck'. Both reflect *kolso-*. These words are often derived from the root *kʷelH-* 'to turn', with the neck as a 'turner'. This etymology is semantically perfectly possible (cf. Lithuanian *kãklas* 'neck' < *kʷokʷlo-*), but in Germanic the loss of labialization is unexpected. If one compares Gothic *hʷas* 'who', *hʷar* 'where', *hʷan* 'when' etc. < *kʷo-*, *aihʷa-* 'horse' < *h₁eḱuo-*, one gets the impression that the labialization is regularly retained before *o.* Admittedly, both the interrogative pronoun and the word for 'horse' may have restored the *w* from other forms in the same paradigm

(e.g., *k^weso* and nom.sg. *$h_1$ek̂us*, cf. Kloekhorst 2008: 237-239). Even if the Latin and Germanic words belong to this root, their formation is unique (is it a thematicized *s*-stem (attested in Slavic *kolo*)?), other laryngeal-less derivatives of the same root may have influenced it (e.g. Lithuanian *kãklas* 'neck', Sanskrit *cakrá-*, Greek κύκλος 'wheel'), and it cannot even be ruled out completely that *collus* reflects *kolasos* < *k^wolHso-*, as admitted by Nussbaum (1997: 196).

Latin *collis* 'hill' has direct cognates in Greek κολώνη, κολωνός, Gothic *hallus* 'rock' < *kolH-nu-*, English *hill* < *klH-ni-*, Lithuanian *kálnas*, Latvian *kaȋns*, all 'hill'. These forms clearly point to an original ablauting *n*-stem. A possible Indo-European paradigm would be nom. *kolH-ōn*, acc. *k(o)lH-on-m*, gen. *k(o)lH-n-os*. For the reconstruction of an *o*-grade in the suffix in the accusative cf. Umbrian *homonus* [dat.pl.] 'man'. Since the laryngeal would have been lost in Latin in all forms with a full or lengthened grade of the suffix, it is very unlikely that we would find a trace of it. The word understandably joined the other *n*-stems as if it had a root *kol-*, thus becoming *kolō*, *kolonem*, (*klānis* >>) *kol(o)nis*, like *homō*, *homonem*, *hom(o)nis*. After that, *kol-ni-* > *collis* was derived from it, like *carnis* 'meat' next to *carō* 'meat' (< *kerh$_2$-*), gen. *carnis* (both already in Livius Andronicus) or *amnis* 'river' from an *n*-stem *abō*, cf. Old Irish *aub* 'river' < *abōn* or Latin *pellis* 'skin, hide' < *pel-n-*, cf. Lithuanian *plėnė̃* 'membrane' < *pl-ēn-*.

A similar explanation applies to Latin *pollen* '(fine) flour', which is likely to be related to Latin *pulvis* 'dust' < *polHu-*,[9] Greek πάλη 'fine flour, dust' < *plH-eh$_2$* or secondarily to a *u*-stem *παλυ-* < *plH-u-* (from which παλύνω 'to disperse flour'). Further cognates may be Lithuanian fem.pl. *pēlūs* 'chaff', Russian *polóva* 'chaff', Sanskrit *paláva* 'chaff' < *pelH-u-*, Latin *palea* 'chaff' (see further Schrijver 1991: 256f.). The *n*-stem *polH-n-* was reshaped in the zero-grade to *pol-n-* in analogy to other *n*-stems, as explained above for *collis*. The geminate *-ll-* subsequently spread throughout the paradigm.

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[9]*pulvis* < *polVu-* if Nussbaum is right that *-lu-* > *-ll-*. He explains the lack of a trace of the "Saussure effect" by assuming a full-grade *polH-o/eu-* (1997: 197).

Latin *sollus, sollo-* 'whole', mainly in compounds, is by far the strongest example for SE in Latin, or indeed in Indo-European.[10] It is undisputedly related to *salvus* 'safe, secure', and outside Latin to Oscan *sullus* nom.pl. 'every, all', *salavs,* Umbrian *salv-* 'whole, healthy', Greek ὅλος, Sanskrit *sárva-,* Tocharian A *salu* 'complete', Tocharian B *solme* 'completely'. It is traditionally thought that, within Italic, we might be dealing with a *u*-stem, with Latin *salvus* and Oscan *salavs* reflecting *slh_2-eu-o-*.[11] The Latin vocalism can only be explained from a zero-grade of the root. The Oscan form may, but need not have an anaptyctic *-a-* (cf. Schrijver 1991: 295, Nussbaum 1997: 186f.). The full grade of the suffix would also explain the sequence *-lv-* in Latin after syncope. The *u*-stem might be confirmed by Sanskrit *prasalaví-* 'towards/on the right side', which would reflect a loc.sg. *$s(o)lH$-eu-i,* cf. loc.sg. *sūnaví* 'son' (Plath 2000). Ruijgh (1987) points out that the initial stress of Greek ὅλος also points to an earlier *u*-stem. One cannot but conclude that the *uo*-stems in Greek, Sanskrit, Latin and possibly Tocharian are independent thematicizations of an old *u*-stem adjective. Next to this *u*-stem, there are a number of other formations, e.g. Old Irish *slán* 'safe, whole, healthy' < *slh_2-no-*, and probably Greek ἱλάσκομαι 'to reconcile, appease' < *si-slh_2-ske/o-* with a secondary zero-grade -λα- (for expected *-λη-*), Armenian *ałač‘em* 'to request' (see the discussion in Clackson 1994: 173f.), Gothic *sels* 'kind' < *$sēlh_2$-*, and Latin *sōlor,* perhaps from a root noun *$sōlh_2$* (cf. De Vaan 2008: 572). Greek and Old Irish may point a root *$selh_2$-*, which might be confirmed by Hittite *šalli-* 'big', if < *solH-i-* (see Kloekhorst 2008: 710), but the semantics of this connection are not very strong.

Returning to the *u*-stem, the following adjectival paradigm can be reconstructed, at least for the masculine forms:[12]

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[10]Cf. also the discussion in van Beek forthc.

[11]I cannot agree with Nussbaum that *slh_2-u-o-* would also yield *salau-* (1997: 186, fn. 42), nor that there was an Indo-European suffix *-euo-* (idem: 187).

[12]Ruijgh even prefers a neuter *u*-stem *$solh_2$-u-* 'the whole' (1987), which seems attractive semantically. Because of the large number of attested adjectives, however, I rather reconstruct an adjective for Proto-Indo-

nom.sg. $*solh_2us$ > Italic $*solus$
acc.sg. $*slh_2eum$ > Italic $*salauem$
gen.sg. $*slh_2eu(o)s$ > Italic $*salauos$ (or $*slh_2uos$ >
     Italic $*slāuos$)[13]

In the nominative, the laryngeal was probably regularly lost, as in Greek πολύς 'many' < $*polh_1us$ etc. The nominative stem was thematicized in Latin *sollus*, Greek ὅλος and Sanskrit *sárva-*. The original accusative stem was thematicized in Italic yielding $*salauo-$ > Latin *salvus*, Oscan *salavs*. The split of the paradigm in Italic naturally separated the two shades of meaning of the adjective, i.e. 'whole, undamaged' (*salvus*) and 'whole, complete' (*sollus*). The question remains, of course, why all these forms were thematicized.[14] This remains a problem, but it has been shown that these forms need not necessarily reflect the working of SE, especially since there are several indications that we are dealing with an earlier *u*-stem. For a discussion of the Greek forms I refer to Lucien van Beek's article in this volume.

The other examples of SE in Latin "fall short of being certain", as Nussbaum puts it (1997: 196). Latin *culmus* 'stalk' can reflect both $*kolmos$ and $*kolamos$ (idem: 196f., cf. *palma* < $*plh_2-em-$). Latin *ūber* 'udder' can also reflect the zero-grade $*Hu(H)d^h-r$ or the *e*-grade $*Heu(H)d^h-r$ (idem:

European. At an earlier stage, this adjective may of course derive from the proposed neuter noun. The *o*-grade in the root would thus also be accounted for (i.e. the same full grade as in δόρυ, γόνυ etc.).

[13]If one prefers an acc.sg. $*solh_2um$, the full grade of the suffix can be reconstructed for the loc.sg. $*slh_2eui$.

[14]Several scenario's can be considered, I will briefly mention two of them. First, there may have been a semantic difference between PIE athematic $*solh_2-u-$ and thematic $*solh_2-u-o-$, comparable to the opposition between Russian *ves'* 'whole, all' and *celyj* 'whole, entire'. The thematic vowel may have had a similar function to that of *-yj* in Russian *celyj*, which goes back to a pronoun that merged with the adjective to form a definite form of the adjective. Note that the generally indefinite PIE $*polh_1-u-$ 'many' remained unthematicized in Sanskrit *purú-*, Greek πολύς. Secondly, the *o*-grade of the nom.sg. may have acted as the trigger for the thematici-zation of the *u*-stem, although in that case it remains unclear why the otherwise similar $*polh_1-u-$ remained athematic.

198f.), attested in Old Norse *jugr*, Old Frisian *iader*.[15] The existence of the second laryngeal in the root is doubtful. The odd thing about a reconstruction *$HeuHd^h$-* is that the root ends in three consonants, which is very unusual for an Indo-European root.[16] It seems difficult to analyze the root as an original compound *Heu-* + *Hd^h-*, since neither element constitutes a known root. It is hardly more attractive to analyze the root final *$-d^h$-* as some kind of suffix or root extension, since it remains unclear what *$HeuH$-* would be. In addition, the heteroclitic inflexion of 'udder' speaks against the analysis of the word as a recent compound. The root structure would be less awkward if we could reconstruct the root as *h_3eud^h-*. In Sanskrit, the zero grade possibly yielded *$ūdh$-* if there is a sound law *h_3RC- > *$ūRC$-* (cf. Lubotsky 1988: 94, fn. 22).[17] The Balto-Slavic cognates, Slavic *$vymę$* (a.p. a) 'udder', Lithuanian *ūdróti* 'to be with young' and *pa-úʹdrė* 'lower part of the body', may reflect the regular metathesis of initial stressed *Hu-*.[18] A similar explanation may be invoked to explain the Germanic forms with long *$ū$-* (Swiss German *ūter*, Dutch *uier*), although there appear to be no parallels in Germanic.

7. Conclusion

It can of course be argued that, although none of the examples I discuss here require SE, the recurring pattern of lack of vocalization of a laryngeal whenever there is an *o*-

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[15]Cf. also the discussion in van Beek in this volume. In Latin, *$HuHd^h$-* may be expected to yield *vab-* according to Schrijver (1991: 327), but this is doubted by, e.g., Nussbaum (1997: 199, fn. 90).

[16]Why was the full grade not **$HueHd^h$-*, as in, e.g., *$Hieh_2ĝ$-* 'to worship' and *$h_2reh_1ĝ$-* 'to support'?

[17]Cf. the long initial *ū-* of Sanskrit *ūrvá-* 'container, enclosure, dungeon', which is likely to be related to the root *var-* 'to cover, enclose' < *h_2uer-*. Notice that the root *var-* also has a present form *ūrnóti* next to *vr̥nóti*, which arose as a result of laryngeal metathesis when the verb was preceded by the preverbs *ví* and *abhí*: *$CiHuC$* > *$CiuHC$-* (Lubotsky 2000, also on the etymology). About the long *ū* of *ūrvá-*, Lubotsky remarks that it is possible that *-ūr-* is the regular reflex of *$-CrV$-*, since the sequence *-r̥v-* is not attested in Vedic, except at transparent morpheme boundaries (1988: 94, 104 fn. 24). Other instances of unexplained initial long *ū-* are found in Sanskrit *ū́rj-* 'food, refreshment, strength' and *ūrdhvá-* 'high'.

[18]Sanskrit *ū́dhar* shows columnar root-stress, and the Slavic forms also seem to reflect earlier fixed root stress (see Pronk 2009).

grade in the vicinity is proof enough that some sort of rule applied. It must be stressed, however, that the only example in Indo-European outside Greek that receives a straightforward explanation when one assumes SE is Sanskrit *sárva-*, Latin *sollus,* Greek ὅλος. As shown above, the *uo*-stem in these three languages is due to later individual thematicizations of a *u*-stem, which rather complicates the picture. Given the phonetic unlikeliness of the "rule", one plausible example simply does not justify it. In addition, the one plausible example is outweighed by the numerous counterexamples we find in Balto-Slavic. The only possible conclusion is that SE did not work outside Greek and is therefore not a common Indo-European development.

References

van Beek, Lucien
    2011   "The "Saussure Effect" in Greek: a revision of the evidence." *JIES* (this volume).

Derksen, Rick
    1996   *Metatony in Baltic.* Amsterdam-Atlanta: Rodopi.
    2003   Slavic **jь-. Dutch contributions to the thirteenth international congress of Slavists : Ljubljana, August 15-21, 2003: linguistics (= Studies in Slavic and General Linguistics* 30*),* Amsterdam-New York, 97-105.
    2008   *Etymological Dictionary of the Slavic Inherited Lexicon.* Leiden: Brill.

Eichner, Heiner
    1980   Phonetik und Lautgesetzen des Hethitischen: ein Weg zu ihrer Entschlüsselung. *Lautgeschichte und Etymologie : Akten der VI. Fachtagung der Indogermanischen Gesellschaft, Wien, 24.-29. September 1978.* Wiesbaden: Reichert, 120-165.

Fraenkel, Ernst
    1962-1965 *Litauisches etymologisches Wörterbuch.* Heidelberg.

Jasanoff, Jay
    2003   *Hittite and the Indo-European verb.* Oxford: Oxford University Press.

Kloekhorst, Alwin
    2008   *Etymological Dictionary of the Hittite Inherited Lexicon.* Leiden: Brill.

Lubotsky, Alexander
    1981   Gr. *pḗgnumi* : Skt. *pajrá-* and loss of laryngeals before mediae

in Indo-Iranian. *Münchener Studien zur Sprachwissenschaft* 40, 133-138.

1988   *The System of Nominal Accentuation in Sanskrit and Proto-Indo-European.* Leiden: Brill.

2000   The Vedic root *vr̥*- 'to cover' and its present. *Indoarisch, Iranisch und die Indogermanistik : Arbeitstagung der Indogermanischen Gesellschaft vom 2. bis 5. Oktober 1997 in Erlangen.* Wiesbaden: Reichert, 315-325.

Matasović, Ranko
    2008   *Etymological Dictionary of Proto-Celtic.* Leiden: Brill.

Melchert, Craig
    1994   *Anatolian Historical Phonology.* Amsterdam-Atlanta: Rodopi.

Morris Jones, John
    1913   *A Welsh Grammar, Historical and Comparative: Phonology and Accidence.* Oxford: Clarendon.

Nussbaum, Alan
    1997   The 'Saussure Effect in Latin and Italic. *Sound Law and Analogy: papers in honor of Robert S. P. Beekes on the occasion of his 60th birthday.* Amsterdam/Atlanta: Rodopi, 181-203.

Plath, Robert
    2000   Altpersisch *fraharavam* und vedisch *prasalaví. Anusantatyai : Festschrift für Johanna Narten zum 70. Geburtstag,* Dettelsbach: Röll, 189-206.

Pokorny, Julius
    1959   *Indogermanisches etymologisches Wörterbuch.* Bern: Francke.

Praust, Karl
    2000   Altindisch *dr̥-/dr̥̄*-: seṭ oder aniṭ? *Indoarisch, Iranisch und die Indogermanistik : Arbeitstagung der Indogermanischen Gesellschaft vom 2. bis 5. Oktober 1997 in Erlangen.* Wiesbaden: Reichert, 425-441.

Pronk, Tijmen
    2009   The accentuation of the Slavic *n*-stems. *Stressing the Past: Papers on Baltic and Slavic Accentology.* (= *Studies in Slavic and General Linguistics* 35), Amsterdam-New York: Rodopi, 101-114.

    2011   On the development of initial **Hu,* *Hi and the rise of initial acute diphthongs in Baltic and Slavic. *Accent Matters: Papers on Baltic and Slavic Accentology.* (= *Studies in Slavic and General Linguistics* 37), Amsterdam-New York: Rodopi, 309-321.

Rasmussen, Jens
    1989   *Studien zur Morphophonemik der indogermanischen Grundsprache.* Innsbruck: IBS.

Ruijgh, Cornelis
   1987   À propos de ϝισϝο- (wi-so-wo), ἐϝισυ- (e-wi-su) et hom.
             ἐ(ϝ)εισάμενος. *Minos* 20-22 (= *Studies in Mycenaean and classical
             Greek presented to John Chadwick*), 533-544.

de Saussure, Ferdinand
   1905   D' ὠμήλυσις à Τριπτόλεμος. Remarques étymologiques."
             *Mélanges Nicole: recueil de mémoires de philologie classique et
             d'archeologie offerts Jules Nicole l'occasion du XXXe anniversaire de
             son professorat.* Genève, 503-514.

Schrijver, Peter
   1991   *The Reflexes of the Proto-Indo-European Laryngeals in Latin.*
             Amsterdam-Atlanta: Rodopi.
   1996   *Studies in British Celtic Historical Phonology.* Amsterdam-Atlanta:
             Rodopi.

Thurneysen, Rudolf
   1946   *A Grammar of Old Irish.* Dublin : Dublin Institute for Advanced
             Studies.

de Vaan, Michiel
   2008   *Etymological dictionary of Latin and the other Italic languages.*
             Leiden: Brill.

Yamazaki, Yoko
   2009   The Saussure Effect in Lithuanian. *Journal of Indo-European
             Studies* 37, 430-461.

Indian "hero-stones" and the Earliest Anthropomorphic Stelae of the Bronze Age

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Having taken as starting point the suggestion made by Alexander Zaitsev and K. Jones-Bley that the earliest North Pontic anthropomorphic stone stelae of the late 4th and 3rd millennium BC may be perceived as visual representations of the IE formula "undying/unfading fame", the author then demonstrates that both the tradition of memorial stelae for fallen heroes and the use of Indo-European poetic formulae expressing a worldview of "pastoral heroism" were inherited by the archaic culture of the Indo-Aryans. Contrary to widespread opinion, the use of the "undying fame" formula is not limited to one or two contexts in the Rigveda. This formula, in a slightly modified form, was used in Sanskrit epic poetry. Indian "hero-stones" which have been erected since very old times in regions inhabited by warlike nomadic cattle-herders, are considered by the author to be a branch of the Bronze-age Eurasian tradition of anthropomorphic stelae. Indian memorial stones are the object not only of archaeological, but also of ethnological studies; at some places hero-stones continue to function in their original cultural context, the symbolic meaning of their design is transparent and we may use them as an explanatory model in order to elucidate the semantics and function of Bronze-age Eurasian memorial monuments. Basic Indian terms designating hero-stones reveal their IE antiquity, being in particular connected with the well-known IE formula "keep safe (our) men/heroes and livestock" ($*uih_xro\text{-}pe\hat{k}u\text{-}$ + $*pah_2\text{-}$). Variants of this formula have been found in the Śatarudriya hymn of the Yajurveda and even in the Mahābhārata. All this makes the author believe that the specific worldview of "pastoral heroism", which had originated in the Eurasian steppe-belt in the Early Bronze age, survived in India over several millennia, existing side by side with the mainstream Vedic-Hindu complex of ideas.

About 150 years ago the discovery of the Indo-European (IE) formula the "undying fame" (cf. Vedic

śrávas ákṣitam and Hom. κλέος ἄφθιτον; see: Kuhn 1853) started a search for other elements of the IE poetic language. Soon IE formulas were identified for the "great fame" (Ved. *máhi śrávas* and Hom. μέγα κλέος) and the "wide fame" (Ved. *urú śrāvas* and Hom. κλέος εὐρύ), combinations of the word for "fame" with particular verbs (IE **dheh₁-* [**dhē-*], **bher-*), etc. Scholars have reconstructed a set of heroic notions and a complex of verbal expressions that may remind us of the oral-poetic "theme" as it was understood by M. Parry and A. Lord (Lord 1960).

Both linguistic and archaeological data lead us to the conclusion that the specific set of notions and verbal expressions came into existence most probably during the Copper and Early Bronze periods in the western part of the Eurasian steppe where the linguistic ancestors of both Greeks and Indo-Aryans had lived together, in a kind of cultural unity, and where, at the same time, mighty chiefdoms were emerging and metal weapons, fortifications and other signs of frequent wars were discernible; in other words, it was the beginning of the epoch that could well be viewed by the subsequent generations as the "heroic age". The exceptional role played in the economy of the period by cattle-breeding leads us to the suggestion that the main object of wars between the steppe tribes might have been good pastures and herds of livestock. The main cultures of this period - the Pit-Grave (Yamnaya), the Kemi-Oba and the Novosvobodnaya ("Majkop-2") for the first time in history introduced the practice of a chieftain's or hero's burial under a high earthen mound (*kurgan*), sometimes with a memorial stone monument at the top.

It is well-known that the ancestors of the Greeks came to Greece from the North-Pontic steppes and brought with them the practice of building large burial mounds with memorial stelae on top of them. The poems by Homer make it quite clear that the mound built in the memory of a hero, was thought to be the embodiment of his fame, κλέος (see e.g. Odyss. IV.584). This gave the Russian Classical scholar Alexander Zaitsev (1986) and, later, K. Jones-Bley (1990) grounds to suggest that the

earliest anthropomorphic stone stelae of the late 4th and
3rd mill. BC found in large numbers in the North Pontic
region (see Figure 1, 1) could equally be perceived as
visual representations of the IE formula "undying fame".
Of course, due to the scarcity of the data, suggestions of
this kind are deemed to remain purely speculative until
they can be supported by more weighty arguments.

Figure 1. Animals and/or women in the lowest panel.
1. Hero-stone from Karnataka (South India). In the lowest
panel the hero defends the cows from raiders. The middle
panel shows the hero ascending heaven in the company of
two Apsarās. The highest panel contains the picture of the
hero's apotheosis. The Government Museum, Bangalore
(after Thapar 1981).
2. Cattle-raid stones from Naygavpeth, Maharashtra (after
Memorial Stones 1982). In the lowest panel: the cows are
mourning over their fallen defender.
3. Hero-stone from Bavde, Maharashtra. In the lowest panel,
the hero's wife, mourning over his body, and the Apsarās with

flower garlands. The composition reminds one of that of the "cows' lament" (after Settar and Sontheimer 1982).
4. The "Idol from Kernosovka" (Ukraine), front side. In the lower panel, below the belt, there are two horses and a square enclosure or pen for livestock. Bronze Age (after Mallory 1989, plate 27).
5. Anthropomorphic stela from the Apsheron Peninsula, Azerbeijan. Some animals can be seen in the lowest panel (below the belt). Bronze age (after Leus 2007).
6. Anthropomorphic stela from Hakkari (South-eastern Turkey). Noteworthy are the shepherd's crook, the animal (deer) in the lowest panel, a woman's figure "stuck" under the belt and a goblet or cup in the right hand of the figure. The horned animal to the left of the figure's head may be a symbol of a god (animal symbols representing heavenly gods were well-known in the region in the Bronze Age) or, if the animal is a mountain goat, it may merely symbolize the ascent of the person represented to the highest sphere of the Universe. All these details reappear on some other stelae from the same site. Late Bronze Age (after Leus 2007).

For an indologist it was tempting to check the hypothesis with the use of the Indian data. First of all, it seemed reasonable to ask two questions: 1. Does the formula *śrávas ákṣitam* haves any continuation in the Sanskrit texts after the Rigveda? And: 2. are there any visual correspondences to this formula in Indian art and culture?

The "undying fame" formula stands isolated in the RV, it looks like a survival of or a borrowing from some other tradition. After the RV it never reappears in the Vedic texts. But a related formula is used in the Great Indian epic, the Mahābhārata, which originally belonged to the warriors' (kṣatriya) tradition. The difference is that the Vedic word *śrávas* is replaced everywhere by its epic synonym *kīrti*, which had taken its position in combinations with the standard epithets derived from the same verb *kṣiṇáti*, with the negative prefix *a-*. Instead of the Vedic *śrávas … ákṣitam* (RV I. 9.7) the Epic has *kīrtiḥ… akṣayā* (Mbh III. 221.76; V. 121.7; 02*179.9), instead of *ákṣiti śrávaḥ* (RV I.40.4; VIII. 103.5; IX. 66.7) – *akṣayā kīrtiḥ* (Mbh XII. 54.28; 320.36). The epic formula is used in the context of the specific poetic "theme" connected with the

mythic notion of the fallen hero's bliss in heaven – the notion which in the time of the epic's composition was, as it seems, still popular in some circles of the society in spite of the fact that from the point of view of both Vedic and Hindu values the concept looked like an archaic survival; such kind of bliss was no longer regarded as an aim to be pursued.

As far as the material expressions of the same concept are concerned, a search in the Sanskrit sources, including even the Great Epic, gives no results. But a further search leads to the conclusion that we can recognize such expressions in the artistic form that has existed for centuries and has partly survived even to our days on the periphery of the Hindu (Sanskritic) culture. I mean the so called memorial stones, or "hero-stones" that have been erected in the Western Punjab, Saurashtra, Gujarat, Rajasthan, Himachal Pradesh, Maharashtra, Karnataka, Tamilnadu, Andhra Pradesh, Orissa and West Bengal for centuries, beginning at least in the 3rd century BC (the date of some recent finds in Tamilnadu).[1] The territories with the hero-stones form a kind of belt around the subcontinent. They have something in common: we often find in them cattle-breeding societies with strong vestiges of an archaic social organization and traditions of cattle-raiding. Interestingly, there are no "hero-stones" in Madhyadeša. i.e. the northern part of Uttar Pradesh, the cradle of the Vedic (Brahminic) civilization.

It should be noted that in about half of these territories people speak non-Aryan, mostly Dravidian languages. But as a rule in these languages the basic terms referring to the hero-stones are of Indo-Aryan origin (as, e.g., the term which Europeans translate as "hero-stone" – Tamil *vira(k)kal* where the Dravidian *kal* "stone" is

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[1]Announcement of the discovery made by scholars of the Tamil University, Thanjavur, appeared in "The Hindu" on 5th April, 2006. Later in the same month the highest authority on the Tamil epigraphy, Iravatham Mahadevan assigned the Tamil Brahmi inscriptions on the hero-stones to the end of the 3rd - early 2nd century B.C., on paleographic evidence (Mahadevan 2006; see also: http://thehindu.com/2006/04/29). The earliest Tamil works of the Śangam age (3rd cent. BC - 3rd cent. AD) refer to the erection of the hero stones as an established custom (Memorial Stones 1982: 52).

combined with the Indo-Aryan, and even the IE term for a man=hero: Skt. *vīra*, IE *$uih_x ro$-).

Some scholars have suggested earlier that the tradition of the hero-stones might be connected in their origin with the Megalithic culture (Srinivasan 1946; Sontheimer 1976; Thapar 1981: 294-295; Memorial Stones 1982: 186) whose early monuments are dated now to the 13th-12th centuries BC (Allchin and Allchin 1982: 243-245). This culture of Western and South India, in its turn, was linked to some cultures of Iran, the Caucasus and ultimately to the "Kurgan" cultures of the North Pontic steppes in the early Bronze age (Deo 1973; Leshnik 1974; Allchin and Allchin 1982: 242): so it could possibly represent one of the non-Vedic waves of Aryan migration to India. One may suggest that some of these tribes lost their Indo-Aryan speech and were assimilated by the Dravidians but left them a legacy of some specific elements of culture (cf. Parpola 1973; 1984: 320).

The whole symbolism of the hero-stones reproduces the archaic Indo-Aryan mythic concept of a fallen hero ascending to heaven to enjoy posthumous bliss in the company of the gods (Figure 1). As it is often mentioned in the Sanskrit epic, the bliss continues as long as the glory of the hero is still alive. In this connection the pictorial motif of the Sun and the Moon which is very often present on the hero-stones is worthy of mention. Local informants in different parts of India agree in their explanation of this motif: as long as the Sun and the Moon appear in the sky, the glory of the hero will not die (see, e.g.: Thapar 1981: 296-97, 305; Memorial Stones 1982: 252-253).

This gives us sufficient grounds to connect the hero-stones with the ancient "undying fame" formula . But there is also direct linguistic evidence for it. Along with many local terms for a hero-stone there is a general one which was in use in different parts of India – *kīrtistambha* "the post of fame". The terms *stambha, khambha, khambhi* in some local languages may be regarded as its shortened forms. As it has been said, *kīrti* "fame, glory" is a substitute for the ancient *śrávas* in the post-Vedic language. There is also another important term connected with the hero-

stones: the horrible mask of anger that often appears in the upper part of Indian memorial stones bears the name *kīrtimukha* "the face of Glory", the term that until now could not have been explained semantically on the basis of Indian sources; now it can be understood as the face of the *kīrtistambha* i.e. of a memorial stela, or rather the face of *kīrti* – of the hero's "undying fame" which is embodied in it.

These Indian terms related to the hero-stones significantly add probability to the suggestion made by A. Zaitsev and K. Jones-Bley that the remote ancestors of both Greeks and Indians who lived in the North Pontic region about 5000 years ago too might have regarded the stone stelae erected in memory of the heroes, as embodiments of their "undying fame".

But the importance of the Indian hero-stones is not limited to this linguistic evidence. The tradition of the earliest Eurasian anthropomorphic stelae[2] has been dead for millennia, and nobody can explain to us the meaning of its symbolism. Even early Greek art existed in a non-literate society, and we can only make guesses at its symbolic meaning. The tradition of Indian memorial stelae, with its millennia-long history, is still alive, some of the hero-stones continue to function in their original cultural context, and we may use them as an explanatory model, in order to elucidate the semantics and function of both Greek and the Bronze-age Eurasian memorial monuments.

Let us first have a look at the structure, semantics and function of the Indian hero-stones. Their composition can be very simple, reduced sometimes to a figure of a hero with his weapons, or a scene of his fight with an enemy. But more common are complex, multi-panelled compositions. Such a composition is often crowned with the *kīrtimukha*. In a standard composition (Figure 1), the

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[2]By "Eurasian anthropomorphic stelae" we refer here not only to North Pontic memorial monuments, but also to the the stelae of North Mediterranean (Southern France, Switzerland, Northern Italy), South-Eastern Turkey (see Sevin 2000; Sevin and Özfirat 2001; Sevin 2005), South Arabia (Rodionov 1997; Vogt 2006) and Central Asia (Chemurchek culture of Altai: Kovalev 2007) genetically related to them.

lower panel usually contains the picture of the hero's last fight; in the middle panel two heavenly maidens, the Apsarās, attend the fallen warrior in his ascendance to heaven; the upper panel, under the *kīrtimukha*, depicts the hero enjoying bliss in a heavenly paradise. If he is a devotee of Shiva, he is usually shown sitting beside the lingam. If he belongs to another religious cult, the hero is shown worhipping his chosen god or enjoying bliss in the closest proximity to him. But sometimes the hero is himself shown practically as a god: sitting on a throne and accepting worship. He may be attended, in heaven, by the Apsarās, or by his wife (if she became a *satī*, i.e. joined him in the cremation on the funeral pyre).

One thing should be particularly stressed: many hero-stones in Western and South India were erected in memory of the local warriors who died defending the herds of their community from cattle-raiding (or taking part in such a raid on the herds of their neighbors). The earliest hero-stones, recently found in the extreme South of India, contain inscriptions in the Tamil Brahmi script, and one of them explicitly says that this stone was erected in order to glorify the local hero who had been killed in a cattle-raid[3]. In the other regions of India several early inscriptions on the hero-stones in the same way connect the death of the heroes with cattle-raids (Skt *go-grahana*, Kannada *turu-goḷ* etc.)[4]. In later periods some hero-stones show, on the lower panel, the hero defending the herd against the attacking enemies. But more often there is one more panel, the lowest one. It represents the object of the fight: the cows. They are shown standing over the prostrate body of the hero with their heads bowed down as if mourning for their fallen defender.

There is also another variant of the fourth, lowest panel that provides us with a perfect compositional parallel of the "cows' lament" scene, but here we see, instead of the cows, the hero's wife sitting near her slain husband and the Apsarās who have come down from heaven with

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[3]"The Hindu", 24 September 2006 (http://www.thehindu.com/2006/ 09/24/stories/2006092406750300.htm).

[4]See, for example, an inscription in the Brāhmī script of the 3-4th cent. AD from Gangaperuru, Andhra Pradesh (Memorial Stones 1982: 210).

garlands of flowers to glorify him (Figure 1.3). The cresent-like garlands in their raised hands look very similar to the horns in the scene of the "cows' lament". The compositional parallelism between the cows and the female personages is based on the functional parallelism between cows and women in the world-view of the heroic age. Sometimes not the cows, but another object of combat is shown on the hero-stones: the women whom the hero defends from violence. Some hero-stones were specially dedicated, as the inscriptions witness, to the memory of the heroes who fell defending women from rape or molestation by enemies; other inscriptions define the objects of fight as "cows and women" or "women, cows, horses and camels" (see, e.g.: [Memorial Stones 1982: 144, 154,195]).

Some of the stelae, instead of the figure of the hero enjoying the bliss in the heaven of his chosen god, introduce, in the upper panel, the image of the god himself, usually a form of Viṣṇu. Sometimes it is the image of Kṛṣṇa raising Govardhana mountain over his head in order to protect his herds and his people from the heavy rains sent by Indra – which provides an obvious parallel to the defense of his herds by the hero. Another popular image is Viṣṇu in the form of the Man-Lion (Narasiṃha), tearing with his claws the evil demon-king Hiraṇyakaśipu. The meaning of this symbolism is clear: the deceased is not only glorified as a true hero: he is likened to a god and, to a certain extent, identified with him.

This is, in the shortest formulation, the symbolic meaning and function of the Indian hero-stones. This concept is practically identical to the general concept of the hero-cult in early Greece (see especially: E. A. Savostina 1988). Moreover, this concept is expressed in the early Greek memorial and funerary monuments (the funerary multi-panelled Geometric style vases, Archaic memorial stelae, kuroi etc.) with the help of the set of specific pictorial motives which display striking parallelism with the corresponding set of motives on the Indian hero-stones.

The motif of *battle*, or a military expedition, or its symbolic equivalents (such as the chariot race, or the

animal fight: the killing of a small animal by a predator) is a common scene represented on the Greek funeral vases and other monuments. The motif of the *cattle-raid* is very popular in India: the Greeks preferred a related topic – *the raping of women* (we know that both in archaic India and early Greece the herds of cattle and women were regarded as related and interchangeable values in myth and in everyday life). As we have seen, in India the cows as the cause of the battle are often shown in the separate, lowest panel. On many Greek Geometric funerary vases, the subject of horses and sometimes bulls or goats grazing on the grass represented on separate panels could be regarded a survival from the same motif.

Another motif was very popular among the Greeks, the motif of *prothesis* – i.e. the mourning of the hero by his wife and other women over his body on his death-bed[5]. We can regard as an Indian equivalent to it the above-mentioned Indian pictorial topic of the hero's wife and the Apsarās mourning over the dead body; the wife is represented in this case with her hand raised up to indicate that she is a *satī*, i.e. is ready to join her slain husband on his funeral pyre. The parallel topic of the "cow's lament" may be viewed as another variant of the Indian "*prothesis*" theme. The same is probably true with reference to the extremely popular, beginning from the post-Gupta period, separate motif of *satī* where both the deceased's body and his wife sitting beside are represented amidst the flames of fire.

Widespread in early Greece (but not in the Geometric period) is the theme of *apotheosis* ("becoming a god") that can be expressed in the picture of a hero feasting (drinking) in the otherworld (see, e.g., Vermeule 1979: 450, Figure 13), or sitting on a throne being worshipped or honored, or wearing a special band around his head which is usually a mark of divinity; or the hero can be merely presented as the young Apollo, which is probably implied by the kuroi – the statues of the deceased as a beautiful youth (Savostina 1988: 106-109). All this can be considered as parallel to the motifs that we find on the

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[5]See, e.g., Ahlberg 1971.

upper panels of the Indian hero-stones. The difference is that in India the hero in heaven is never shown drinking: this is against classical Hindu cultural norms, but in the pre-classical times the motif was undoubtedly well known.

Regarding the monstrous apotropaic mask of *kīrtimukha*, it has its Greek parallel in the related image of Gorgo (Medusa) which is sometimes substituted, and sometimes accompanied by the image of the sinister Sphinx (Richter 1961: 14, 26, Figure 1-14, 34-65, 83, 84, 96-103, 110-122).

As expected, some of these common Indo-Greek pictorial motifs are present also on the most ancient anthropomorphic stelae of the North Pontic region, as well as on the stelae of similar types from the other regions of Eurasia. Now it is time to mention that the North Pontic stelae[6] represent only one branch of the tradition which was very widespread, it seems, across Eurasia. In the West we find similar stelae in Southern France, Switzerland and North Italy (see Arnal 1976; Landau 1977; Anati 1977; Guilaine 1990), in the East the Chemurchek culture has been recently discovered in the foothills of the Chinese Altai, where the borders of China, Mongolia and Russia meet (Kovalev 2007). In my brief review I shall sometimes refer to the materials of these traditions.

Among the North Pontic stelae, two contain in their lower parts the scene of the hero's *fight* with the enemy (see Mallory and Adams 1998: 545). On the so called "Idol from Kernosovka" (Figure 1.4) we can see, in the lower part, below the belt, some *animals*: two horses standing in front of an enclosure or a pen for livestock on the face side of the "idol", the bull on its left side (Krylova 1976: 36; Mallory 1989: fig 27; Mallory and Adams 1998: 545). The figures of the two horses are engraved on the back side of the stela from Ak-Chokrak (Crimea). It should be noted that in the North Pontic region the flesh of horses, according to the archaeological evidence, constituted the main kind of meat eaten at that period, so the figures of horses on the stelae might well symbolize the horse-herds. The situation was different, as it seems, in the steppes of

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[6]See on them: Häusler 1966; Telegin 1971; Krylova 1976; Mallory 1989: 203-206, 210-221; Figure 27, 119-121; Telegin and Mallory 1994.

Central Asia, where we can see, in the lower parts of the Chemurchek stelae, the figures of bulls (Kovalev 2007: 53, Figure 8 [a stela from Aktubai]).

The attribute of the hero, common to all branches of the ancient Eurasian tradition, is the *shepherd's staff*, or crook (Figure 2).[7] It is clearly seen in the hands of the heroic figure on the stelae from France (e.g. from Rosseronne and Mas-de-l'Avegle [Smirnov 2004: 80, Figure 10]), from the North Pontic region (e.g. the stelae from Novosyolovka and Novocherkassk [Telegin and Mallory 1995: Figure5, n.3; Figure 11, n. 1]) and finally from the Chemurchek culture of Central Asia (e.g. the stela from Utsubulak [Kovalev 2007: 51, Figure 6, n. 3]). Of special interest is the Chemurchek stela from the site of Kainarl where we can see the hero who holds, in his right hand, a shepherd's crook and, at the same time, something looking like a noose or a kind of lasso thrown upon the figure of a running bull (Kovalev 2007: 50, Figure 5, nn. 1, 3). In early Greek art, a shepherd's crook is reinterpreted as a walking staff which should help the deceased in his journey to the underworld, or the spear of a soldier. On Indian hero-stones this attribute, as far as I know, is never present, and this is most probably caused by the specific role played by the staff in classical India – that of an attribute of wandering ascetics.[8]

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[7]The motif of the staff, or the shepherd's crook, on the North Pontic and North Mediterranean anthropomorphic stelae is dealt with in a special article (Smirnov 2004) very rich in comparative material. However, the interpretation ultimately suggested by the author, seems to me unacceptable. Having taken for granted the views of some French archaeologists (e.g. Bailloud G., Boujot C., Cassen S., Le Roux C.-T. 1995) A. M. Smirnov regards the staffs to be divine insignia, symbols of magical power and treats the stelae themselves as the statues of female characters (goddesses).

[8]However it is worth noticing that the staff of an Indian religious mendicant may be traced in its origin to the crooked staff as an attribute of the "heroic shepherd". According to some Vedic texts, *daṇḍa* "staff" is used both for driving cattle (RV VII. 33.6) and for fighting (defense or attack – ŚatBr I.5.4.6; XII.7.3.1). The Vedic student's staff (*daṇḍa*), according to the "Aparārka" (the oldest commentary on the "Yajñavalkya-smṛti"), is required, among other purposes, for the defense or control of the guru's cattle (*gavādinivāraṇam*), which the student was to tend. Another text ("Gautama-smṛti" I.25) adds that the tip of the student's staff should be curved (Gonda 1965: 263, 265).
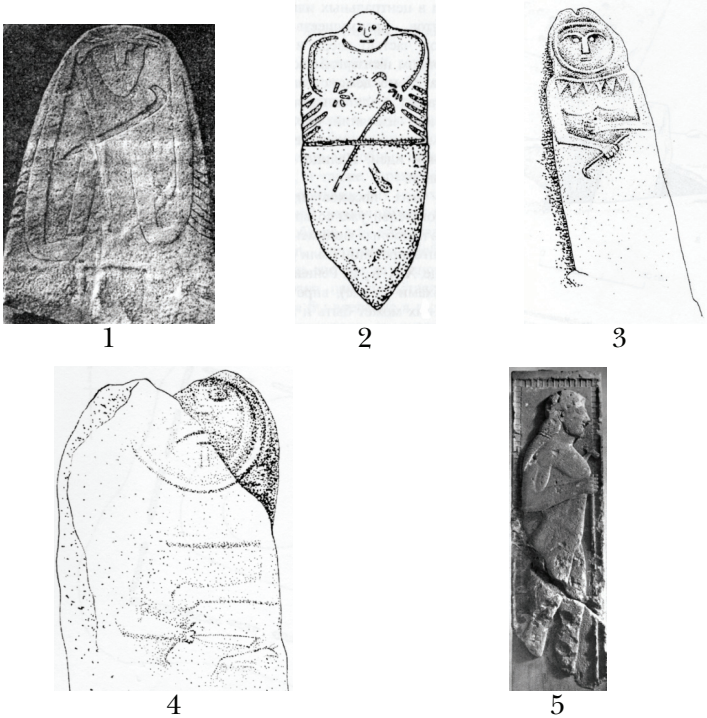
Figure 2. The shepherd's crook.
1. Stela from Ronseronne, Southern France (after Smirnov 2004). 2. Stela from Novoselovka (Ukraine), Bronze Age (after Smirnov 2004). 3. Stela from Utsubulak (North China). Chemurchek culture. Bronze Age (after Kovalev 2007). 4. Stela from Kainarl. The Chemurchek culture. The hero is depicted in the process of "controlling" the animal (bull) with the shepherd's crook and something looking like a kind of lasso. Bronze Age (after Kovalev 2007). 5. Archaic Greek stela from Attica (after Richter 1961).
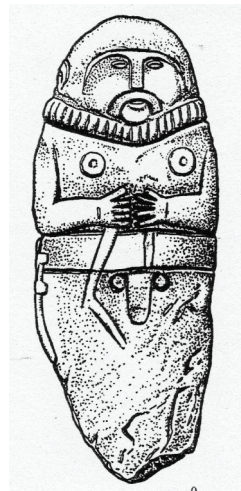
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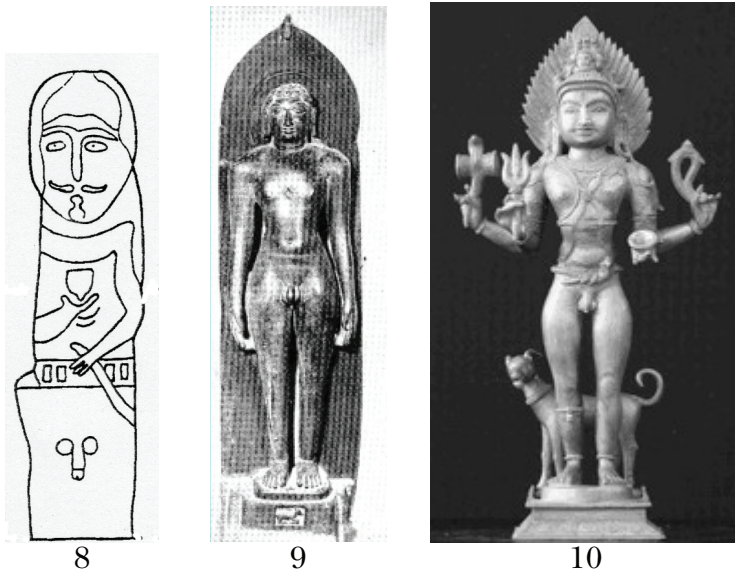<center>8   9   10</center>
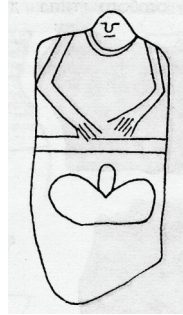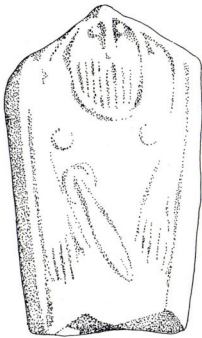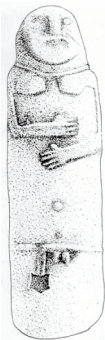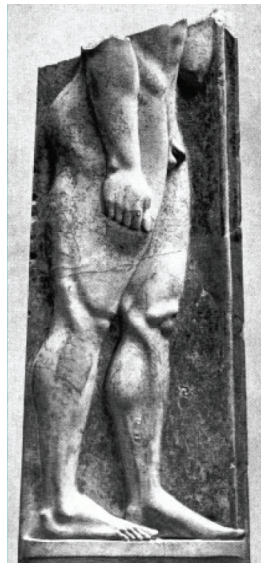
Figure 3. "Heroic nudity".
1. Stela from Mas de l'Avegle (France). The nipples on the breast of this and many other stelae are often misinterpreted as evidence that the stelae represented "goddesses" (after Smirnov 2004). 2. Stela from Dobrudja (Romania), Bronze age (after Danilenko 1974). 3. Front and back views of the stela from Hadramaut (Yemen). Noteworthy are the nipples and the sword of the "phallic" form on the front side, the spine and ribs on the back. Bronze age (after Rodionov 1997). 4. Stela from the Novocherkassk region (South Russia), showing the ribs and the shepherd's crook between the hands. Bronze age (after Danilenko 1974). 5. Stela of the Chemurchek culture from Sentas, North China. Note the breast muscles and the navel. Bronze Age (after Kovalev 2007). 6. Lower part of the Archaic Greek stela from Attica (after Richter 1961). 7. Nipples and male genitalia on the Scythian statue from the North Pontic region. 6th century BC (after Ermolenko 2008). 8. Turkic statue of a hero from Mongolia. 7th-9th cent. (after Ermolenko 2008). 9. Statue of a Jaina saint. India, 10th cent. BC (after Bhattacharya 1974). 10. Śiva Bhairava. Bronze. South India, 20th century.

One more feature common to all early Eurasian traditions of memorial stelae is the nakedness of the hero, shown either by the demonstration of the genitals, or ribs,

breast muscles and nipples (Figure 3). The last detail has been misunderstood by specialists in the Aeneolithic and Bronze age stelae of France, who recognized in the figures on the stelae female images (goddesses; see e.g. Arnal 1976: 213; Smirnov 2004: 68). The tradition to emphasize the hero's nudity was continued in the later Scythian and even some Mediaeval Turkic memorial statues in the steppes; it also survived in early Greece[9]. And again, India is different: the classical norms did not permit one to show a hero in his nakedness. But there is a significant exception: the statues of Jaina teachers and ascetics – the *tirthankaras* - are always nude. We can explain this by the suggestion that the ancient Jaina ideal of a *tirthankara* was formed under the influence of the archaic Indo-Aryan concept of heroism that originally might have included the notion of "heroic nudity". The definition of the tirthankars as *jīna* "conqueror", the terms for the religious community (*saṁgha*) and its divisions (*gaṇa*), borrowed from the warriors' tradition of non-Vedic Aryans – all these features betray the strong influence of the heroic world-view. As we know, even the constant epithet of the greatest teacher of Jainism – *Mahāvīra*, "the Great Hero", contains the term *vīra* which is a normal designation, in

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[9]The figures of the chariot-riding heroes on the earliest Greek memorial stelae from Mycenae dated 1600 – 1500 BC, are nude (Mylonas 1951), the tradition is then continued by the warriors' figures on the Geometric vases (Ahlberg 1971), by the figures of young heroes on the Archaic stelae of Attica (though in this period warriors are represented sometimes as dressed and armored [Richter 1961]) and by *kouroi* – the memorial statues of the youths (standing in a strictly frontal pose) of the Archaic period (late VIII-V centuries BC; see, e.g., Richter 1959: 47-84). The hero *par excellence* – Heracles and the heroes in general were depicted mostly nude in early Greek art (the so called "heroic nudity"). The participants in competitive games (such as the famous Olympics), connected both with the hero cults and the concept of "undying fame", originally wore no clothes, and as it seems, it was closer to the Classical period that they began to wear loincloths. As the author of a special paper on the subject formulates, "nudity survived in Greek athletics because it was supported by heroic tradition and religion" (Mouratidis 1985: 232). The early Greeks, according to him, "believed that there was in nudity something heroic and sacred". He traces the origin of this belief to the prehistoric practices of "warrior-athletes", where nudity was used for aggression and apotropaic purposes, and even to the pre-human, animal behavior (Ibid., pp. 221ff.).

the Indian culture, of the character shown on hero-stones.

Inside the Hindu tradition, nudity is a specific characteristic of Bhairava – a form of Śiva, which is supposed to be a continuation of Śiva's archaic forerunner – the wild god Rudra (see Figure 3, no. 10). The image of Bhairava may also be viewed as a result of the generalization which made it possible to include into the system of Hinduism the gods of a specific type worshipped by some pastoral ethnic groups in many regions of Western, Central and South India. Every god of this class was originally a deified local hero (often with a hero-stone of his own); he was usually perceived as the leader of a "wild hunt", head of a host of violent demoniac spirits (e.g. Marathi *bahan vīr* - "fifty-two vīrs"). The bhaktas of such gods as Khaṇḍobā in Maharashtra or Mailār in Karnataka form militant brotherhoods and behave in ritual contexts like the "dogs of god". G. D. Sontheimer has convincingly demonstrated some striking similarities between the mythologies of Khaṇḍobā/ Mailār/Mallaṇṇa and ancient Rudra, as well as between the practices of the pastoral gods' bhaktas and the ancient vrātya brotherhoods (Sontheimer 1987). These similarities can be explained only by the suggestion of direct continuity between modern pastoral cults and the Rudra religion of the ancient vrātyas. The spread of the archaic tradition of non-Vedic Aryans over the Deccan and South India is probably evidenced by the archaeological Megalithic culture representing in its early forms nomadic militant communities of horsemen followed by their dogs (Sontheimer 1984: 162, fn. 18). Warrior brotherhoods similar to ancient vrātas left obvious traces in the great epic of India – the Mahābhārata (see Vassilkov 2009).

Another example of male nudity in the Indian culture is connected with the same set of notions. The so-called gaṇas – the retinue of Śiva, members of his host – gaṇa (without doubt inherited by him from older Rudra) are usually depicted in classical art as nude (or almost nude), very young (in fact, childish) and having a halo of curly hair, or a hairstyle resembling the Rastafarian dreadlocks (see, e.g.: L'Âge d'or 2007: 269, pl. 78; 273, pl. 81). This feature links the gaṇas with the young warriors'

brotherhoods (and the modern teenager gangs) all over the world, but, at the same time, with ancient Indian vrātyas who are repeatedly described in the Vedic sources as *keśin*-s – "long-haired ones". It is worth noticing that in the Mahābhārata Arjuna and Kṛṣṇa, who are of the same age-group and probably share some common initiatory experience, call each other with meaningful nicknames: Guḍakeśa "with the ball of hair" (for Arjuna) and Hṛṣikeśa "with the halo of sticking out hair" (for Kṛṣṇa).

Marco Polo mentions in his book (chapter clxxiv) that in the land of Ma'abar (an old Muslim name for Coromandel coast – the eastern coastline of the Deccan, south of Madras-Chennai) men used to go to battle stark naked with only a lance and a shield. The Venetian saw the reason for this in the hot climate; we too could be satisfied with this simple explanation, but we already know that the traditions of "pastoral heroism" were still very much alive in mediaeval South India, and this gives us grounds to suggest that the strange custom of the Ma'abar warriors could have been a survival of the ancient "heroic nudity" concept on Indian soil (cf. Mouratidis 1985: 223, 225).

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All this gradually draws us to the conclusion that the earliest anthropomorphic stelae of Eurasia can be considered a common source not only of the Greek and Indian memorials, but also of the other Eurasian traditions of heroic stelae and statues. A closer look at the earliest stelae enables us to see that their composition contains germs of development in two main directions. On the one hand, an early stela is an anthropomorphic figure, but on the other, the horizontal lines of the necklace and the belt divide it into hierarchical panels (tiers), and these panels tend to become "thematic": the weapons and prestige symbols are usually placed between the necklace and the belt; the fight scene is always in the lower part of the stela; the animals are also in the lower part or at the very bottom. This tendency to the "panelization" of the whole composition will later find its full expression in the

Greek Geometric vases and the Indian hero-stones with
their hierarchy of thematic panels, but also in the so-called
"deer-stones" of the Eurasian steppe dating to the 2nd–
beginning of the 1st millennium BC. The difference is
that whereas the Greek vases and the Indian hero-stones
have lost their anthropomorphic features completely[10], the
deer-stones retain a certain measure of a reduced,
conventional anthropomorphism: three diagonal lines on
the thin side mark the "face"[11], in the upper part of the
left and right sides, two circles signify "ear-rings", the
horizontal lines around the monument still remind us of
the necklace and the belt; but all these features look like
survivals of anthropomorphism, and the whole composition
is perceived rather as a cosmological pattern (see, e.g.,
Podol'skij 1987; 131; Kilunovskaya, Semenov 1998-99) .
The origin of the deer-stones has remained a mystery until
now; some scholars (e.g., Chlenova 1984: 56-60; Savinov
1994: 152-154) have compared them to the Bronze age
stelae of the North Pontic region and North Italy, but the
enormous distance separating their Central Asian
homeland from Europe made impossible any thought of a
genetic connection. Now, the discovery of the ancient
Chemurchek stelae precisely in the same region of Central
Asia where the tradition of the deer-stones originated in
the middle of the 2nd millennium BC will make the
suggestion of the genetic link look much more probable in
the eyes of scholars. The movement of the biologically
closely related groups of people from the North Pontic
region to Central Asia in the 3rd millennium. BC, and then
backwards, from the East to the West in the second half of
the 2nd mill. BC has been now convincingly traced by

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[10]There are some rare exceptions such as a *pālia* stone of the Gamit tribe
from South Gujarat: it has the form of a human figure with broad
shoulders and the semi-circular head; but instead of the face there is, as
it seems, the solar (or the composite solar-lunar) symbol. On the neck
there is a massive necklace and below – the figure of the hero on
horseback, with his sword and spear, ready for the battle (see: Memorial
stones 1982: Figure 10 for the paper by H. Shah "Tribal Memorials in
Gujarat").
[11]According to one of many explanations, this specific treatment of the
face may be explained by reference to the battle paint of the Steppe
warriors (Yu. S. Khudyakov quoted in: Savinov 1994: 21).

means of physical anthropology (Kozintsev 2007). This movement practically coincides with the spread of the Bronze Age stelae from Europe to Central Asia and the subsequent spread of the "deer-stones" in the opposite direction.

Another artistic tradition of Eurasia that can be traced in its origin, but through another line of development, to the same earliest memorial stelae, is represented by *Scythian* memorial statues (dating from the 8th century BC). In general, they follow, as their face sides are concerned, the iconography of the ancient stelae[12] but introduce one novelty: a cup or a goblet appears in the right hand of the hero, which is, no doubt, a variant of the apotheosis motif, the motif of the hero's feast in heaven[13]. Some scholars (e.g. Shultz 1976: 220-221; Chlenova 1984: 60) had earlier suggested the possibility of a genetic connection between the Scythian statues and the Bronze age stelae, but the differences in their general form and in the details such as the above-mentioned goblet made the suggestion open to doubt. At the end of the 20th century the series of eight anthropomorphic stelae was discovered in the south-easternmost corner of Turkey, in the city of Hakkari. Their date is approximately the second half of the 2nd millennium BC (see Sevin 2000; Sevin, Özfirat 2001: 22-23; Schachner 2001: 131; Sevin 2005; Leus 2007: 59). They look very much like the Bronze Age stelae, being nude (or almost nude), having similar faces, necklace, sets of weapons, belts, the figures of fighters or animals below the belt, etc. But there are also significant differences, e.g. the cup or goblet appears in the right hand of a hero, and the "shepherd's crook" has been replaced by a spear or a bow. The Hakkari stelae demonstrate how the Bronze Age stelae with their design incised or done in low relief, under the obvious influence of Near Eastern art, turn into deeply cut reliefs, as if being half way towards the Scythian memorial statues.

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[12]In the early phase, they have a face with the "grimace of fury", necklace, weapons, and in some later traditions – elements of "heroic nudity", pastoral attributes, such as whips or lashes, etc.
[13]And, at the same time, the symbol of the hero's "large share" or "great lot" in his earthly life.

It is remarkable that the iconography and symbolism of the Scythian statues is partly continued throughout the Middle Ages by the tradition of the Turkic tribes of the steppes. This and the persistence of the Indian memorial stones' tradition up to the present day give us some grounds to say that the ancient concept of heroism which had been expressed, for the first time, in the earliest anthropomorphic stelae, continued to exist in Eurasia in some form for about five millennia among the peoples speaking many different languages.

Our reconstruction reveals, as it seems, the ancient concept of heroism centered on the image of the hero as defender (and capturer) of the cattle. In the process of this reconstruction we have analysed the data of Indian hero-stones (what can be called historical or even modern anthropological material) and have projected this on the artistic objects of the remotest antiquity. This way of reasoning could be considered rather arbitrary and unsound, but we can refer, in support of this approach, to the data of IE comparative linguistics.

The IE formula "protect men and livestock"

The basic Indian terms for the hero-stones are not merely Indo-Aryan, but IE words: the term *vīra* "hero" in Sanskrit *vīrastambha* "post/stela of a hero", Tam. *vīrakkal*, Kannada *vīragal*, Telugu *vīrakallu* "hero-stone" may be traced to a word in the Indo-European poetic language: *uih_xro- "full of vitality, young; marriageable adult (about the age of 20); man, husband" (Mallory and Adams 1997: 366, 531, 548). The basic term for "post/stela" - Sanskrit *stambha/skambha* and its continuations in the Modern Indian languages (*thambha, khambha, khambhi, khambi*) go back to the IE pair of interrelated verbs: **stembh-* and **skambh-* (Pokorny 1959: 916, 1011-1013). The term widespread in Gujarat and Maharashtra: *pāliya* (with variants: *pālia, pavaliya khambi*) "[stela] for the defender" is connected with Sanskrit *pāla* "defender" which has also a specialized meaning of "herdsman" (as in *gopāla* "cowherd"); this trail leads us eventually to the IE verbal root *$*pah_2$*- "to defend, protect". The same IE root is present in the Russian verbs *pasti* "to graze, keep watch

of", *spasat'* "to save" and the nouns: OldSlav *pastyr'*, Russ. *pastukh* , Latin *pāstor* all meaning "shepherd".

It is highly remarkable that some of the roots used in India with reference to hero-stones, appear on the level of the common proto-IE poetic language in the context of the formulae which express the concept of defending cattle. For example. *vīra* in the Rigveda constitutes the first element in the compound *virapśá*- m. "abundance" (<* *vĭra-páv-á* - "rich in men and livestock"). The parallels found in Avestan (*pasu vīra*), Umbrian (*uiro pequo*) and Latin (*pecudesque virosque*) reveal the IE formula *uih_xro-peḱu-/ *peḱu- uih_xro* "men (and) livestock", first discovered by J. Wackernagel in 1910 (see Wackernagel 1953: 280; Schmitt 1968: 30-33; cf. Watkins 1979; Watkins 1995: 15, 42-43; Mallory, Adams 1997: 23; Watkins 2000: 63, 101; Gamkrelidze and Ivanov 1984: 470-471). Subsequently C. Watkins reconstructed a larger formula in which this pair of words is governed by a verb:

*uih_xro- peḱu-/ *peḱu- uih_xro + *pah_2-

PROTECT (*pah_2) MEN (*uih_xro) (and) LIVESTOCK (*peḱu-)

This formula is represented in four IE languages belonging to two branches of the family: Indo-Iranian (Avestan, Vedic) and Roman (Latin, Umbrian). As Watkins demonstrates, this formula underwent, in different traditions, certain historical changes: Latin and Vedic have independently substituted other words for MEN: *pastores pecuaque* (Early Latin prayer to Mars), *púruṣaṁ* paśúm AV VIII.7.11, *púruṣān* paśūn AV III. 28.5,6; in the Iranian tradition one of the gāthās ascribed to Zarathushtra (Y. 46.2) introduces instead of *vīra*- another term for "man" – *nar*- (Watkins 1995: 15). The original verb *pah_2- was substituted in Vedic and Avestan by the Indo-Iranian verb *trā-:

trắyantām …púruṣaṃ paśúm
…protect…man, beast… (AV 7.7.11)

θrāθrāi pasuuá vīraiiá
…for the protection of cattle and men… (Yt. 13.10)

However, in spite of all these substitutions, the formula "preserved the essential unity intact" (Watkins 1995: 42).

Of special interest to us are the Italic variants of the formula which use, instead of *pah₂-*, the verb *ser-* "to preserve, protect" (or, as Watkins sees it, a two-part phrase "keep safe"):

> *pāstōrēs pecuaque salva servāssīs*
> (I pray that) you keep (*servāssīs*) shepherds
> (*pāstōrēs*) and livestock (*pecuaque*) safe
> (Early Latin prayer to Mars)

> *uiro pequo salua seritu*
> may he keep (*seritu*) men (*uiro*) (and) livestock
> (*pecuaque*) safe (*salua*)
> (Umbrian prayer from the Tables of Iguvium)

Watkins considers this substitution to be an Italic innovation, but the use of the same verb by the Avestan texts in the meaning of protection with reference to cattle (see e.g. the expression *pasuš.haurvō spā* "the dog guarding cattle/sheep; shepherd dog") allows us to suggest that the variant of the formula with the verb *ser-* already existed already in Indo-European. This verb is particularly relevant to our reconstruction of the most ancient heroic values, because it probably was the basis on which the ancient Greek and later common European term for the "hero" was coined: Gr. *hērōs* from IE *sēr-ōs* "protector" (Pokorny 1959: 910; Watkins 2000: 76).

The IE formula *uihₓro- peku- + *pah₂* in the Śatarudriya

The brilliant and fruitful reconstruction of the IE verb phrase *uihₓro- pek̂u- + *pah₂* , done by C. Watkins, has one weak point. In his own words, "none of the four languages shows a direct reflex of the verb *pah₂* 'protect' in the formula". He restores *pah₂* "as a likely candidate for the Indo-European lexical expression" only because it is often used in Indic and Iranian in the meaning of "protecting", "defending", "keeping safe", especially with reference to the herds of cattle. Another line of his

reasoning is the appeal to what he calls "the associative semantics (contiguity relations)": e.g. *pās-tōrēs* in the Latin variant of the formula "may be a formulaic echo of *pah_2*". As the scholar himself saw it, "to expose such formulaic links, which constitute a potentially vast network, is one of the important tasks of the future for the Indo-European comparatist-littérateur" (Watkins 1995: 213).

Following this path, it has become possible to find in the Indic texts, both Vedic and Post-Vedic, reflections of the same formula *uih_xro- peḱu- + *pah_2*-, which, as it seems, have escaped the attention of C. Watkins.

There is a poetic theme in the Vedic texts, which provides a striking parallel to the Italic prayers to Mars (Early Latin) and Jupiter (Umbrian of the Iguvian Tables). This theme may be defined as a prayer to Rudra – the ambivalent (both deadly and benevolent to humans) god of the Vrātyas and the heroic shepherds (*vīra*). The formulaic sequence which is of special interest to us appears once in the hymn to Rudra RV 114. 8-10, and then in the variants of the well-known hymn "Śatarudriya" from the Saṃhitās of the Yajurveda. Even before discovering the formulaic affinity between the Indian and the Italic texts, the reader is surprised at the common mood of these litanies – the mixed feeling of horror and the hope for the god's mercy. Then comes the realization that the text contains the familiar IE formula:

> *mā́ no góṣu mā́ no áśveṣu rīriṣaḥ |*
> *vīrā́n mā́ no rud(a)ra bhāmitó vadhīr |*

Harm not our cattle, (harm) not our horses;
slay not in anger our men (heroes), o Rudra…
            (RV I. 114. 8bc = Taittirīya Saṃhitā 4.5.10.3)

The text of Vājasaneyi Saṃhitā (XVI. 16) differs in one detail:

> *vīrā́n mā́ no rudra bhāminó vadhīḥ…*

Slay not our angry men (or: our heroes in their fury), o Rudra…[14]

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[14]The possibility of such a reading puts to doubt the widespread opinion

At first sight it may seem that these verses have nothing in common, except the word *vīra*, with the formula **uih$_x$ro- pek̂u-* + **pah$_2$-*; in particular, any direct reflex of **pek̂u-* is absent. Instead of the expected pair *paśu - vīra* we see here the sequence: cattle (*go-*), horses (*áśva-*) and men/heroes (*vīra-*). But this does not obviate the identity of the phrase with the IE formula. We have to take into account the historical changes of its lexical garb on Indian soil: in the language of the Rig- and Atharvaveda *paśu* as the term for 'livestock' tends to be substituted by the "bipartite asyndetic" expression *gávo áśvāḥ* which stands for the most important 'large cattle' (German *Grossvieh*) and, as *pars pro toto*, for the cattle in general (see Watkins 1975: 278-279; Watkins 1994: 653-654). There are in the Rigveda direct indications to this meaning, e.g. in RV I. 83.4: *áśvāvantaṃ gómantam ắ paśúṃ náraḥ* "the men (drove) in the cattle: horses (and) cows", or RV X.48.4: *etáṃ gavyáyam áśviyam paśúm* "this cattle consisting of cows and horses". This means that the noun phrase "cows(and) horses" is a substitute for *paśu*.[15]

The verb too presents a problem. Firstly, "protect" is here expressed negatively: "do not harm/slay". A Vedic example of the transformation of our formula in the same

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that Vedic *vīra* or *puruṣa* in pairs *paśu – vīra, paśu paśu – puruṣa* (cf. *dvipad – catuṣpad*) referred to slaves ("two-footed cattle"). The sacrificer for whom mantras and magic charms were composed – the king or the leader of the Vrātya brotherhood, *sthapati* - was perceived as the "good shepherd" for the community, that is why all its members could be viewed as his "two-footed cattle" whom he "grazed" and defended. But nothing in the texts indicates that the men called *vīra* or *puruṣa* were really slaves. On the contrary, in one of the hymns from the "Vrātya" book of the Atharvaveda (XV. 5.1) it is promised to the sacrificer, "who knoweth thus", that not Śarva, not Bhava, not Īśāna (the names of Rudra's *gaṇapatis*) injure him or his cattle (*paśūn*) or his "equals" or "fellows" (*samānan*) – members of the king's host or of the Vrātya brotherhood.

[15]However see RV V.61.5ab … *aśviyam paśūm / utá gávyaṃ śatávayam* "the cattle (consisting) of horses and cows, (and) a hundred of sheep". But as a rule the pair "horses (and) cows" is equivalent to *paśu*. It often supersedes *paśu* in the word combination *paśu + vīra*, e.g., *ní vīrám gávyam áśviyaṃ ca rắdhaḥ* "[give us] a hero son (*vīrá*) and a gift of kine and horses" (RV VII. 92.3d); *gắm áśvaṃ rāsi vīrávat* "give cow (and) horse, (and) abundance of men" (RV IX. 9.9).

way was adduced by C. Watkins:

> *sā́ no mā́ hiṃsīt púruṣān paśū́ṃś ca*

> Let her not injure our men and cattle.
> (AV 3. 28.5, 6; Watkins 1995: 212).

Secondly, we do not know what particular verb would be used here in the case of a positive formulation. Certainly, there are some instances in Vedic texts where the meaning of protection with reference to cattle and humans is expressed with the root *pā-*: *paśū́ñ ca sthātṝ́ñ cárāthaṃ ca pāhi* "protect cattle and (all beings) immovable and moving" - RV I. 72.6d; *priyā́ padā́ni paśvó ní pāhi* "protect the footprints of cattle, (which are) dear (to us)" RV I. 67.6; *tā́ no vasū sugopā́ siyātam / pātáṃ no vṛ́kād aghāyóḥ* "Be our good shepherds (lit.: cowherds), ye two gods, protect us from the wicked wolf" – RV I. 120.7. However, all this would not be enough to convince us that *pā-*, and not any other verb, was basic for the variants of the formula **uih_xro- peḱu- + *pah_2-* in Vedic. Still there is a way to prove that this really was the case.

In two of the three variants of the Vedic prayer to Rudra (RV I. 114 and Vājasaneyi Saṃhitā XVI. 16) there are direct hints to it. The next stanza immediately following the stanza RV I.114.8 with the formula *mā́ no góṣu mā́ no áśveṣu rīriṣaḥ / vīrā́n mā́ no rudara bhāmitó vadhīr*, contains the term *paśupā́* "shepherd (=protector of cattle)":

> *úpa te stómān paśupā́ ivā́kara*

> I drove in (my) laudatory hymns to you like a shepherd (drives cattle).
>
>   (RV 1.114.09a)

It is, in fact, a double echo: first, of the original *paśu* (**peḱu-*), substituted by the pair *go-* + *áśva-*, and second, of the original verb *pā-* (**pah_2-*). The word *paśupā́* appears here not as a result of coincidence, but as an example of evocative poetics in action. We see how it works again in the variant of the Vājasaneyi Saṃhitā XVI. 16: immediately

after the formula *mā́ no góṣu mā́ no áśveṣu rīriṣaḥ / vīrā́n mā́ no rudra bhāmitó vadhīr* in stanza 16.16 there follows, in the next stanza, a chain of "homage!" exclamations which also contains the double echo of the IE formula:

> … *diśāṃ ca <u>pátaye</u> námo … <u>paśū́nāṃ pátaye</u> námo … <u>pathīnāṃ pátaye</u> námo … <u>puṣñānām pátaye</u> námaḥ //*

> And to the Lord of the regions be homage, … to the Lord of the cattle homage, … to the Lord of the paths homage, … to the Lord of the well-fed homage!
> (Vājasaneyi Saṃhitā XVI.17).

The central element *paśūnāṃ pataye* "to the Lord of the cattle" reminds the audience (or the addressée of the prayer) the word *paśu* (**peḱu-*), a basic constituent of the old formula ousted from its present variant. At the same time the echo of another superseded component - *pā-* (**pah₂-*) is evoked on the phonetic level by the repeated combinations of the syllable *pa-* (in <u>pa</u>śū<u>nā</u> and several times in <u>pa</u>taye) with the long vowel *ā* in the genitive plural endings (*paśū<u>nā</u>, pathī<u>nā</u>, puṣṭā<u>nām</u>*). This excludes any possibility of coincidence: we see that the millennia-old basic components of the formula, though ousted from its present poetic variation, are still alive in the consciousness of the Vedic poets. The use of associative poetics and phonetic devices is directly connected with the communicational aspect of Vedic poetry and its basic function. A prayer or a laudatory hymn was to be heard and perceived by its addressee (see Elizarenkova 1993: 12, 124-154, 312-313; cf. Elizarenkova 1995). In our case, the poets obviously took precautions, consciously or not, in order to be sure that the addressee would recognize and perceive the old sacred formula in spite of its new lexical and phonetic appearance.

These verses from the Vedic hymn to Rudra, as it seems, give additional weight to the reconstruction of the IE formula **uih₂ro- peḱu-* + **pah₂-* done by C. Watkins.

The IE formula *uih$_x$ro- peku- + *pah$_2$- in Sanskrit epic

In conclusion, a few words must be said about the traces of the IE formula *uih$_x$ro- peku- + *pah$_2$- in the epic (Mahābhārata). Of course, in the context of the pan-Indian "battle of nations" at the Field of Kuru, the archaic values seem to be mostly forgotten, and the term *vīra*, for example, means nothing but a heroic warrior[16]. But in the background, e.g. in the stories of the Pāṇḍavas' young years, one can find numerous vestiges of the "pastoral-heroic" world view. There are, in particular, several stories of cattle-raids (e.g. Mbh I. 205. 5-23; III. 225-243; IV. 24-62); the heroes, Pāṇḍavas appear in them usually as the protectors of the herds, overcoming the cattle-thieves and bringing the cows back to their owners. In this earlier stratum of the epic content the word *vīra* still retains some archaic shades of meaning. It is often said about the unhappy lot of a *vīra*'s wife who has lost her *vīra*, is *hatavīrā* or *vīrahīnā,* is often described as now *anāthā* ("without a protector"), helpless against sexual harassment and rape (see, e.g., I. 146.12; III. 225.6; XI. 16.20). One may think that if these epithets (*vīrahīnā* etc.) usually refer to a wife, the basic meaning of *vīra* is "man", "husband". But sometimes such epithets as *vīrahīnā* may be applied to relatives in other categories. Thus it is said that after the massacre of the Yādava heroes in Prabhāsa Arjuna took care about their relatives and, "having gathered old men, children, women and all others who had lost their *vīras* (*vīrair vihīnān*), … settled them in Śakraprasthā" (Mbh XVI. 8.68). Here *vīra* obviously means "protector", "defender". The protection as the main function of the *vīra* is revealed by the constant use of this noun with the verbs meaning 'to protect', 'defend', such as *pāl-* (*pālayati,*

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[16]But, even in this context some basic elements of the "pastoral-heroic" world view are still preserved: the best lot for a warrior is "to lie down on the bed of heroes (*vīraśayanaṁ*)", i.e. to be killed in battle (Mbh V. 125.17; 126.2; VI. 115.34; 116.2; VII. 3.7), to meet the "death of a hero" (*vīravadham,* III. 238.8), to obtain "the great (earthly) glory" (*mahad yaśaḥ* V. 132.26; VII. 88.59 "to go to the world of heroes" (*vīralokam,* V. 157.12; VII. 166.22; IX. 18.41; 30.40). The verse VIII. 33.56 tells us about the Apsarās taking the fallen heroes one by one on their flying chariots (*vimāna*) and leaving with them from the battlefield for the heavenly world – the scene presented on many multi-tiered mediaeval hero-stones.

understood as a causative from *pā-* or as a denominative verb from *pāla* 'protector, 'herdsman'; but in both cases eventually from **pah₂-*),[17] *gup-* (*gopǎyati*, originally formed as a denominative verb from *go-pa* or *go-pā* "cowherd" [Mayrhofer 1956-1976: I, 339-340])[18] or *rakṣ-* (*rakṣati*, sometimes with prefixes *abhi-* or *pari-*).[19]

Several contexts connected with cattle-raids demonstrate that a specific and probably most ancient duty of a *vīra* was the protection of cattle and the recovery of stolen cows. In Book IV, the Pāṇḍavas, living in disguise at the court of Virāṭa, king of the Matsya country, help the Matsyas to resist the cattle-raid of the Kauravas and their allies. When Virāṭa's son, prince Uttara, gets frightened at the sight of the Kaurava army, Pāṇḍava Arjuna, who at the moment acts as his charioteer, reminds the prince of his status of a *vīra* and warns that if he returns home without the cows (*gāḥ*), all men and women will laugh at him (Mbh 4. 36.21). King Virāṭa, having recovered his "treasure of the herd" *([go]dhanam)* and taking back all the cows (*gāḥ*), enters his capital and at this moment of his triumph is called *vīra* (4. 63.1-3). Prince Uttara, when his father begins to praise him as the victor, says: "It was not I who won back the cattle…everything was done by…that son of a god… He recovered the cows, he vanquished the Kurus: the feat was this hero's, father, not mine (*tasya tat karma vīrasya*)" (4. 64.20-21). Virāṭa then asks: "Where is he, that hero (*vīra*) of great fame, son of a God, who in battle won back my treasure (of a herd – *[go]dhanam*)?" (4. 64.30).

There are also several instances in the Mbh, where

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[17]See, e.g.: *vīra tvaṃ prajā dharmeṇa pālaya* "protect your subjects, o hero, according to dharma" (Mbh 5. 145.27); *senām … vīreṇa pālyamānām* "the army…guarded by the hero" (5.169.10); *raṇe karṇaṃ kuruvīro 'bhyapālayat* "the hero of the Kurus protected Karṇa in the battle" (8. 32.20); *adya rājāsmi .. tvayā nāthena vīreṇa viduṣā paripālitaḥ* "I am now the king … protected by you as (my) wise hero-protector" (8. 69.31).
[18]See *guptaṃ viraiḥ* (4. 36.43; cf. 8. 7.23; 32.19 etc.), *vīrair gopyamānāḥ* (6. 15.34).
[19]E.g., *naḥ parirakṣai 'kavīra* "protect us, o the sole hero!" (1. 223.9); *māṃ vīrair abhirakṣitām* "me guarded by the heroes" (4. 13.17; words of Draupadī); *na hi paśyāmi taṃ vīraṃ yo me rakṣet sutān raṇe* "I do not see a hero who could protect my sons in battle" (6. 61.10); *tasya kāryaṃ tvayā vīra rakṣaṇam sumahātmanaḥ* "your duty, o hero, is to guard this (man) of great soul" (6. 101.3); cf. 7. 53.27; 87.44; 156.4, etc.

the term *vīra* seems to be very close semantically to *gopāla* "cowherd (= protector of cows)" or *nātha* "protector". In the Droṇaparvan, Subhadrā laments over her dead son, Abhimanyu: "While you had Vṛṣṇi heroes (*vīra*), Pañcāla heroes and Pāṇḍavas as [your] protectors (*nātha*), who could kill you as if you were the one who has no protector (*anāthavat*)?" (7. 55.9). When Arjuna in the first book (1. 213.17-18) introduces his new wife Subhadrā to his first wife Draupadī, the former is characterized as *vīrapatnī* "wife of a hero" and at the same time wears the dress of a cowherd's wife (*gopālikā*); this detail is motivated by the necessity to demonstrate the humility and obedience to the elder wife ("I am Bhadrā, your servant!"), but the choice of this particular dress is possibly predetermined by the ancient associative link between *vīra* and *gopāla*.

There is also a śloka in which all the three components of the IE formula *uih_xro- pek̂u- + *pah_2- seem to meet again (if we see in *go*- a substitute for *paśu*). After the victory over the cattle-raiding Kurus, Arjuna suggests to Uttara that they would go with the good news back to the capital but asks him first to "wait till all the herds of cows (*gokulāni*) and their heroes-herdsmen (*vīragopālakaiḥ saha*) have been collected" (4. 62.8). If *vīragopālakaiḥ* is really, as we see it, a compound[20], then all the three roots are present in one word, which, at the same time, demonstrates the unmistakable semantic proximity between *vīra* and *gopāla*.

All this makes us recall the interchangeability of the words *u(e)iro* "men" and *pāstōrēs* "shepherds" in the Italic versions of the formula *uih_xro- pek̂u- + *pah_2- (see above). Indian epic evidence gives us some ground to believe that the semantics of *uih_xro- might include the meaning of "protector", "defender" even in IE antiquity. There is one more consequence of the same facts related not to the distant past, but to the future. The two popular terms for a hero-stone: *vīrastambha* "stela of a hero" and Western Indian *pāliya* "[stela] of the protector" in this light may be considered almost synonymous.

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[20]The translators usually understand *vīra* here as one more address (in the vocative), in addition to *rājaputra* and *mahābāho*, but in my opinion, the grounds for such a reading are insufficient.

One more epic stanza is worthy of notice here. In the beginning of the Bhīṣmaparvan (Mbh 6.15.49), Dhṛtarāṣṭra, bewailing the loss of Bhīṣma, compares the army of the Kurus, left without its commander, with two parallel objects: a woman who has lost her *vīra* and a herd of cows (*gokula*) that has lost its herdsman (*gopa*). The images in the two upamānas (objects of comparison) imply a parallelism not only between a hero and a cowherd, but also between women and cows – the values which were interchangeable, axiologically equal in the pastoral-heroic worldview of various historical periods (for the pastoralists of South India see, e.g., Dubianski 2007: 275).

To sum up: the IE formula "protect men and livestock" (*$*uih_xro$- $peku$- + *pah_2-*), which is present in the Vrātya hymn "Śatarudriya" from the tradition of the Yajurveda, had left also some distinct traces in the heroic stratum of the great Indian epic – the Mahābhārata.

References

Ahlberg, G.
    1971   *Prothesis and Ekphora in Greek Geometric Art.* (Studies in Mediterranean Archaeology, vol. xxxii). Göteborg: Paul Äströms Förlag.

Allchin, Bridget and Raymond
    1982   *The Rise of Civilization in India and Pakistan.* Cambridge, New York, Melbourne: Cambridge University Press.

Anati, E.
    1977   Origene e significato storico-religioso delle statue-stele. *Bollettino del Centro Camuno di Studi Prehistorici* 16, 45-56.

Arnal, J.
    1976   *Les statues-menhirs: hommes et dieux.* Toulouse: Editions des Hesperides.

Bailloud, G., Boujot, C., Cassen, S., and Le Roux, C.-T.
    1995   *Carnac: Les premières architectures de pierre.* Paris.

Chlenova, N.L.
    1984   *Olennyje kamni kak istoricheskij istochnik.* Novosibirsk: "Nauka".

Danilenko, V. N.
    1974   *Ehneolit Ukrainy.* Kiev: Naukova Dumha.

Deo, S. B.
    1973   *Problem of South Indian Megaliths.* Dharwar: Kannada Research
            Institute (Research Lectures, New Series, vol. 4).

Dubianski, A. M.
    2007   O proiskhozhdenii liriki v Indii (Poehzija dozhdej). *Lirika:
            genesis i ehvoljutsija,* 232-288. Moscow, RGGU.

Elizarenkova, T. Ya.
    1993   *Yazyk i stil' vedijskikh rishi.* Moscow: Vostochnaya literatura.
    1995   *Language and style of the Vedic Ṛṣis.* Ed. with an introd. by
            Wendy Doniger. Albany-N.Y.: State University of New York
            Press.

Ermolenko, L. N.
    2008   *Izobrazitel'nyje pamyatniki i ehpicheskaja traditsiya: po materialam
            kul'tury drevnikh i srednevekovykh kochevnikov.* Evrazii. Tomsk
            Izdatel'stvo Tomskogo Universiteta.

Gamkrelidze, T. V. and Ivanov, V. V.
    1984   *Indoevropejskij yazyk i indoevropejtsy.* Tbilisi: Izdatel'stvo
            Tbilisskogo Universiteta.

Gonda, J.
    1965   A note on the Vedic student's staff. *Journal of the Oriental
            Institute* (Baroda) 14, 3-4, 262-272.

Häusler, A.
    1966   Anthropomorphe Stelen des Eneolithicum im
            Nordpontischen Raum. *Wissenschaftliche Zeitschrift der Martin-
            Luther Universität* (Halle – Wittenberg) 15, 1, 29-73.

Jones-Bley, K.
    1990   "So that fame may live forever": The Indo-European burial
            tradition. *Journal of Indo-European Studies* 18, 215-223.

Kilunovskaya, M. E. and Semyonov, V. A.
    1998-99 Olennyje kamni Tuvy. Chasti 1 and 2. *Arkheologicheskiye vesti.*
            No. 5. St.Petersburg, 1998. Pp. 143-154; No. 6. St. Petersburg,
            1999. Pp.130-143.

Kovalev, A.
    2007   Chemurchekskij kul'turnyj fenomen. *A.V.: Sbornik nauchnykh
            trudov v chest' 60-letiya A. V. Vinogradova,* 25-76. St-Petersburg.

Kozintsev, A. G.
    2007   Scythians of the North Pontic region: between-group
            variation, affinities and origins. *Archaeology, Ethnology and
            Anthropology of Eurasia,* 2007, No. 4 (32), 143-157.

Krylova, I. P.
   1976   Kernosovskij idol (Stela). *Ehneolit i bronzovyj vek Ukrainy*, 36-45.
              Kiev.

Kuhn, A.
   1853   Über die durch nasale erweiterte Verbalstämme.
              Zeitschrift für Vergleichende Sprachforschung 2, 255-271.

L'Âge d'or
   2007   *L'Âge d'or de l'Inde classique: L'empire des Gupta.* Paris:
              Galeries nationales du Grand Palais. 4 avril – 25 juin
              2007.

Leshnik, L. S.
   1974   *South Indian 'Megalithic' burials: The Pandukal Complex.*
              Wiesbaden: Franz Steiner Verlag.

Leus, P. M.
   2007   Kamennyje steely iz Hakkari (Turtsiya) i nekotoryje
              paralleli k nim. *Arkheologicheskiye vesti* 14, 56-61 (English
              summary).

Lord, A.
   1960   *The Singer of Tales.* Cambridge (Mass.): Harvard University
              Press.

Mahadevan, I.
   2006   Hero stones. *The Hindu* 29/04/2006.

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 (eds.)
   1997   *Encyclopaedia of Indo-European Culture.* London – Chicago:
              Fitzroy Dearborn Publishers.

Mayrhofer, M.
   (1956-76) *Kurzgefasstes etymologisches Wörterbuch des Altindischen.* Bd. I-III.
              Heidelberg.

Memorial stones
   1982   *Memorial stones: A study of their origin, significance and variety /*
              Eds. S. Settar and G. Sontheimer. Dharwad-Heidelberg.

Mouratidis, J.
   1985   The origin of nudity in Greek athletics. *Journal of Sports History*
              12, 3, 213-232.

Parpola, A.
　　1973　　Arguments for an Aryan origin of South Indian megaliths. Madras: State Department of Archaeology, Government of Tamilnadu. (T.N.D.A. Publication № 32).
　　1984　　The Todas of the Nilgiris: Hypothesis of a twofold origin – Pre-Tamil and Saka. *Amrtadhara. Prof. R.N.Dandekar Felicitation Volume*. Ed. By S.D..Joshi. Delhi: Ajanta Publications.

Pokorny, J.
　　1959　　*Indogermanisches etymologisches Wörterbuch*. Bd.1. Bern.

Richter, G. M. A.
　　1959　　*A Handbook of Indian Art*. London: The Phaidon Press.
　　1961　　*The Archaic Gravestones of Attica*. London: The Phaidon Press.

Rodionov, M. A.
　　1997　　Mawlā Maṭar and other awliyā': On social functions of religious places in Western Hadramawt. *Mare Erythraeum* I, 107-114. München: Staatliche Museum fur Völkerkunde.

Savinov, D. G.
　　1994　　*Olennyje kamni v kul'ture kochevnikov Evrazii*. St.-Petersburg: St-Petersburg University.

Savostina, E. A.
　　1988) Mif i kul't geroya. *Zhizn' mifa v antichnosti. The Life of Myth in Antiquity*. Chast' I, 98-115. Moskva.

Schachner, A.
　　2001　　Zur Bildkunst des 2. Jahrtausends v. Chr. zwischen Kaspischem Meer und Van-See am Beispiel einer Stele im Museum von Astara (Azerbaycan). *Archäologische Mitteilungen aus Iran und Turan* 33, 115-142.

Schmitt, R. (ed.)
　　1968　　*Indogermanische Dichtersprache*. Darmstadt: Wissenschaftliche Buchgesselschaft.

Sevin, V.
　　2000　　Mystery stelae. *Archaeology* 53, 4, 46-51.
　　2005　　Who were the naked warriors of Hakkary? *Archäologische Mitteilungen aus Iran und Turan* 37, 163-165.

Sevin, V. and Özfirat, A.
　　2001　　Die Stelen aus Hakkari: Steppennomaden in Vorderasien. *Istanbuler Mitteilungen* 51, 11-26.

Shultz, P. N.
    1976   Skifskiye izvayaniya. *Khudozhestvennaya kul'tura i archeologiya skifskogo mira.* Moskva.

Smirnov, A. M.
    2004   Izobrazheniya posokhov na antropomorfnykh izvayaniyakh ehpokhi ehneolita v Severnom Prichernomorye i Sredizemnomorye. Analogii, interpretatsii. *Pamyatniki arkheologii i drevnego iskusstva Evrazii / Sbornik statei pamyati V.V.Volkova*, 65-92. Moskva.

Sontheimer, G. D.
    1976   Some memorial monuments of Ancient India. *German Scholars on India* 2, 264ff. Bombay: Nachiketa Publication.
    1984   The Mallāri/Khandobā myth as reflected in folk art and ritual. *Anthropos* 79, 155-170.
    1987   Rudra and Khaṇḍobā: Continuity in folk religion. *Religion and Society in Maharashtra.* Ed. By M. Israel and N. K.Wagle, 1-31. Toronto: University of Toronto.

Srinivasan, K.
    1946   The megalithic burials and the urnfields of South India. *Ancient India* 2, 9-16.

Telegin, D. Ya.
    1971   Ehneoliticheskiye stely i pamyatniki nizhnemikhailovskogo tipa. *Arkheolohiya* (Kiev) 4, 3-17.

Telegin, D. and Mallory, J. P.
    1994   *The Anthropomorphic Stelae of the Ukraine: The Early Iconography of the Indo-Europeans.* Washington: Institute for the Study of Man.

Telegin, D. Ya. and Potekhina I. D.
    1998   *Kam'yany "bogi" midnogo viku Ukraïni. Stone "gods" of the Copper age in Ukraine.* Kiev.

Thapar, R.
    1981   Death and the hero. *Mortality and Immortality: the anthropology and archaeology of death.* Ed. by S.C.Humphreys and Helen King, 285-315. London: Academic Press.

Vassilkov, Ya. V.
    2009   Mezhdu sobakoj i volkom: Po sledam instituta voinskikh bratstv v indijskikh traditsiyakh. *Aziatskij bestiarij*, 47-62. St Petersburg: Kunstkamera.

Vermeule, E.
    1979   *Aspects of Death in early Greek Art and Poetry.* Berkeley – London: University of California Press.

Vogt, B.
  2006   Die Prähistorischen "Kriegerstelen" von Al-Qibali im Wadi
            'Arf (Hadramaut) und ihr Kontext. *Kul'tura Aravii v aziatskom
            kontekste. Sbornik statej k 60-letiju M. A. Rodinova*, 119-128. St
            Petersburg.

Wackernagel, J.
  1953   *Kleine Schriften*. Bd. I. Göttingen: Vandenhoeck und Ruprecht.

Watkins, C.
  1979   NAM.RA GUD UDU in Hittite: Indo-European poetic
            language and the folk taxonomy of wealth. *Hethitisch und
            Indogermanisch*, ed. By E.Neu and W.Meid, 269-287.
            Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
  1994   *Selected Writings*. Ed. By Lisi Oliver. Vol. I. Language and
            Linguistics. Innsbruck.
  1995   *How to kill a Dragon. Aspects of Indo-European Poetics*. Oxford
            University Press, New York, Oxford.
  2000   *The American Heritage Dictionary of Indo-European Roots*. 2nd ed.
            Boston-New York.

Zaitsev, A.
  1986   Praindoevropejskie istoki drevnegrecheskogo ehposa.
            Problemy antichnogo istochnikovedeniya, 96-107. Moscow-
            Leningrad.

C. Scott Littleton
(*1 July 1933 – †25 November 2010)

C. Scott Littleton, a member of the Editorial Board of the *Journal of Indo-European Studies* since its inception, was born in Los Angeles 1 July 1933 and died in Pasadena from complications of heart surgery 25 November 2010. He was very proud of his service in the Korean War. He had to lie about his age to get into the army, but it was during the war that he read a book that convinced him to become an anthropologist. He obtained his B.A. from UCLA in 1957 and his M.A. in 1962, the same year he started work at Occidental College, where he remained as a professor until 2002.

Littleton's *The New Comparative Mythology: An Anthropological Assessment of the Theories of Georges Dumézil*, first published in 1974 (Third Edition 1981), was based of his dissertation, with which he earned his Ph.D. in 1965. This work was largely credited with making Dumézil's hypotheses widely accessible to the English-speaking world. Littleton was also known for a wide range of works in several fields of anthropology in addition to folklore and mythology, with a special interest in the Arthurian legends and the Japanese Shinto tradition. While Littleton is more popularly known for his work on UFO and parapsychology, he was a Fulbright scholar to Japan in 1976-77 and in 1980-81. He was a member of Phi Beta Kappa, Graduate Commencement Speaker at UCLA in 1965, a member of the Occidental College Faculty Hall of Fame (1997) and a recipient of the Occidental College Alumni Association's annual Honorary Alumni Seal Award for Emeritus Faculty.

His publications include books on comparative mythology (*Mythology: The Illustrated Anthology of World Myth and Storytelling*; 2002), the Arthurian tradition (*From Scythia to Camelot*, with Linda A. Malcor; 1994), Shinto (*Understanding Shinto: Origins, beliefs, practices, festivals, spirits,*

sacred places; 2002), a memoir about his years growing up in Hermosa Beach during World War II, two science fiction novels (*Phase Two*; 2002; the second is still in press.), and literally hundreds of articles, reviews, monographs and other publications. He also served as editor for many publications, most notably *Eastern Wisdom* (1995, reprinted as *The Sacred East* in 1999). He was a member of many professional societies too numerous to list in the space allotted. His contributions to his primary field and related fields were significant and extensive. He will be sorely missed. He is survived by his wife, Mary Ann, his daughters, Leslie and Cynthia, and his granddaughter Daisy Anna.

Linda Malcor

Dmytro (Dmitry) Ya. Telegin
(*26 October 1919-†1 January 2011)

On January 1, 2011 the patriarch of Ukrainian archaeology, Doctor of Historical Sciences, Professor, Laureate of the State Award of the Ukraine, Dmytro Telegin passed away. His whole life was given to archaeology. During the last years he was a symbolic figure of a generation of the post-WWII archaeologists, who were teachers of the majority of leading archaeologists in the modern Ukraine. His devotion to science, extraordinary capacity for work, many-sided personality, interest in a wide range of problems of archaeology, enormous scientific inheritance, numerous students and followers assigns Dmytro Telegin to the number of the most prominent archaeologists. The life and activity of this extraordinary researcher signifies a whole epoch in the development of Ukrainian archaeology.

Dmytro Telegin was born on October 26, 1919 in a peasant family in Plisove village, Kharkiv region, Ukraine. Dmytro was one of nine children. During the years of collectivization and famine (1932-1933) in the Ukraine, following confiscation of all the family property and cattle by the Bolsheviks the Telegin family moved to the eastern Ukraine, to the Donbas area. Here at the age of 17 Dmytro graduated from teaching courses and started working as a teacher in the village school, simultaneously studying at the historical department of the pedagogical college in Slavyansk. After graduation in 1940 he was appointed to the position of school director in the village of Krasne.

Dmytro's professional development was interrupted by the Second World War. Soon after the beginning of the war Telegin was called into the army and participated in the taking of Konigsberg, achieving the rank of senior sergeant. For his military services he was awarded the Order of WWII and several medals.

In 1946 after the end of the war, Dmytro Telegin

joined the History Department of Chernovtsy University in the western Ukraine. After graduation from the university he moved to Kiev where he became a PhD student in the Institute of Archaeology of the Academy of Sciences of the Ukraine. His scientific supervisor was academician Petro Efimenko (1884 – 1969), the founder of Paleolithic research in the territory of the former USSR. The focus of his PhD dissertation was the Neolithic sites of his native territory of the Seversky Donets River basin. He defended his PhD thesis in 1953. The research interests of the young specialist as well as their geography (Donetsk area, Dnieper basin, Byelorussia, Azov Sea region, Carpathian region) were wide enough. However the main object of his scientific interests, during all his life, was the Neolithic of the Ukraine.

During the 1950-60s, besides the continuous research into sites in the Dnieper Basin, D. Telegin carried out an interesting study on the evolution of the Neolithic cultures of Western Ukraine, Russia, Central and North Europe. The result of this work was highlighted in his second (doctoral habilitation) dissertation "The Dnieper-Donets Culture" (1967) which placed him among the leading archaeologists of the Soviet Union and Europe and which still remains an exceptional example of methodologically consistent and integrative archaeological research.

During 20 years he was the head of the department of Stone Age archaeology in the Institute of Archaeology NAS Ukraine, and for many years taught in the leading universities of the Ukraine.

He published about 500 scientific works (including 14 monographs) on the various problems of archaeology. Among these are his two major surveys of the Ukrainian Mesolithic: *Mezolitichni Pam'yatky Ukraïny* (1982) and *Pamyatniki Epokhi Mezolita na Territorii Ukrainskoy SSR* (1985), a period for which he expressed a special fondness. He was also a major contributor to the first volume of the *Arkheologiya Ukrainskoy SSR* (1985) that provided synthetic descriptions of the major prehistoric cultural groups of the Ukraine.

In terms of Indo-European Studies, his most

influential book was his *Seredn'o-Stohivs'ka Kul'tura Epokhy Midi* (1973) that had a major impact on the formulation of Marija Gimbutas' model of Indo-European origins. This work was updated in 2001 in his *Srednestogovskaya i Novodanilovskaya Kul'tury Eneolita Azovo-Chernomorskogo Regiona* (reviewed in *JIES* 32, 363-367). He insured that his research reached far beyond the Ukraine and published three monographs in English. These comprised *Neolithic Cemeteries and Populations in the Dnieper Basin* (1987, Oxford, BAR International Series 383) and *Dereivka: A Settlement and Cemetery of Copper Age Horse Keepers on the Middle Dnieper* (1986, Oxford, BAR International Series 287) which became one of the archetypal sites of Gimbutas' "Kurgan culture". He also published *The Anthropomorphic Stelae of the Ukraine: The Early Iconography of the Indo-Europeans* (1994) in the JIES monograph series. In addition, he contributed two articles to the *Journal of Indo-European Studies*: "Iranian hydronyms and archaeological cultures in the Eastern Ukraine" (1990) and "The Yamna Culture and the Indo-European homeland problem" (2005).

An outstanding scholar and most generous man, he also played a very significant part in guiding the research interests of the current editor of this journal.

<div align="right">

Inna Potekhina
Institute of Archaeology, Kiev
J P Mallory
Queen's University of Belfast

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Werner Winter
(*25 October 1923 – †7 August 2010)

Three very renowned specialists in Indo-European languages passed away in 2010. They were Johann Knobloch (*5 January 1919 – †25 July 2010), further Wolfgang Schmid (*25 October 1929 – †22 October 2010) and Werner Winter. The last mentioned was able to extend his mastery beyond the scope of Indo-European languages and became an honoured scholar in languages distant in geography, structure and genetic relations from Indo-European. Werner Winter became one of the most prominent historical and descriptive linguists thanks to his generalism in combination with brilliant and convincing argumentation.

Werner Winter studied at universities in Hamburg and Bern. He defended his dissertation "'Prothetische Vokal' im Griechischen" in Bern in 1949 (published as 1950a). It is very interesting that in his first profession he was a tamer of wild beasts in a circus. Perhaps he tried to forestall entering the armed forces, i.e. the *Wehrmacht*. But his decision in favor of linguistics turned out to be auspicious, since he contributed to the development of several branches in the field. He was back in Hamburg as *Lehrbeauftragter* in 1950-53, then he worked as *Assistant Professor* at the University of Kansas in Lawrence (1953-57). After those four years he moved to Austin to the University of Texas, where he later (1961) gained the position of *Full Professor*. He came back to Germany in 1964 as the head of the Department of Indo-European and General linguistics at the Christian-Albrecht University in Kiel and stayed there the next 28 years. During this time he was, in addition, a visiting professor at many universities in the USA (Texas, Kansas, Berkeley, UCLA, Stanford, Yale) and also visited many universities in Europe: in Copenhagen, Kaliningrad and Poznań. A collection of Winter's pivotal articles about Tocharian languages was

published here in Poznań (1984a) where he obtained also a title of honorary doctorate (1984). The same title he obtained once again in Kaliningrad in 2000.

He worked in close cooperation with Mouton Publishing house from 1963 (the name was changed to Mouton de Gruyter in 1976), where he was a director of the section *Janua Linguarum* with the first set called *Series Critica* which was later transformed to *Trends in Linguistics* in the seventies; other subseries were *Studies and Monographs, Documentation, State-of-the-Art Reports.*

Thanks to his many-sided erudition and extraordinary diligence, Winter as editor helped in publishing around 220 publications, in many cases such fundamental works as *A Handbook of Old Chinese Phonology* by W. H. Baxter (1992), *Comparative Austronesian Dictionary* by D. T. Tryon & M. D. Ross (1995); *Indo-European and the Indo-Europeans* by T. Gamkrelidze & V. Ivanov (1995 = English translation of the Russian original from 1984); *Atlas of languages of intercultural communication in the Pacific, Asia and the Americas* by S. A. Wurm, P. Mühlhäusler & D. T. Tryon (1996); *A Historical Dictionary of Yukaghir* by I. Nikolaeva (2006) and many others. As a generally renowned linguist, Werner Winter was a member of editorial boards of many prestigious journals in linguistics (for example *Journal of Indo-European Studies, Quaderni semantici, Studies in Contrastive Linguistics, Tocharian and Indo-European Studies*) and many societies and academical institutions as *Societas Linguistica Europaea* (secretary 1966-91, president 1991-92), *Linguistic Society of America, Linguistic Society of Nepal, Deutsche Forschungsgemeinschaft, Institut für deutsche Sprache, Alexander von Humboldt Foundation, Academia Europaea, Finnish Academy, Linguistic Society of Nepal.* He also acted as the director of *Linguistic Survey of Nepal* (1980-84).

Werner Winter opened his career in Indo-European studies with a series of works dedicated to the most "significant" IE languages, i.e. Sanskrit and Greek**,** with 17 publications about Germanic languages to follow. His reputation in major has grown thanks to series of 22 articles about Armenian. The discovery of two (or in some cases three) different continuants of IE protophonemes in Armenian (without positional conditioning) gave him the

motivation for a fundamental deduction: Armenian (beginning with classical texts from the 5th century) is a conglomerate language derived from a mixture of two or three IE languages (1966b).

But Werner Winter was most productive in the field of Tocharian languages with 54 articles and 12 reviews. Many articles were published for the second time in the collections *Studia Tocharica* (Poznań 1984) and *Kleine Schriften* in 2 volumes (Bremen 2005). The titles of his articles confirm his key role in setting up Tocharology: he used the name "Tocharian" only in quotes up to 1959. Few of his articles consist of editing or revising former readings + translations of Tocharian manuscripts (1958a, 2003b); he wrote about literary form and metrics (1955f, 1959b), the classification of Tocharian languages (1955g). Other areas were Tocharian dialectology (1958c), studies of relations and loanwords between both idioms A and B (1962d, 1962i). Winter was famous for using Tocharology for the reconstruction of Indo-European (proto)-language and the theory of linguistics (1960d, 1962c, 1965e, 1969e, 1980b, 1982b, 1992c, 1993b). Studies of grammatical forms (1961c, 1962e, 1965f, 1968a, 1970e, 1980f, 1990d, 1991b, 1992k, 1994b, 1994c) were the most common, together with works dedicated to the development of sounds by comparison of lexicon in Tocharian A and B (1972c, 1976b, 1978b, 1980e, 1984c, 1984d, 1985c, 1987e, 1988b, 1988d, 1989c, 1989d, 1990b, 1993d, 1997a, 1998e, 1999f). Winter's articles about relations of Tocharian and other languages (1963a, 1971b, 1984e, 1984i – ethnonym, 1989b) and Tocharian numerals (1987c, 1992i) remain very important to this day. It is no wonder that after such a broad scope of work he became a respected and sought-after editor in all areas of Tocharian studies. We must mention not only his coedition of the *Fragments of the Tocharian A Maitreyasamiti-Nāṭaka of the Xinjiang Museum, China* (1998b), but also the first part (words beginning with A-J) of the *Dictionary and Thesaurus of Tocharian A* (2009a). The work on this last publication was started due to the need for revision of the only extant Tocharian A dictionary by Pavel Poucha (1955: *Thesaurus*). After the author's death further volumes will probably take more

time to realize. One of Winter's last coeditions of *Tocharian and Indo-European Studies* (Vol. 12) will appear posthumously (2011).

Werner Winter wrote only a few, but important, studies dedicated to Balto-Slavic languages (1978c, 2002). They led to the formulation of the law called after him (sometimes also Winter-Kortlandt's law).

From his general studies into Indo-European language we must mention his focus on numerals, their inner structure and etymology. Conclusions of his studies (1987c,1989a, 1990g, 1992d, 1992g, 1992i) are generaly accepted. But Winter was active in analyses of non-IE languages too – see his study about the numerals in the languages of Nepal (1999e).

As the head of *Linguistic Survey of Nepal* (1980-84) Winter did not work only as a ceremonial director, but he also started to study non-Indo-European language families: see his 14 publications about Sino-Tibetan languages of Nepal (1985a, 1985d, 1986a, 1986b,1987b, 1990f, 1991a, 1992f, 1992h, 1996, 1997f, 1999e, 2003a, 2004). Among non-Eurasian languages he focused on the Yuman languages of the Hoka family in the American South-West (13 publications).

Werner Winter was exceptional in possessing a rare combination of such competences as 1) an excellent philologist dealing with old literary languages, 2) a pioneer descriptive linguist who was able to be the first to analyse and describe non-literary languages by the use of modern methods, 3) a clear-thinking etymologist and 4) a typologist. It may be that due to such extraordinary generalism and today's era of microspecialisations, Winter's chair remained vacant after his superannuation.

We could conclude that Winter "permutated" (almost) all the material he surveyed into linguistic gold. It is a pity that his productive career was limited to "only" 60 years.

Topical overview of Werner Winter's works

Indo-European: 1952a, 1953a, 1963c, 1968b, 1970a, 1982a-b, 1989a, 1990g, 1992g, 1994d, 1995b.
Greek: 1950a, 1950c, 1951, 1956a, 1958d, 1960h, 1993f,

1994a.
Old-Indic.: 1950b, 1955b, 1962k, 1980a, 1987d, 1993f.
Tocharian: 1952c, 1955f, 1955g, 1955i, 1958a, 1958c, 1959b, 1960d, 1961c, 1962c, 1962d, 1962e, 1962i, 1963a, 1963d, 1965e, 1965f, 1968a, 1969e, 1970e, 1971b, 1072c, 1975d, 1976b, 1976f, 1978b, 1980b, 1980e, 1980f, 1981a, 1981b, 1982b, 1982d, 1984a, 1984c, 1984d, 1984e, 1984g, 1984i, 1985c, 1987c, 1987e, 1988b, 1988d, 1988e, 1989b, 1989c, 1989d, 1990b, 1990c, 1990d, 1991b, 1991c, 1992c, 1992i, 1992k, 1993b, 1993d, 1993e, 1994b, 1994c, 1997a, 1997d, 1998b, 1998e, 1999f, 2001, 2003b, 2003c, 2005, 2009a, 2009b, 2011.
Iranian: 1975a.
Balto-Slavic: 1978c, 1980d, 2002.
Germanic: 1953c, 1955d, 1958b, 1959e, 1959g, 1960b, 1960g, 1962a, 1962b, 1965b, 1965c, 1967a, 1971d, 1972d, 1979c, 1987d, 1999c.
Armenian: 1954a, 1954b, 1955a, 1955c, 1955e, 1956c, 1957b, 1959c, 1960c, 1961d, 1962f, 1965d, 1966b, 1975c, 1980d, 1983b, 1992c, 1992d, 1993b, 1997e, 1998c, 1999a.
Albanian: 1958e.
Yuman: 1957a, 1966a, 1976d, 1998d.
Walapai: 1963b, 1976e, 1983a, 1990e, 1992e, 1995c, 1998a.
 Paipai/Akwa'ala: 1967c.
 Washo: 1970f.
Languages of Nepal: 1985a, 1986a, 1992h, 1996, 2004.
 Rai: 1985d, 1987b, 1991a, 1992f.
 Bantawa: 1986b, 1990f, 1997f, 2003a.
Altaic: 1956b, 2010 (co-editor).

Laryngeals: 1960c, 1960d, 1965a, 1965d, 1965e.
Language and style: 1962g, 1962h, 1964b, 1967b, 1969c.
Translation problems: 1961a, 1961b, 1964c, 1964d, 1969d, 1970d.

Bibliography

1949
(1949) "Goethe und die Demokratie. Notizen zum Vortrag von Thomas Mann", *Berner Student* 17, 214-216.

1950

(1950a) *Studien zum 'Prothetischen Vokal' im Griechischen. Hamburger Arbeiten zur Altertumwissenschaft 7*, Hamburg: Hansischer Gildenverlag.
(1950b) "On the origin of the safprasaraza reduplication in Sanskrit", *Language* 26, 365-370.
(1950c) "The reduplication type *bharībharti/bharibhrati* in Greek", *Language* 26, 532-533.

1951

(1951) "Two Greek names for the truffle", *American Journal of Philology* 72, 63-68.

1952

(1952a) "An Indo-European prefix *ņ- 'together with'", *Language* 28, 186-191.
(1952b – review) Hans Krahe: Ortsnamen als Geschichtsquelle + Sprachwissenschaft im alten Europa, *Language* 28, 269-272.
(1952c – review) Jean Filliozat, Fragments de textes koutchéens de medecine et de magie, *Language* 28, 286-288.

1953

(1953a) "Gruppe und Reihe. Beobachtungen zur Systematik indogermanischer Zählweise", *Zeitschrift für vergleichende Sprachforschung* 71, 3-14.
(1953b – review) Bruno Schnell, Der Aufbau der Sprache, *Language* 29, 193-195.
(1953c – review) Heinz Koss, Die Entwicklung neuer germanischer Kultursprachen von 1800 bis 1950, *Language* 29, 195-197.

1954

(1954a) "Problems of Armenian phonology I.", *Language* 30, 197-201.
(1954b – review) Dirair Froundjian, Armenisch-deutsches Wörterbuch, *Language* 30, 406.

1955

(1955a) *Armenian manuscripts*, An exhibit at the University of Kansas Library, Kansas: Lawrence.
(1955b) "Nochmals vedisch *aśnáti*", *Zeitschrift für vergleichende Sprachforschung* 72, 161-175.
(1955c) "Problems of Armenian phonology II.", *Language* 31, 4-8.
(1955d) "Juncture in Proto-Germanic: some deliberations", *Language* 31, 530-532.
(1955e) "Armenian cryptography", *Armenian Review* 8, 53-56.
(1955f) "Some aspects of 'Tocharian' drama: Form and techniques", *Journal of the American Oriental Society* 75, 26-35.
(1955g) "A linguistic classification of 'Tocharian' B texts", *Journal of the American Oriental Society* 75, 216-225.
(1955h) [Bibliographical contributions (Russian literature) to Joseph Rubinstein, *Catalogue of books burned and banned.*]
(1955i – review) Emil Sieg & Wilhelm Siegling, Tocharische Sprachreste, Sprache B, *Language* 31, 105-109.

1956
(1956a – review) Emmett Bennett, The Pylos Tablets + Vladimir Georgiev, Slovar' krito-mikenskix nadpisej; Dopolednie, *Language* 32, 504-508.
(1956b – review) Robert P. Blake & Richard N. Frye, History of the Nation of the Archers (The Mongols) by Grigor of Akanc', *Zeitschrift für Deutschen Morgenländischen Gesselschaft* 106, 224-226.
(1956c – review) N. E. Vrouyr, Répertoire étymologique de l'arménien, *Zeitschrift für Deutschen Morgenländischen Gesselschaft* 106, 227.

1957
(1957a) "Yuman languages I: First impressions", *International Journal of American Linguistics* 23, 18-23.
(1957b – review) M. A. van den Oudenrijn, Eine alte armenische Übersetzung der Tertia Pars der Theologischen Summa des hl. Thomas von Aquin, *Speculum* 32, 620-622.
(1957c – review) Werner Winter & O. P. Backus, Indiana Slavic Studies I., *American Slavic and East European Review* 16, 571-572.

1958
(1958a + von Gabain, Annemarie) *Türkische Turfantexte IX: Ein Hymnus an der Vater Mani auf 'Tocharisch' B mit alttürkischer Übersetzung. Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen, Literatur und Kunst* 2, Berlin: Akademie Verlag.
(1958b + Shaw, Leroy R. & Winter, Ingrid; eds.) *Active German. Reader*, Austin, TX [Preliminary Edition].
(1958c) "Zur Dialektgliederung von 'Tocharisch' B", *Zeitschrift für vergleichende Sprachforschung* 75, 233-237.
(1958d – review) Michael Ventris & John Chadwick, Documents in Mycenaean Greek, *American Journal of Philology* 79, 201-208.
(1958e – review) Leonard Newmark, Structural grammar of Albanian, *Language* 34, 522-530.

1959
(1959a) "Über eine Methode zum Nachweis structureller Relevanz von Oppositionen distinktiver Merkmale", *Phonetika* 4, 28-44.
(1959b) "Zur 'tocharischen' Metrik", *Akten des XXIV. Internationalen Orientalistenkongress München 1957*, 520-521.
(1959c) "Some remarks on a plan for a repertory of Armenian etymology", *Akten des XXIV. Internationalen Orientalistenkongress München 1957*, 447.
(1959d) "[Obituary] Johann Albert Debrunner", *Language* 35, 335-336.
(1959e – review) Oscar Landau, Mykenisch-griechische Personennamen (Studia Graeca et Latina Gothoburgensia 7.), *American Journal of Philology* 80, 325-328.
(1959f – review) Carl Hj. Borgstrom, Innforing i sprogvidenskap, *Language* 35, 303-306.
(1959g – review) Eberhard Zwirner & Wolfgang Bethge, Lautbibliothek der deutschen Mundarten, *Language* 35, 712-715.

1960

(1960a, ed.) *Evidence for laryngeals*, Austin, TX: University of Texas Press.

(1960b + Shaw, Leroy R. & Winter, Ingrid; eds.) *In einer deutschen Stadt. Active German readings* Book 1, New York: Holt.

(1960c) "Armenian evidence for Proto-Indo-European laryngeals", in: Werner Winter (ed.), *Evidence for laryngeals.* Austin, TX: University of Texas Press, 27-40.

(1960d) "Tocharian evidence for Proto-Indo-European laryngeals", in: Werner Winter (ed.), *Evidence for laryngeals.* Austin, TX: University of Texas Press, 173-186.

(1960e – review) Henry Kahane & Renée Kahane & Andreas Tietze, The Lingua Franca in the Levant, *Language* 36, 454-462.

(1960f – review) Helmut Protze, Das Westlausitzische und Ostmeissnische, *Journal of English and Germanic Philology* 59, 763-766.

(1960g – review) Karl Bischoff, Sprachliche Beziehungen zwischen niederdeutschem Altland und Neuland im Bereich der Elbe. *Journal of English and Germanic Philology* 59, 766-767.

(1960h – review) John Chadwick, The decipherment of Linear B, *American Journal of Philology* 81, 210.

1961

(1961a) "Impossibilities of translation", in: W. Arrowsmith & R. Shattuck (eds.), *The craft and context of translation.* Austin, TX: University of Texas Press, 68-82.

(1961b) "Translation as politic action", in: W. Arrowsmith & R. Shattuck (eds.), *The craft and context of translation.* Austin, TX: University of Texas Press, 172-176.

(1961c) "Zum sogenannten Durativum in Tocharisch B", *Zeitschrift für vergleichende Sprachforschung* 77, 89-96.

(1961d – review) Hans Jensen, Altarmenische Grammatik, *Journal of the American Oriental Society* 81, 54-58.

1962

(1962a + Shaw, Leroy R. I. & Shaw, Rosemary; eds.) *Focus on German*, Part II: *Book for intermediates*, Austin: TX [Preliminary edition].

(1962b + Shaw, Leroy R. I. & Shaw, Rosemary; eds.) *Focus on German. Student's Book III.* Section 3, Austin: TX.

(1962c) "Die Vertretung indogermanischen Dentale im Tocharischen", *Indogermanische Forschungen* 67, 16-35.

(1962d) "Lexical interchange between 'Tocharian' A and B", *Journal of the American Oriental Society* 81, 271-280.

(1962e) "Nominal and pronominal dual in Tocharian", *Language* 38, 111-134.

(1962f) "Problems of Armenian phonology III", *Language* 38, 254-262.

(1962g) "Relative Häufigkeit syntaktischer Erscheinung als Mittel zur Abgrenzung von Stilarten", *Phonetica* 7, 193-216.

(1962h) "Styles as dialects", *Preprints of papers for the 9th International Congress of Linguists*, Cambridge: MA, 214-219.

(1962i) "Further evidence of inter-Tocharian lexical borrowing", *Journal of the American Oriental Society* 82, 71-73.

(1962j) [Contributions to discussions, published in Studies in American

English. Texas conference on problems of linguistic analysis in English. University of Texas, Austin.]

(1962k – review) Meinrad Scheller, Vedisch *priyá-* und die Wortsippe *frei, freien, Freund. Journal of English and Germanic Philology* 61, 101-103.

1963
(1963a) "Tocharians and Turks", *Uralic and Altaic Studies* 23, 239-251.
(1963b) "Stories and songs of the Walapai", *Plateau* 35, 114-122.
(1963c) "Indo-European", in: Thomas A. Sebeok (ed.), *Current Trends in Lingustics* I, The Hague: Mouton, 205-216.
(1963d – review) Wolfgang Krause & Werner Thomas, Tocharisches Elementarbuch I: Grammatik, *Deutsche Literaturzeitung* 83, 1066-1069.

1964
(1964a) "Form and meaning in morphological analysis", *Linguistics* 3, 5-18.
(1964b) "Styles as dialects", in: Horace G. Lunt (ed.), *Proceedings of the 9th International Congress of Linguistics*, The Hague: Mouton, 324-330.
(1964c) "Impossibilities of translation", in: W. Arrowsmith & R. Shattuck (eds.), *The Craft and Context of Translation*, Garden City-NY: Doubleday, 93-112.
(1964d) "Translation as political action", in: W. Arrowsmith & R. Shattuck (eds.), *The Craft and Context of Translation*, Garden City-NY: Doubleday, 295-301.
(1964e – review) P. E. Cleator, Lost languages, *Romance Philology* 18, 124-125.
(1965a, ed.) *Evidence for laryngeals*, The Hague & London & Paris: Mouton.

1965
(1965b + Shaw, Leroy R. I. & Shaw, Rosemarie; eds.) *Focus on German for intermediates*, New York & Evanston & London.
(1965c) "Vom Genitiv im heutigen Deutsch", *Westdeutscher Rundfunk Kulturelles Wort* 8, 11.
(1965d) "Armenian evidence", in: Werner Winter (ed.), *Evidence for Laryngeals*, The Hague & London & Paris: Mouton, 100-115.
(1965e) "Tocharian evidence", in: Werner Winter (ed.), *Evidence for Laryngeals*, The Hague & London & Paris: Mouton, 190-211.
(1965f) "Zur Vorgeschichte einiger Verbformen in Tocharisch A", *Zeitschrift für vergleichende Sprachforschung* 79, 203-210.
(1965g) "Transforms without kernels", *Language* 41, 484-489.

1966
(1966a) "Yuman languages. II: Wolf's son – a Walapai text", *International Journal of American Lingustics* 32, 17-40.
(1966b) "Traces of early dialectical diversity in Old Armenian", in: Henrik Birnbaum & Jaan Puhvel (eds.), *Ancient Indo-European dialects*, Berkeley & Los Angeles-CA: University of California Press, 201-210.

1967
(1967a) "Vom Genitiv im heutigen Deutsch", *Zeitschrift für deutsche Sprache* 22, 21-35.
(1967b) "Stil als linguistisches Problem", *Sprache der Gegenwart* 1, 219-235.
(1967c) "The identity of the Paipai (Akwa'ala)", in: D. Hymes & W. E. Bittle (eds.), *Studies in Southwestern Ethnolinguistics* (Studies in General Anthropology 3.), The Hague & Paris: Mouton, 372-378.
(1967d) "A note on cases", in: *To Honor of Roman Jacobson. Essays on the Occasion of his 70ᵗʰ Birthday*, The Hague & Paris: Mouton, 2250-2253.

1968
(1968a) "Archaismen in der tocharischen Adjektiv- und Nominalbildung", in: Johannes C. Heesterman & Godard H. Schocker & V. I. Subramoniam (eds.), *Pratidānam: Indian, Iranian, and Indo-European Studies Presented to Franciscus B. J. Kuiper on his 60ᵗʰ Birthday*, The Hague & Paris: Mouton, 60-64.
(1968b) "Aus der Arbeit des Seminars für Allgemeine und Indogermanische Sprachwissenschaft", *Christiana Albertina* 6: 52-54.

1969
(1969a) "Analogischer Sprachwandel und semantische Struktur", *Folia Linguistica* 3, 29-45.
(1969b) "Vocative and Imperative", in: Jaan Puhvel (ed.), *Substance and Structure of Language*, Berkeley & Los Angeles - CA: University of California Press, 205-223.
(1969c) "Styles as dialects", in: Lubomir Dolezel & R. W. Bailey (eds.), *Statistics and style*, New York & London & Amsterdam: Elsevier, 3-9.
(1969d) "Impossibilities of Translation", in: Thomas M. Olshevsky (ed.), *Problems in the Philosophy of Language*, Holt, Rinehart and Winston, 477-489.
(1969e) The importance of Tocharian for the reconstruction of Proto-Indo-European - [résumé] Bulletin du Cercle Linguistique de Copenhague 1967-1968", *Acta Linguistica Hafnensia* 12: 236.
(1969f – recenze) Simeon Lexac'i, Putevye zametki, *Der Islam* 45, 224-225.

1970
(1970a) "Some widespread Indo-European titles", in: G. Cardona & H. M. Hoenigswald & A. Senn (eds.), *Indo-European and Indo-Europeans*, Philadelphia – PA: University of Pennsylvania Press, 49-54.
(1970b) "Some basic difficulties in the application of quantifying techniques to morphological typology", in: A. Graur (ed.), *Actes du Xe Congrès International des Linguistes 3*, Bucarest: Académie de la République de Roumaine, 545-549.
(1970c) "Basic principles of the comparative method", in: Paul L. Garvin (ed.), *Method and Theory in Linguistics*, The Hague & Paris: Mouton, 147-153 (+ Contributions to discussion, 153-156).
(1970d) "Nemožnosti překladu", in: J. Čermák & B. Ilek & A. Skoumal (eds.), *Překlad literárního díla*, Praha, 519-535.
(1970e) "Über tocharische Verbformen und ihrem Verhältnis zum Satzakzent", in: W.-J. Marggraf (ed.), *Untersuchungen zum Akzent in Tocharisch B*, Dissertation, University of Kiel, 95-103.

(1970f) "Reduplication in Washo: A restatement", *International Journal of American Linguistics* 36, 190-198.

1971

(1971a) "Comparative linguistics: Contribution of new methods to an old field", *Monograph Series on Language and Linguistics* 24, 145-156.

(1971b) "Baktrische Lehnwörter im Tocharischen", in: Robert Schmitt-Brandt (ed.), *Donum Indogermanicum. Festgabe für Anton Scherer zum 70. Geburtstag*, Heidelberg, 217-223.

(1971c) "Alte und neue Formen der Zusammenarbeit in der Philosophischen Fakultät", *Kieler Universitätstage* 1971, 39-59.

(1971d – review) George Y. Shevelov, A prehistory of Slavic. The historical phonology of Common Slavic, *Zeitschrift für Ostforschung* 20, 152-153.

(1971d – review) Ernest Klein, A Comprehensive etymological dictionary of the English language, *Linguistics* 71, 108-118.

1972

(1972a) "Formal frequency and linguistic change. Some preliminary comments", *Folia Linguistica* 5, 55-61.

(1972b) "A proposal concerning metaphor", in: E. S. Firchow & K. Grimstad & N. Hasselmo & W. O'Neil (eds.), *Studies for Einar Haugen*, The Hague & Paris: Mouton, 562-567.

(1972c) "Zur Vertretung von *w nach Konsonant in Tocharisch B", *Orbis* 21, 385-390.

(1972d) "Untersuchungen zur quantitativen Stilistik: Implikationen für den Deutschunterricht an Deutsche und Ausländer", *Studia Leibnitiana* 3, 102-115 (+ Comments in discussion, 160-165).

1973

(1973) "Areal linguistics: Some general considerations", in: Thomas A. Sebeok (ed.), *Current Trends in Linguistics* 11, The Hague & Paris: Mouton, 135-147.

1974

(1974) "Echte und simulierte gesprochene Sprache", *Gesprochene Sprache, Jahrbuch 1972 des Institut für deutsche Sprache*, Sprache der Gegenwart 26, Düsseldorf, 129-143.

1975

(1975a, transl. + Oranskij, Iosif M., ed.) *Die neuiranischen Sprachen der Sowjetunion*, (2 vols.), The Hague & Paris: Mouton.

(1975b) "Intralanguage variation and interlanguage comparison", in: Hakan Ringbom (ed.), *Style and Texts. Studies presented to Nils Erik Enkvist*, Stockholm: Sprakförlaget Skriptor, 299-302.

(1975c) "Die Personalendungen des Imperfekts und Aorists im Armenischen", *Zeitschrift für vergleichende Sprachforschung* 89, 110-122.

(1975d – review) Peter Stumpf, Der Gebrauch der Demonstrativ-Pronomina im Tocharischen, *Kratylos* 18, 136-138.

1976

(1976a + Jazayery, Mohammad & Polomé, Edgar C.; eds.) *Linguistic and literary studies in honor of Archibald A. Hill.* Vol. 1. *General and theoretical linguistics,* Lisse: Rider.

(1976b) "Tocharisch B *–au*-: tocharisch A *–e*", *Orbis* 25, 27-33.

(1976c) "Louis Hammerich 1. November 1975", *Christiana Albertina* – N. F. 5, 289-290.

(1976d) "Switch reference in Yuman languages", in: Margaret Langdon & Shirley Silver (eds.), Hokan Studies, The Hague & Paris: Mouton, 165-174.

(1976e + Jarr Butchel, Christel) "Robber's Roost – A Walapai tale", *International Journal of American Linguistics – Native American Text Series* 1, 3, 61-67.

(1976f – review) Peter Stumpf, Der Gebrauch der Demonstrativ-Pronomina im Tocharischen, *Zeitschrift der deutschen Morgenländischen Gesellschaft* 126, 179-181.

1978

(1978a + Jazayery, Mohammad & Polomé, Edgar C.; eds.) *Linguistic and literary studies in honor of Archibald A. Hill.* (4 vols.), The Hague & Paris & New York: Mouton.

(1978b) "Internal structure and external relationship of two verbal paradigms: Tocharian B *wen*-, A *weñ*- 'say'", *Journal of Indo-European Studies* 5, 133-159.

(1978c) "The distribution of short and long vowels in stems of the type Lith. *ĕsti : vèsti : mèsti* and OCS *jasti : vesti : mesti* in Baltic and Slavic languages", in: Jacek Fisiak (ed.), *Recent Developments in Historical Phonology,* The Hague & Paris & New York: Mouton, 432-446.

1979

(1979a) *Linguistics and literature. Sociolinguistics and applied linguistics,* Berlin & New York: Mouton de Gruyter.

(1979b) "On the importance of links not missing", in: Bela Brogyanyi (ed.), *Current issues in linguistic theory. Festschrift for Oswald Szemerényi on the Occasion of his 65th Birthday* – 2, Amsterdam: Benjamins, 989-994.

(1979c) "Zur "Überlänge" im Deutschen", in: Kennosuke Ezawa & Karl H. Rensch & Wolfgang Bethge (eds.), *Sprache und Sprechen. Festschrift für Eberhard Zwirner zum 80. Geburtstag,* Tübingen: Niemeyer, 197-200.

1980

(1980a) "OInd. *máhi* : Gk. *méga* 'great' reconsidered", in: Kathryn Klar & Margaret Langdon & Shirley Silver (eds.), *American Indian and Indo-European Studies. Papers in Honor of Madison S. Beeler,* Berlin & New York: Mouton de Gruyter, 487-495.

(1980b) "Zum Beitrag der tocharischen Sprachen zu Problemen der lautlichen Rekonstruktion des Indogermanischen", in: M. Mayrhofer & M. Peters & O. E. Pfeiffer (eds.), *Lautgeschichte und Etymologie. Akten der VII. Fachtagung der indogermanischen Gesellschaft,* Wiesbaden: Reichert, 542-563.

(1980c) "Markedness and normalcy/naturalness: Some reflections", *SAIS* 2, 162-170.

(1980d) "Eine verschüttete armenisch-baltoslavische Isoglosse?", *Lingua*

Posnaniensis 23, 209-214.

(1980e) "Tocharisch B *yok*, A *yok* 'Körperhaar, Farbe' und Verwandtes", in: G. Brettschneider & Christian Lehmann (eds.), *Wege zur Universalienforschung. Beiträge zum 60. Geburtstag von Hansjakob Seiler*, Tübingen: Narr, 469-472.

(1980f) "Morphological signalling of selection properties: transitiveness in Tocharian A and B verbs", in: Jacek Fisiak (ed.), *Historical Morphology*, The Hague & Paris & New York: Mouton, 421-422.

1981

(1981a – review) A. J. van Windekens, Le tokharien confronté avec les autres languages indo-européenes I,II:1, *Kratylos* 25, 125-132.

(1981b – review) A. J. van Windekens, Le tokharien confronté avec les autres languages indo-européenes I, *Language* 57, 935-941.

1982

(1982a) "Indo-European words for 'tongue' and 'fish': A reappraisal", *Journal of Indo-European Studies* 10, 167-186.

(1982b) "Tocharian and Proto-Indo-European", *Lingua Posnaniensis* 25, 1-11.

(1982c) "O markirovannosti, sootvetstvii norme i "estestvennosti", *Voprosy jazykoznania* 4, 72-77.

(1982d – review) A. J. van Windekens, Le tokharien confronté avec les autres languages indo-européenes I, *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 132, 399-402.

1983

(1983a) "A tentative English-Walapai dicitonary und Etymologicum Tocharicum: Unterschiede und Gemeinsamkeiten", in: Alfred Bammesberger (ed.), *Das etymologische Wörterbuch. Fragen der Konzeption und Gestaltung*, Regensburg: Pustet, 313-327.

(1983b) "Nochmals arm. *hiwsn* 'Zimmermann'", *Die Sprache* 29, 177-181.

(1983c) "Summary of the plenary session on sociolinguistics", in: Shirị Hattori & Kazuko Inoue (eds.), *Proceedings of the XIIIth International Congress of Linguistics*, Tokyo, 384-385.

(1983d) "Tradition and innovation in alphabet making", in: Florian Coulmas & Konrad Ehlich (eds.), *Writing in Focus*, Berlin & New York, Mouton de Gruyter, 227-238.

1984

(1984a) *Studia Tocharica. Selected writings. Ausgewählte Beiträge*, Poznań: Wydawnictwo Naukowe UAM.

(1984b; ed.) *Anredeverhalten*, Tübingen: Narr.

(1984c) "Toch B *śka*, A *śkā* ; B *e* ; B *ecce*, A *aci*", in: *Studia Tocharica. Selected writings. Ausgewählte Beiträge*, Poznań: Wydawnictwo Naukowe UAM, 117-123.

(1984d) "B *staukka*-", in: *Studia Tocharica. Selected writings. Ausgewählte Beiträge*, Poznań: Wydawnictwo Naukowe UAM, 212-216.

(1984e) "Cultural and linguistic cross-currents in Central Asia", in: *Studia Tocharica. Selected writings. Ausgewählte Beiträge*, Poznań: Wydawnictwo Naukowe UAM, 9-26.

(1984f) "In memoriam Erich Hofmann 4. März 1895 – 7. November 1982", *Christiana Albertina* N. F. 19, 231-232.

(1984g) "Preface – Vorwort", in: *Studia Tocharica. Selected writings. Ausgewählte Beiträge*, Poznań: Wydawnictvo Naukowe UAM, 7-8.

(1984h) "Reconstructed comparative linguistics and the reconstruction of the syntax of undocumented stages in the development of languages and language families", in: Jacek Fisiak (ed.), *Historical Syntax*, Berlin & New York: Mouton de Gruyter, 613-625.

(1984i) "Zur tocharischen Entsprechung von skt. *tokharika*", *Zeitschrift für vergleichende Sprachforschung* 97, 131-133.

1985

(1985a) *Materials towards a dictionary of Chamling*, Kiel: Linguistic Survey of Nepal.

(1985b) "'Left' or 'right'", in: Jacek Fisiak (ed.), *Historical Semantics. Historical Word-Formation*, Berlin & New York & Amsterdam: Mouton de Gruyter, 583-595.

(1985c) "Tocharian B *soy*, A *se* and related forms", *Journal of the American Oriental Society* 105, 259-264.

(1985d + Hannson, Gerd) "On some Rai numeral of Indo-Aryan origin", *Indian Linguistics* 46, 33-35.

1986

(1986a) "Aus der Arbeit des Linguistic Survey of Nepal", in: Bernhard Kölver (ed.), *Formen kulturellen Wandels und andere Beiträge zur Erforschung des Himalaya*, Sankt Augustin: VGH Wissenschaftsverlag, 451-459.

(1986b) "Bantawa *rV-*< ? An exercise in internal and comparative reconstruction", in: Dieter Kastovsky and Aleksander Szwedek (eds.), *Linguistics across Historical and Geographical Boundaries I: Linguistic Theory and Historical Linguistics*, Berlin & New York: Mouton de Gruyter, 763-772.

(1986c) "Doctoris lectio", in: *Wernerus Winter, doctor honoris causa Universitatis Studiorum Mickiewiczianae Posnaniensis*, Poznań: Wydawnictvo Naukove UAM, 22-26 + 27-30.

(1986d) "Hayereni anvanakan t'ek'man mi k'ani harc'er", *Patma-banasirakan Handes* 113, 17-24.

1987

(1987a + Laycock, Donald C.; eds.) *A world of language: Papers presented to Professor S. A. Wurm on his 65th birthday*, Canberra, ACT: Pacific Linguistics.

(1987b) "Differentiation within Rai: Non-lexical isoglosses", in: Donald C. Laycock and Werner Winter (eds.), *A World of Language: Papers Presented to Professor S. A. Wurm on his 65th birthday*, Canberra – ACT: Pacific Linguistics, 729-734.

(1987c) "Distributive numbers in Tocharian", *Tocharian and Indo-European Studies* 1, 238-244.

(1987d) "Old Indic *sūnú-*, Greek *huiús* 'son'", in: George Cardona and Norman H. Zide (eds.), *Festschrift for Henry Hoenigswald on the Occasion of his 70th Birthday*, Tübingen: Narr, 405-408.

(1987e) "Tocharian B *ñakte*, A *ñkät* 'god'. Two nouns, their derivatives, their etymology", *Journal of Indo-European Studies* 15, 297-325.

1988

(1988a + Jazayeri, Mohammad Ali; eds.) *Languages and cultures. Studies in honor of Edgar C. Polomé*, Berlin & New York & Amsterdam: Mouton de Gruyter.

(1988b) "Cardinal points and other directions in Tocharian A and B", in: Mohammad Ali Jazayery & Werner Winter (eds.), *Languages and Cultures. Studies in Honor of Edgar C. Polomé*, Berlin & New York: Mouton de Gruyter, 775-791.

(1988c) "Metaphors in dialectical diction. A critical note", in: Jacek Fisiak (ed.), *Historical Dialectology Regional and Social*, Berlin & New York & Amsterdam: Mouton de Gruyter, 775-791.

(1988d) "The loss of Tocharian B **-we-* and its conditions", *Tocharian and Indo-European Studies* 2, 211-220.

(1988e – review) Werner Thomas, Tocharische Sprachreste. Sprache B. Teil I. Die Texte. Band I. Fragmente Nr. 1-116 der Berliner Sammlung, *Kratylos* 33, 95-99.

1989

(1989a) "Nekotorie mysli ob indoevropejkix čislitel'nyx", *Voprosy Jazykoznanija* 2, 32-45.

(1989b) "On a new claim concerning substratum influence upon Tocharian", *Central Asiatic Journal* 33, 126-132.

(1989c) "Tocharian B *–aiñ*: B *–āñ/-añ* and related problems", *Tocharian and Indo-European Studies* 3, 111-120.

(1989d) "B *–ññ-*: *-wññ-* and related problems", *Tocharian and Indo-European Studies* 4, 5-31.

1990

(1990a) "Linguistic reconstruction: The scope of historical and comparative linguistics", in: Edgar C. Polomé (ed.), *Research Guide on Language Change*, Berlin & New York: Mouton de Gruyter, 11-21.

(1990b) "The importance of fine points in spelling: Deletion of accented vowels in Tocharian B", in: Jacek Fisiak (ed.), *Historical Linguistics and Philology*, Berlin & New York: Mouton de Gruyter, 371-379.

(1990c) "Vorwort", in: Peter Stumpf, *Die Erscheinungsformen des Westtocharischen. Ihre Beziehungen zueinander und ihre Funktionen* (Tocharian and Indo-European Studies Supplementary Series 2.), Reykjavik, 11-14.

(1990d) "Verbale Paradigmen des Tocharischen", in: Werner Bahner & Joachim Schildt & Dieter Viehweger (eds.), *Proceedings of the 14th International Congress of Linguistics 1987*, Berlin: Akademie Verlag, 2534-2537.

(1990e) "Non-Walapai words in Walapai", in: James E. Reden (ed.), *Proceedings of the 1990 Hokan-Penutian Languages Workshop* (Occasional Papers on Linguistics 15.) Carbondale: Department of Linguistics – Southern Illinois University, 191-197.

(1990f + Novel, Kishore Rai) "Triplicated verbal adjuncts in Bantawa", in: "*Linguistic fiesta*". Festschrift for Professor Hisao Kakehi's 60th Birthday, Tokyo, 135-150.

(1990g) "Some thoughts about Indo-European numerals", in: "*Essays on Indo-European Linguistics*", ed. S.R. Banerjee, Calcutta: The Asiatic Society

1986, 23-42.

1991
(1991a) "Introduction", in: Gerd Hansson, *The Rai of Eastern Nepal: Ethnic and Linguistic Grouping. Findings of the Linguistic survey of Nepal*, Kirtipur & Kathmandu: Linguistic Survey of Nepal and Centre for Nepal and Asian Studies & Tribhuvan University, i-ii.
(1991b) "The mediopassive present participle in Tocharian A", *Tocharian and Indo-European Studies* 5, 45-56.
(1991c – review) Werner Thomas, Tocharische Maitreya-Parallelen aus Hami, *Central Asiatic Journal* 35, 317-320.

1992
(1992a + Polomé, Edgar C.; eds.) *Reconstructing languages and cultures*, Berlin & New York: Mouton de Gruyter.
(1992b) "A note on parasystems", in: Tom Dutton & Malcolm Ross & Darrell Tryon (eds.), *The Language Game: Papers in memory of Donald C. Laycock*, Canberra – ACT: Pacific Linguistics, 521-526.
(1992c) "Armenian, Tocharian, and the "glottalic" theory", in: Edgar C. Polomé & Werner Winter (eds.), *Reconstructing Languages and Cultures*, Berlin & New York: Mouton de Gruyter, 111-127.
(1992d) "Armenian", in: Jadranka Gvozdanović (ed.), *Indo-European Numerals*, Berlin & New York: Mouton de Gruyter, 347-359.
(1992e) "Borrowing and non-borrowing in Walapai", in: Ernst Håkon Jahr (ed.), *Language Contact.Theoretical and Empirical Studies*, Berlin & New York: Mouton de Gruyter, 213-228.
(1992f) "Diversity in Rai languages: An inspection of verb systems in selected idioms", *Lingua posnaniensis* 34, 141-156.
(1992g) "Some thoughts about Indo-European numerals", in: Jadranka Gvozdanović (ed.), *Indo-European Numerals*, Berlin & New York: Mouton de Gruyter, 11-28.
(1992h) "The linguistic survey of Nepal", in: Bernhard Kölver (ed.), *Aspects of Nepalese Traditions*, Stuttgart: Franz Steiner, 171-175.
(1992i) "Tocharian", in: Jadranka Gvozdanović (ed.), *Indo-European Numerals*, Berlin & New York: Mouton de Gruyter, 97-161.
(1992j + Polomé, Edgar) "Preface", in: Edgar Polomé & Werner Winter (eds.), *Reconstructing Languages and Cultures*, Berlin & New York: Mouton de Gruyter, v-vi.
(1992k + Schmidt, Klaus T.) "Die Formen der 1. Singular Aktiv der unerweiterten Präterita in Tocharisch B (i.e., A)", *Historische Sprachforschung* 105, 50-55.

1993
(1993a) "Abstract mapping", in: Wolfgang Viereck (ed.), *Historische Dialektologie und Sprachwandel. Sprachatlanten und Wörterbucher. Verhandlungen des internationalen Dialektologenkongresses Bamberg 1990*, 2, 258-262.
(1993b) "Armenian, Tocharian, and the "glottalic" theory", in: L. Hovsepian & N. Parnasian & S. Simonian (eds.), *The Second International Symposium on Armenian Linguistics 1987*, Yerevan: Armenian Academy Press, 218-241.

(1993c) "Some conditions for the survival of small languages", in: Ernst Håkon Jahr (ed.), *Language Conflict and Language Planning*, Berlin & New York: Mouton de Gruyter, 299-314.

(1993d) "The development of underlying accented "schwa" before dental in Tocharian B", *Tocharian and Indo-European Studies* 6, 197-205.

(1993e) "Tocario", in: Anna G. Ramat & Paolo Ramat (eds.), *Le lingue indoeuropee*, Bologna: il Mulino, 181-196.

(1993f) "Überlegungen zum Fehlen der Reduplikation in aind. *véda*, gr. *oîda*, usw.", in: Gerhard Meiser et al. (eds.), *Indogermanica et Italica. Festschrift für Helmut Rix zum 65. Geburtstag*, Innsbruck: Institut für Sprachwissenschaft, 479-483.

1994

(1994a) "Griechisch –*men* und griechisch –*mes*", in: Roland Bielmeier and Reinhard Stempel (eds.), *Indogermanica et Caucasica. Festschrift für Karl Horst Schmidt zum 65. Geburtstag*, Berlin & New York: Mouton de Gruyter, 265-271.

(1994b) "Syncope in Tocharian A", in: Jens Elmegård Rasmussen (ed.), *In honorem Holger Pedersen*, Wiesbaden: Reichert, 401-415.

(1994c) "Zum tocharischen Verb", in: Bernfried Schlerath (ed.), *Tocharisch. Akten der Fachtagung der indogermanischen Gesellschaft, Berlin, 1990.* Reykjavík: TIES, 284-308.

(1994d) "Proto-Indo-European: A multiangular view. VII: Comments on reks deiwos-k^{w}e", *Journal of Indo-European Studies* 22, 82-83.

1995

(1995a, ed.) *On languages and language. The Presidential Addresses at the 1991 meeting of the Societas Linguistica Europaea*, Berlin & New York: Mouton de Gruyter.

(1995b, ed) Thomas Gamkrelidze and Vjačeslav Ivanov, *Indo-European and the Indo-Europeans*, Translation by Johanna Nichols of *Indoevropejskij jazyk i indoevropejcy* [1984], Berlin & New York: Mouton de Gruyter.

(1995c) "Reduplication forms in Walapai", in: Michael Dürr & Egon Renner & Wolfgang Oleschinski (eds.), *Language and Culture in Native North America. Studies in Honor of Heinz-Jürgen Pinnow*, München & New Castle: Lincom, 227-235.

1996

(1996 + Bickram, Ingwaba Subba D. & Hansson, Gerd & Weidert, Alfons K.; eds.) *A synoptic glossary of Athpare, Belhare, and Yakkha with fu(r)ther contributions. Findings of the 'Linguistic Survey of Nepal'*, München & New Castle: Lincom Europa.

1997

(1997a) "Lexical archaisms in the Tocharian languages", in: Hans Henrich Hock (ed.), *Historical, Indo-European, and Lexicographical Studies. A Festschrift for Ladislav Zgusta on the Occasion of his 70th Birthday*, Berlin & New York: Mouton de Gruyter, 183-193.

(1997b) "A lone loanword and its implications", in: Stig Eliasson and Ernst Håkon Jahr (eds.), *Language and its Ecology, Essays in the Memory of Einar Haugen*, Berlin & New York: Mouton de Gruyter, 435-440.

(1997c) "A sound change in progress?", in: Raymond Hickey and Stanisław Puppel (eds.), Language History and Linguistic Modelling. A Festschrift for Jacek Fisiak on his 60th Birthday, Berlin & New York: Mouton de Gruyter, 1113-1123.

(1997d) "Tocario", in: Anna G. Ramat & Paolo Ramat (eds.), *Le lingue* indoeuropee. Nuova edizione, Bologna: il Mulino, 181-196.

(1997e) "Armenian *arj* 'bear'", in: Alexander Lubotsky (ed.), *Sound Law and Analogy. Papers in honor of Robert S. P. Beekes on the Occasion of his 60th birthday*, Amsterdam & Atlanta – GA: Rodopi, 349-351.

(1997f + Novel, Kishore Rai) "Triplicated verbal adjuncts in Bantawa", in: David Bradley (ed.), *Tibeto-Burman Languages of the Himalayas* (Papers in Southeast Asian Linguistics 14. Pacific Linguistics A – 86.), Canberra – ACT: Australian National University, 119-134.

1998

(1998a) *Walapai (Hualapai) texts.* (Native American Texts Series 2), Berlin & New York: Mouton de Gruyter.

(1998b + Pinault, Georges-Jean & Ji, Xianlin; eds.) *Fragments of the Tocharian A Maitreyasamiti-Nāsaka of the Xinjiang Museum, China*, Berlin & New York: Mouton de Gruyter.

(1998c) "Cases of cross-over between finite verb forms and nouns in Armenian", in: Mark Janse (ed.), *Productivity and Creativity. Studies in General and Descriptive Linguistics in Honor of E. M. Uhlenbeck*, Berlin & New York: Mouton de Gruyter, 629-632.

(1998d) "? in Yuman nouns", in: Leanne Hinton and Pamela Munro (eds.), *Studies in American Indian Languages. Description and Theory* (University of California Publications, Linguistics 131.), Berkeley & Los Angeles & London: university of California Press, 72-76.

(1998e) "Lexical archaisms in the Tocharian languages", in: Victor H. Mair (ed.), *The Bronze Age and Early Iron Age peoples in eastern Central Asia I: Archeology, migration and nomadism. Linguistics*, Washington, D.C.: Institute for the Study of Man & Philadelphia – PA: University of Pennsylvania Museum, 347-357.

1999

(1999a) "Consonant harmony in Armenian", in: Edgar Polomé & Carol Justus (eds.), *Language change and typological variation: in honor of Winfred P Lehmann on the occasion of his 83rd birthday* (Journal of Indo-European Studies Monograph 31), Washington, D.C.: Institute for the Study of Man, 313-319.

(1999b) "Ökonomie in der Rekonstruktion und typologische Plausibilität", in: Colette Cortès & André Rousseau (eds.), *Catégories et connexions en hommage à Jean Fourquet pour son centième anniversaire le 23 juin 1999*, Villeneuve d'Ascq (Nord) Septentrion, 379-385.

(1999c) "Ordered pairs of words in German and elsewhere", in: Jerzy Bańczerowski and Tadeusz Zgólka (eds.), *Linguam amicabilem facere. Ludovico Zabrocki in memoriam*, Poznań: Wydawnictwo UAM, 331-352.

(1999d) "Sociolinguistics and dead languages", in: Ernst Håkon Jahr (ed.), *Language change. Advances in Historical Socioliguistics*, Berlin & New York: Mouton de Gruyter, 67-84.

(1999e) "When numeral systems are expanded", in: Jadranka

Gvozdanović (ed.), *Numeral Types and Changes Worldwide*, Berlin & New York: Mouton de Gruyter, 43-53.

(1999f) "Tocharian marginalia", *Tocharian and Indo-European Studies* 8, 247-274.

(1999g – review) Frederik Otto Lindeman, Studies in comparative Indo-European linguistics presented on the occasion of his 60th birthday March 3, 1996, *Norsk Lingvistik Tidsskrift* 17, 327-330.

2000
(2000) "Eyes and ears", in: Christianne Dalton Puffer and Nikolaus Ritt (eds), *Words: Structure, Meaning, Function. A Festschrift for Dieter Kastovsky*, Berlin & New York: Mouton de Gruyter, 323-327.

2001
(2001 – review) Douglas Q. Adams, A dictionary of Tocharian B, *Central Asiatic Journal* 45, 128-138.

2002
(2002) "The distribution of short and long vowels in stems of the type Lith. *jsti* : *vèsti* : *mèsti* and OCS *jasti* : *vesti* : *mesti* in Baltic and Slavic languages", in: *Mouton Classics* 1, Berlin & New York: Mouton de Gruyter, 343-358.

2003
(2003a) *A Bantawa Dictionary*, Berlin & New York: Mouton de Gruyter.

(2003b) "A new look at a Tocharian B text", *Tocharian and Indo-European Studies* 10, 105-124.

(2003c – review) Douglas Q. Adams, A dictionary of Tocharian B, *Journal of American Oriental Society* 123, 202-208.

2004
(2004) "Preverbal Modifiers in Sunwar", in: Saxena, Anju (ed.). *Himalayan Languages: Past and Present*. Berlin: Mouton de Gruyter, 239-272.

2005
(2005) *Kleine Schriften = Selected writings : in zwei Bänden : Festgabe aus Anlass des 80. Geburtstags / Werner Winter*, selected and edited by Olav Hackstein. Bremen: Hempen.

2009
(2009a + Gerd Carling & Georges-Jean Pinault; eds.) *Dictionary and Thesaurus of Tocharian A, A-J*. Wiesbaden: Harrassowitz.

(2009b + Pinault, George-Jean & Schmidt, Klaus T. & Rasmussen, Jens Elmegård & Olander Thomas; eds.) *Tocharian and Indo-European Studies* – Vol. 11, Copenhagen: Museum Tusculanum Press & University of Copenhagen.

2010
(2010 + Ozolina, L. V. & Simonov, M. D. & Bulhakova T. & Majewicz E. & Wicherkiewicz, T; co-eds.) in: Alfred F. Majewicz (gen. ed.), *Materials for the Study of Tungusic Languages and Folklore* (Trends in Linguistics –

Documentation 15-4, The Collected Works of Bronislaw Pilsudski, Volume 4), Berlin & New York: Mouton de Gruyter.

2011
(2011 + Olander, Thomas & Peyrot, Michael & Pinault, Georges-Jean & Rasmussen, Jens & Schmidt, Klaus T.; eds.) *Tocharian and Indo-European Studies* – Vol. 12, Copenhagen: Museum Tusculanum Press & University of Copenhagen.

Further reading about Werner Winter

Studia Linguistica Diachronica et Synchronica : Werner Winter sexagenario anno MCMLXXXIII : gratis animis ab eius collegis, amicis discipulisque oblata, quae redigenda curaverunt atque ediderunt Ursula Pieper et Gerhard Stickel. Berlin- New York: Mouton de Gruyter, 1985.

Brigitte L.M. Bauer & Pinault, Georges-Jean. 2003. Werner Winter: ad multos annos. *Language in time and space: a Festschrift for Werner Winter on the occasion of his 80th birthday*, ed. by Brigitte L.M. Bauer, Georges-Jean Pinault. Berlin: Mouton de Gruyter, 2003 (Trends in linguistics Studies and monographs, 144), xxiii-xxv.

http://linguist.org/issues/21/21-3229.html

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Wolfgang P. Schmid
(*25 October 1929, Berlin; †22 October 2010, Friedland)

After his graduation from high school Wolfgang P. Schmid started to study theology at the Church University in Berlin-Zehlendorf. But after a short time he left both theology and Berlin and moved to Tubingen to study comparative linguistics. He became part of the circle around Hans Krahe, a prominent scholar in the field of Indo-European onomastics, especially hydronymy. However it was W. P. Schmid, who later successfully developed the ideas of his former tutor, but his first decade of study was devoted to various Indo-European themes, especially Indo-Iranian languages. So in the mid-fifties he successfully finished his Ph.D. thesis on nasal presents in the Indo-Iranian verbal system, and the Ph.D. degree was awarded by the Faculty of Arts of the University of Tubingen. W. P. Schmid left his alma mater for one year in 1964, which was spent at the University of Innsbruck, but in 1965 the seat of General and Indo-European Linguistics was offered to him by the famous University of Gottingen.

His first published study appeared in the year 1955 in the "Kuhn's" *Zeitschrift.* The subject of the paper was the orthographic rules of Oscan inscriptions. The problems of Italic languages attracted Schmid's attention again ten years later in a paper on an Old Latin inscription on the golden bracelet of Praeneste (1965c), and finally almost a quarter of century later, when Schmid analyzed "vulgarisms" in Old Latin (1989i). Seven papers are concerned with Greek (1962a, 1962b, 1982a, 1988a, 1988b, 1988c), two with Hittite (1973b, 1979c), others with relict languages of the Mediterranean: Messapian (1960a, 1965e), Thracian (1987d) and Phrygian (1993d).

Already in the fifties Schmid became interested in the Baltic languages, the etymology of their word stock and in their grammatical structure. The problems of Baltic philology were soon so attractive to Schmid, that they

overshadowed his interest in Indo-Iranian. In the year 1963 his habilitation "Studies in the Baltic and Indo-European verb" (1963c) was published.

From the huge number of studies and reviews on Baltic languages we could single out the monograph on the vanishing dialect from the Curonian Spit (1989g) and three other papers on the same theme (1983a, 1995a, 1995c), and Schmid's original solution to the identification of the so-called "Narew dialect", manuscript inscriptions in an old book of prayers, considered by some to be the dialect of the Medieval Jatvingians. Schmid (1986i) refused this romantic view and demonstrated that more probably the language of the inscriptions is the Yiddish dialect of East Baltic Jews, probably written in Vilnius, which could easy explain the number of German borrowings in the thesaurus.

It was not until the mid-sixties that W. P. Schmid took up onomastics, especially those of the Baltic. In a way he inherited this from his mentor from his Tubingen years, Hans Krahe, who died in 1965. After Krahe Schmid took over the position of editor, both of *Archiv für Gewässernamen* and the *Hydronymia Germaniae* series, which was renamed in 1985 as *Hydronymia Europeae*. Since 1963 Schmid, together with Krahe, had coedited the prestigious journal *Indogermanische Forschungen*, and since 1969 he edited the journal on his own. In the field of onomastics he (like his mentor) focused on hydronymy. Beside this field of study he took over Krahe´s conception of an Old European (*alteuropäisch*) layer in the European hydronymy, considered to be a heritage of the oldest waves of Indo-European speaking immigrants in Central, West, Northern and Southern Europe. The language of those immigrants was considered to be an undifferentiated continuum, in contrast to the more differentiated languages of Eastern Indo-European, i.e. Hellenic, Anatolian, Armenian, Indo-Iranian and Tocharian languages. The huge set of European hydronyms is not etymologized in Italic, Celtic, Germanic, Baltic or Slavic languages, which according to Krahe and Schmid (Schmid added Slavic languages to the preceding – see his paper on the Slavic Urheimat – 1979e) crystallized from the "Old

European" dialectal continuum. Schmid (in 1970a) demonstrated that in the Indo-Iranian languages there are transparent appellative cognates to those hydronyms, semantically related to water. In a whole series of papers he systematically surveyed how the "Old European" hydronymy is continued in the daughter branches: Slavic (1969a), Baltic (1975a, 1984a, 1998a), Germanic (1986a) and Skandinavian (1989a), and Latin (1985f). To that Schmid added more papers confronting the "Old European" hydronymy with hydronymic terminology of the Eastern Indo-European languages: Indo-Iranian (1970a), Greek (1971a, 1983a), Thracian (1989b) and Hittite (1988e). The exclusivity of the Baltic branch, with its enormously rich hydronymic terminology, led W. P. Schmid to formulate a hypothesis of the central position of Baltic languages in the whole Indo-European dialect continuum (see the graph: (1976a, 115-22)):
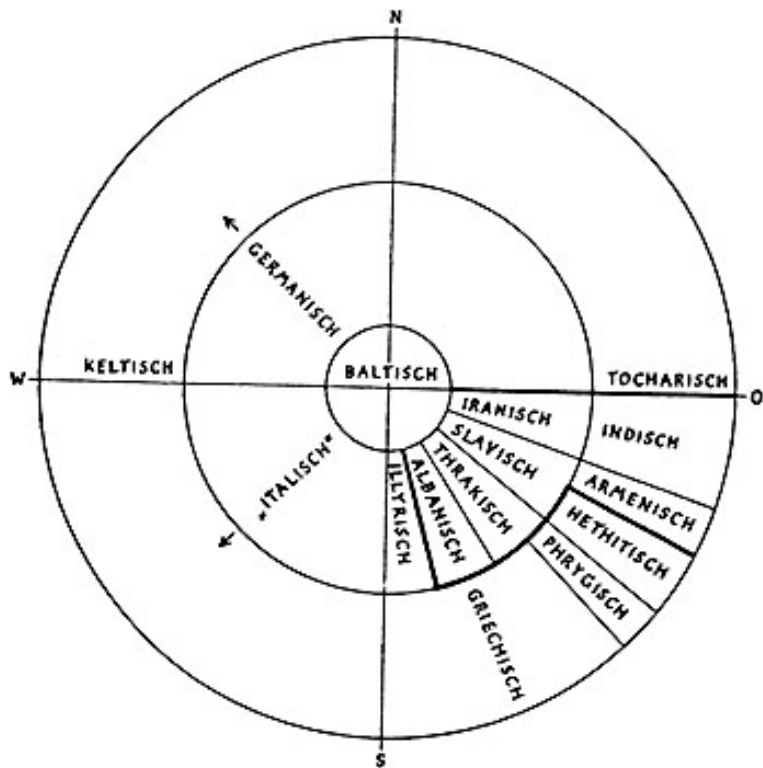
W. P. Schmid was occupied with more general considerations, too, for example, Indo-European numerals (1987f, 1989j) or word classes (1970c). His linguistic interests were not limited to the Indo-European languages. Alongside the reviews of Altaic (1964 – review b, f) and Dravidian languages (1963 – review d) he focused on Finno-Ugric languages, concretely on the Finnish hydronym *Aurajoki* and its possible Old European origin (1973a), on the Baltic-Finnic substrate in Lithuanian (1988d) and on dating Iranian borrowings in Finno-Ugric languages (1979b).

From among his students probably the most important reception is given to Jürgen Udolph, who was the chairman of the department of Slavic studies in Leipzig till 2009. His Humboltian grant was spent in Gottingen just with W. P. Schmid and the prominent Polish Baltist Wojciech Smoczyński, too. Both scholars are emeriti now but their work is still here. We can only hope that the line Krahe – Schmid – Udolph will be extended by other scholars in the future.

Bibliography

1955
[a] Anaptyxe, Doppelschreibung und Akzent im Oskischen. *Zeitschrift für Vergleichende Sprachforschung auf dem Gebiete der Indogermanischen Sprachen* 72, 1955, 30-46.

1956
[a] *Untersuchungen zur Stellung der Nasalpraesentia im indo-iranischen Verbalsystem.* (diss.). Tübingen 1956.
[b] Vedisch *īmahe* und Verwandtes. *Indogermanische Forschungen* 62, 1956, 219-239.
[Rev. a]: Zgusta, L., Die Personennamen griechischer Städte der nördlichen Schwarzmeerküste. Die ethnischen Verhältnisse, namentlich das Verhältnis der Skythen und Sarmaten, im Lichte der Namenforschung. Praha 1955. *Beiträge zur Namenforschung* 7, 1956, 207-210.

1958
[a] Altpreußisch *lasto* 'Bett'. *Indogermanische Forschungen* 63, 1958, 220-227.
[b] Baltisch *kurtas* und andere Tierbezeichnungen. *Sybaris. Festschrift Hans Krahe zum 60. Geburtstag am 7.2.1958 dargebracht von Freunden, Schülern und Kollegen.* Wiesbaden 1958, 129-137.

[c] Vedisch *uvé*. *Indogermanische Forschungen* 63, 1958, 144-150.

[Rev. a]: Adrados, F. R., Védico y sánscrito clásico. Gramática, textos anotados y vocabulario etimológico. (Manual de lingüística indeuropea, cuaderno Il.) Madrid 1953. *Indogermanische Forschungen* 63, 1958, 197-198.

[Rev. b]: Krahe, H., Vorgeschichtliche Sprachbeziehungen von den baltischen Ostseeländern bis zu den Gebieten um den Nordteil der Adria (Akademie der Wissenschaften und der Literatur Mainz, Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse, Jg. 1957, 3.) Wiesbaden 1957. *Beiträge zur Namenforschung* 9, 1958, 208-210.

[Rev. c]: Ruipérez, M. S., Estructura del sistema de aspectos y tiempos dei verbo griego antiguo. Análisis funcional sincrónico. (Theses et studia philologica Salmanticensia, VII) Salamanca 1954. *Indogermanische Forschungen* 63, 1958, 182-186.

1959

[a] Indo-Iranisch *nam-* 'schlagen'. *Indogermanische Forschungen* 64, 1959, 113-118.

[b] Die Kuh auf der Weide. *Indogermanische Forschungen* 64, 1959, 1-12.

[Rev. a]: Deroy, L., L'emprunt linguistique. (Bibliothéque de la Facuité de Philosophie et Lettres de l'Université de Liege, Fascicule CXLI), Paris 1956. *Indogermanische Forschungen* 64, 1959, 78-82.

[Rev. b]: Gonda, J., Notes on Brahman. Utrecht 1950. *Indogermanische Forschungen* 64, [Rec. c]: Gonda, J., Reflections on the Numerals "One" and "Two" in Ancient Indo-European Languages. Utrecht 1953. *Indogermanische Forschungen* 64, 1959, 298-301.

[Rev. d]: Gonda, J., Remarques sur la place du verbe dans la phrase active et moyenne en langue sanscrite. Utrecht 1952. *Indogermanische Forschungen* 64, 1959, 298-301.

[Rev. e]: Melzer, U., Sechzehnhundert Sätze Persisch. Wiesbaden 1956. *Indogermanische Forschungen* 64, 1959, 109-110.

[Rev. f]: Natalicium Carolo Jax Septuagenario a.d. VII Kal. Dec. MCMLV oblatum, edidit Robertus Muth, redegit Ioannes Knobloch. (Innsbrucker Beiträge zur Kulturwissenschaft 3,3) Innsbruck 1955. *Indogermanische Forschungen* 64, 1959, 174-175.

[Rev. g]: Niedermann, M., Balto-Slavica. (Université de Neuchâtel, Recueil de travaux publiés par la Faculté des Lettres, 27) Neuchâtel 1956. *Indogermanische Forschungen* 64, 1959, 99-101.

[Rev. h]: Renou, L., Études védiques et pāṇinéennes I-II. (Publications de l'Institut de civilisation indienne, fasc. 1, 2), Paris 1955/56. *Kratylos* 4, 1959, 46-50.

[Rev. i]: Renou, L., Études védiques et pāṇinéennes III-IV. (Publications de l'Institut de civilisation indienne, fasc. 4, 6), Paris 1957/58. *Kratylos* 4, 1959, 156-159.

[Rev. j]: *Sprachgeschichte und Wortbedeutung*. Festschrift Albert Debrunner gewidmet von Schülern, Freunden und Kollegen. Bern 1954 *Indogermanische Forschungen* 64, 1959, 280-283.

[Rev. k]: Thumb, A., Handbuch des Sanskrit mit Texten und Glossar. Eine Einführung in das sprachwissenschaftliche Studium des Altindischen. I. Teil: Grammatik. 1. Einleitung und Lautlehre. Dritte,

stark umgearb. Aufl. von Richard Hauschild. (Indogermanische Bibliothek, Erste Reihe: Lehr- und Handbücher) Heidelberg 1958. Indogermanische Forschungen 64, 1959, 287-298.

1960

[a] Messapisch-Baltische Kleinigkeiten. *Indogermanische Forschungen* 65, 1960, 24-30.

[b] Zum Problem *kṛṇóti – karoti. Indogermanische Forschungen* 65, 1960, 235-248.

[Rev. a]: Brandenstein, W., Antiguo Persa. Gramática, inscripciones con un lexico etimológico por Manfred Mayrhofer. (Manual de lingüística indoeuropea, cuaderno III) Madrid 1958. *Indogermanische Forschungen* 65, 1960, 185-188.

[Rev. b]: Buddruss, G., Beiträge zur Kenntnis der Pasai-Dialekte. (Abhandlungen für die Kunde des Morgenlandes 33, 2) Wiesbaden 1959. *Indogermanische Forschungen* 65, 1960, 183-185.

[Rev. c]: Hartmann, P., Nominale Ausdrucksformen im wissenschaftlichen Sanskrit. (Indogermanische Bibliothek, 3. Reihe: Untersuchungen) Heidelberg 1955. *Indogermanische Forschungen* 65, 1960, 65-71.

[Rev. d]: Hartmann, P., Untersuchungen zur allgemeinen Grammatik, 2: Zur Typologie des Indogermanischen. (Bibliothek der Allgemeinen Sprachwissenschaft, 2. Reihe: Einzeluntersuchungen und Darstellungen) Heidelberg 1956. *Indogermanische Forschungen* 65, 1960, 65-71.

[Rev. e]: Krahe, H., Sprachliche Aufgliederung und Sprachbewegungen in Alteuropa. (Akad. d. Wiss. u. d. Lit. in Mainz, Abh. d. Geistes- u. Sozialwiss. Kl., Jg. 1959, 1) Wiesbaden 1959. *Beiträge zur Namenforschung*, 11, 1960, 201 204.

[Rev. f]: Leumann, M., Kleine Schriften. Hrsg. zum 70. Geburtslag am 6.10.1959 von Heinz Haffter, Ernst Risch, Walter Rüegg. Zürich 1959. *Kratylos* 5, 1960, 138-141.

[Rev. g]: Liebert, G., Die Indoeuropäischen Personalpronomina und die Laryngaltheorie. Ein Beitrag zur Erforschung der Pronominalbildung (Lunds Universitets Arsskrift, N.F. Avd. 1, Bd. 52, Nr. 7) Lund 1957 *Indogermanische Forschungen* 65, 1960, 82-84.

[Rev. h]: Németh, J., Eine Wörterliste der Jassen, der ungarländischen Alanen (Abhandlungen der Deutschen Akademie der Wissenschaften zu Berlin, Klasse für Sprachen, Literatur und Kunst, Jahrgang 1958, Nr. 4) Berlin 1959. *Indogermanische Forschungen*, 1960, 188-190.

[Rev. i]: Scheller, M., Vedisch *priyá* und die Wortsippe *frei, freien, Freund.* Eine bedeutungsgeschichtliche Studie (Ergänzungshefte zur Zeitschrift für vergleichende Sprachforschung auf dem Gebiet der indogermanischen Sprachen. Nr. 16) Göttingen 1959. *Indogermanische Forschungen* 65, 1960, 291-295.

[Rev. j]: Schmidt, H.-P., Vedisch *vratá* und awestisch *urvăta.* (Alt- und Neuindische Studien, 9), Hamburg 1958. *Kratylos* 5, 1960, 44-48.

[Rev. k]: Stang, Chr. S., Slavonic Accentuation (Skrifter utgitt av Det Norske Videnskaps Akademi i Oslo, I. Hist.- Fil. Klasse 1957, Nr. 3) Oslo 1957. *Indogermanische Forschungen* 65, 1960, 212-213.

[Rev. l]: Stenzler, A. F., Elementarbuch der Sanskrit-Sprache

(Grammatik, Texte, Wörterbuch). Fortgeführt von Richard Pischel, umgearbeitet von Karl F. Geldner. 14. Aufl., durchgesehen und ergänzt von Samarendranath Biswas. Berlin 1960. *Indogermanische Forschungen* 65, 1960, 302-303.

[Rev. m]: Thumb, A., Handbuch des Sanskrit mit Texten und Glossar. Eine Einführung in das sprachwissenschaftliche Studium des Altindischen. 1. Teil: Grammatik. 2. Formenlehre. Dritte stark umgearb. Aufl. von Richard Hauschild. (Indogermanische Bibliothek, Erste Reihe: Lehr- und Handbücher) Heidelberg 1959. *Indogermanische Forschungen* 65, 1960, 297-302.

[Rev. n]: Wagner. H., Das Verbum in den Sprachen der britischen Inseln. Ein Beitrag zur geographischen Typologie des Verbums. (Buchreihe der Zeitschrift für Celtische Philologie, unter Mitwirkung von R. Hertz hrsg. vor J. Pokorny, 1) Tübingen 1959. *Indogermanische Forschungen* 65, 1960, 312-316.

1961

[a] Nachträge und Verbesserungen zu S. A. Wolf's Wörterbuch der Zigeunersprache. *Indogermanische Forschungen* 66, 1961, 132-154.

[Rev. a]: Altuchow, N., El Tarkasamgraha de Annambhatta. Texto sánscrito con introducción, traducción y notas (Universidad de la Republica, Facultad de Humanidades y Ciencias, Instituto de Filología, Publicaciones del Departemento de Lingüística, 15) Montevideo 1959 *Indogermanische Forschungen* 66, 1961, 221.

[Rev. b]: Biezais, H., Enchiridion. Pirmais Rīgā iespiestais Latviešu Katechisms. Uppsala 1959 *Indogermanische Forschungen* 66, 1961, 100-102.

[Rev. c]: Hacker, P., Zur Funktion einiger Hilfsverben im modernen Hindi. (Abhandlungen der Akademie der Wissenschaften und Literatur in Mainz, Geistes- und Sozialwissenschaftliche Klasse, Jahrgang 1958, Nr. 4) Wiesbaden 1958. *Indogermanische Forschungen* 66, 1961, 304-308.

[Rev. d]: Hauzenberger-Sturma, E. (Hrsg.), In honorem Endzelini. Im Auftrag der Gruppe lettischer Baltologen in Chicago. Chicago 1960. *Indogermanische Forschungen* 66, 1961, 98-100.

[Rev. e]: Kalidasa, Sakuntala. Drama in sieben Akten. Aus dem Indischen übertragen und eingeleitet von Hans Losch. (Universal-Bibliothek 2751/51a) Stuttgart, 1960. *Indogermanische Forschungen* 66, 1961, 221-222.

[Rev. d]: Schwentner, E., Tocharische Bibliographie 1890-1958 (Deutsche Akademie der Wissenschaften zu Berlin. Institut für Orientforschung, Veröffentlichung Nr. 47) Berlin 1959 *Indogermanische Forschungen* 66, 1961, 64-65.

[Rev. e]: Trier, J., Versuch über Flußnamen. (Arbeitsgemeinschaft für Forschung des Landes Nordrhein-Westfalen. Geisteswissenschaften Heft 88) Köln, Opladen 1960. *Germanistik 2,* 1961, 36-37.

1962

[a] (+ H. Happ) Zu ἀσγάνης, ἀσκανδής, ἀστάδης = "Bote". *Glotta* 40, 1962, 198-201.

[b] Zu griech. ἀστάδης "Bote" *Glotta* 40, 1962, 32l.

[c] Lit. *kláusti* "fragen" und das altind. Futurum *Indogermanische*

Forschungen 67, 1962, 1-15.

[d] Zu Simon Grunaus Vaterunser. *Indogermanische Forschungen* 67, 1962, 261-273.

[Rev. a]: Renou, L., Études védiques et pāṇinéennes V-IX. (Publications de l'Institut de civilization indienne, fasc. 9, 10, 12, 14, 16), Paris 1959/61 *Kratylos* 7, 1962, 136-142.

1963

[a] Baltische Beiträge. *Indogermanische Forschungen* 68, 1963, 47-64.

[b] Zum lettischen Götternamen *Ūsiņš*. *Beiträge zur Namenforschung* 14, 1963, 130-137.

[c] *Studien zum baltischen und indogermanischen Verbum.* Wiesbaden 1963.

[d] Das zigeunerische Abstraktsuffix *-bea/-pen*. *Indogermanische Forschungen* 68, 1963, 276-283.

[Rev. a]: Bielfeldt, H. H., Altslawische Grammatik Einführung in die slawischen Sprachen. (Slawistische Bibliothek, 7) Halle (Saale) 1961 *Indogermanische Forschungen* 68, 1963, 346-355.

[Rev. b]: Biezais, H., Die erste Sammlung der lettischen Volkslieder von Gustav Bergmann. Uppsala, Senatne 1961. *Indogermanische Forschungen* 68, 1963, 247-249.

[Rev. c]: Ceļi Rakstu Krājums X, Lingvistika, Folklora, Literātūras zinātne. LundX, 1961. *Indogermanische Forschungen* 68, 1963, 246-247.

[Rev. d]: Emeneau, M. B., Brahui and Dravidian Comparative Grammar. (University of California Publications in Linguistics, 27) Berkeley, Los Angeles 1962. *Indogermanische Forschungen* 68, 1963, 200-201.

[Rev. e]: Falk, K.- O., N. M. Holmer, J. Mägiste, O. B. Anderson, Årsbok 1957/1958 utgiven av seminarierna för slaviska språk, jämförande språkforskning och finsk-ugriska språk vid Lunds Universitet samt östasiatiska språk vid Göteborgs Universitet. Lund 1961 *Indogermanische Forschungen* 68, 1963, 249-250.

[Rev. f]: Gonda, J., Stylistic Repetition in the Veda (Verhandelingen d. Koninkl. Nederlandse Akademie van Wetenschappen, Afd. Letterkunde, N.R. LXV, 3) Amsterdam 1959. *Indogermanische Forschungen* 68, 1963, 204-206.

[Rev. g]: Krahe, H., Die Struktur der alteuropäischen Hydronymie. (Akad. D. Wiss. u. d. Lit. in Mainz, Abh. d. Geistes u. Sozialwiss Kl., Jg. 1962, 5) Wiesbaden 1963. *Beiträge zur Namenforschung* 14, 1963, 199-201.

[Rev. h]: Sgall, P., Die Infinitive im Ṛgveda (Acta Universitatis Carolinae 1958, Philologica II, pag. 135-268) Prag 1958 *Indogermanische Forschungen* 68, 1963, 201-204.

[Rev. i]: Watkins, C., Indo-European Origins of the Celtic Verb I: The Sigmatic Aorist. Dublin 1962. *Indogermanische Forschungen* 68, 1963, 224-228.

1964

[a] Baltische Beiträge II: 3. Die Futurparadigmen im litauischen Dialekt von Kupiškis. 4. Zum altpreußischen Flexionstyp *endyrītwei* "ansehen". *Indogermanische Forschungen* 69, 1964, 122-129.

[b] Zur Konstruktion von altpers. *hačā*. *Indogermanische Forschungen* 69, 1964, 213-217.

[Rev. a]: Brandenstein, W., M. Mayrhofer, Handbuch des Altpersischen. Wiesbaden 1964. *Indogermanische Forschungen* 69, 1964, 262-269.

[Rev. b]: Doerfer, G., Türkische und mongolische Elemente im Neupersischen unter besonderer Berücksichtigung älterer neupersischer Geschichtsquellen, vor allem der Mongolen- und Timuridenzeit Bd. 1: Mongolische Elemente im Neupersischen. (Akademie der Wissenschaften und der Literatur in Mainz, Veröffentlichungen der Orientalischen Kommission, 16) Wiesbaden 1963. *Indogermanische Forschungen* 69, 1964, 301-303.

[Rev. c]: Hauri, Chr., Zur Vorgeschichte des Ausgangs *-ena* des Instr. Sing. Der *a*-Stämme des Altindischen. (Ergänzungsheft zur Zeitschrift für vergleichende Sprachforschung, 17) Göttingen 1963. *Indogermanische Forschungen* 69, 1964, 71-72.

[Rev. d]: Lienhard, S., Tempusgebrauch und Aktionsartenbildung in der modernen Hindī (Acta Universitatis Stockholmiensis, Stockholm Oriental Studies, 1) Stockholm 1961. *Indogermanische Forschungen* 69, 1964, 160-163.

[Rev. e]: Manessy, J., Les substantifs en *-as-* dans la Ṛk-Samhitā Contribution à l'étude de la morphologie védique (Université de Dakar, Fakulté des Lettres et Sciences Humaines, Publications de la Section de Langues et Littératures, 8) Dakar 1961. *Indogermanische Forschungen* 69, 1964, 67-70.

[Rev. f]: Poppe, N., Vergleichende Grammatik der altaischen Sprachen, Teil 1: Vergleichende Lautlehre. (Porta Linguarum Orientalium, Neue Serie 4) Wiesbaden 1960. *Indogermanische Forschungen* 69, 1964, 296-300.

[Rev. g]: Schlerath, B., Das Königtum im Rig- und Atharvaveda. Ein Beitrag zur Indogermanischen Kulturgeschichte. (Abhandlungen für die Kunde des Morgenlandes 33, 3) Wiesbaden 1960. : *Indogermanische Forschungen* 69, 1964, 63-66.

[Rev. h]: Sharma, A., H. J. Vermeer, Einführung in die Grammatik der modernen Hindī (Studienausgabe). Heidelberg 1963. *Indogermanische Forschungen* 69, 1964, 163-165.

[Rev. i]: Turner, R. L., A Comparative Dictionary of the Indo-Aryan Languages. Fasc. I- IV. London 1962-1964. *Indogermanische Forschungen* 69, 1964, 146-148.

1965

[a] Altindisch *vénati. Indogermanische Forschungen* 70, 1965, 1-10.

[b] Baltische Beiträge III: 5. Lat. *aqua* = balt. **aka. Indogermanische Forschungen* 70, 1965, 322-325.

[c] Zur Goldfibel von Praeneste. *Indogermanische Forschungen* 70 (1965), s. 200-208.

[d] Indogermanisch. Bartels, K. und L. Huber (Red.), *Lexikon der Alten Welt.* Zürich – Stuttgart 1965, 1380-1363.

[e] Messapisch *klachi/klaohi. Studi Salantini* 14, 1965, 331-335.

[Rev. a]: Ceļi. Rakstu Krājums XI. Literātūras zinātne, Folklora, Lingvistika. Lundā 1963. *Indogermanische Forschungen* 70,1965, 239-241.

[Rev. b]: Hauschild, R., Über die frühesten Arier im alten Orient. (Berichte über die Verhandlungen der Sächsischen Akademie der Wissenschaften zu Leipzig, Phil.-Hist. Klasse 106, 6) Berlin 1962.

Indogermanische Forschungen 70, 1965, 213-215.
[Rev. c]: Krahe, H., Unsere ältesten Flußnamen. Wiesbaden 1964. *Beiträge zur Namenforschung* 16, 1965, 207-208.
[Rev. d]: Laua, A., Mūsdienu latviešu literārās valodas fonētikas jautājumi. Rīgā 1961. *Indogermanische Forschungen* 70, 1965, 241-242.
[Rev. e]: Sulán, B., Probleme der Argotforschung in Mitteleuropa. (Innsbrucker Beiträge zur Kulturwissenschaft, Sonderheft 18) Innsbruck 1963. *Indogermanische Forschungen* 70, 1965, 243.
[Rev. g]: Turner, R. L., A Comparative Dictionary of the Indo-Aryan Languages. Fasc. V: *tatk[aza – náyati.* London 1965. *Indogermanische Forschungen* 70, 1965, 221-222.
[Rev. h]: Turner, R. L., A Comparative Dictionary of the Indo-Aryan Languages. Fasc. VI. London 1965. *Indogermanische Forschungen* 70, 1965, 350-351.

1966
[a] *Alteuropa und der Osten im Spiegel der Sprachgeschichte.* (Innsbrucker Beiträge zur Kulturwissenschaft, Sonderheft 22), Innsbruck 1966.
[b] Baltische Beiträge IV: Zur Bildung des litauischen Praeteritums. *Indogermanische Forschungen* 71, 1966, 286-296.
[c] (+ Stolz, F. + A. Debrunner) *Geschichte der lateinischen Sprache.* (Vierte stark umgearbeitete Auflage von Wolfgang P. Schmid), Berlin 1966.
[Rev. a]: Roth, R., W. D. Whitney, Atharva Veda Sanhita. 3., unveränderte Aufl. (nach der von M. Lindenau besorgten 2. Aufl.). Bonn 1966. *Indogermanische Forschungen* 71, 1966, 306.
[Rev. b]: Ramakrishna, B. S., K. K. Nair, V.N. Chiplunkar, B. S. Atal, V. Ramachandran, R. Subramanian, Some Aspects of the Relative Efficiencies of Indian Languages. A Study from Information Theory Point of View. Bangalore 1962. *Indogermanische Forschungen* 71, 1966, 136-138.
[Rev. c]: Role of Oriental Studies in the Humanities. Proceedings of a Symposium Held at New Delhi on the 6th January 1964 on the Occasion of the Twenty-sixth International Congress of Orientalists. New Delhi, Organising Committee XXVI. International Congress of Orientalists 1964. *Indogermanische Forschungen* 71, 1966, 135-136.
[Rev. d]: Turner, R. L., A Comparative Dictionary of the Indo-Aryan Languages. Fasc. VII-VIII: *pragamati - matsyahāra, mathá – likṣāgrahaṇa* London 1965. *Indogermanische Forschungen* 71, 1966, 138-140.
[Rev. e]: Väänänen, V., Etude sur le texte et la langue des Tablettes Albertini. (Annales Academiae Scientiarum Fennicae, Ser. B, Tom. 141,2) Helsinki 1965. *Indogermanische Forschungen* 71, 1966, 335-336.

1967
[a] Baltische Beiträge V: Zur Praeteritalbildung im Lettischen. *Indogermanische Forschungen* 72, 1967, 116-122.
[Rev. a]: Turner, R. L., A Comparative Dictionary of the Indo-Aryan Languages. Fasc. IX-XI. London 1966. *Indogermanische Forschungen* 72, 1967, 148-150.

1968

[a] (+ Stolz, F. + Debrunner, A.) *Storia della lingua latina*. Trad di Carlo Benedikter. Introd. e note di Alfonso Traina. (= 1966c), Bologna 1968.

[b] *Alteuropäisch und Indogermanisch*. (Akademie der Wissenschaften und der Literatur. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse. Jahrgang 1968, Nr. 6) Wiesbaden 1968.

[c] Baltische Beiträge VI: Zu altpreußisch *asmai* "ich bin". *Indogermanische Forschungen* 73, 1968, 355-361.

[d] Zur Bildung der Abstrakta in den Zigeunerdialekten Europas. Brekle, H. E. und L. Lipka (eds), *Wortbildung, Syntax und Morphologie*. Festschrift zum 60. Geburtstag von Hans Marchand am 1. Oktober 1967. (Janua Linguarum, Series Maior. 36), The Hague –Paris 1968, 210-216.

[e] Neues zum *apa*-Problem. Mayrhofer, M. + Lochner-Hüttenbach, F. + Schmeja, H. (eds), *Studien zur Sprachwissenschaft und Kulturhunde*. Gedenkschrift für W. Brandenstein (1898- 1967). (Innsbrucker Beiträge zur Kulturwissenschaft, Bd. 14) Innsbruck 1968, 387-392.

[f] Die Wurzel *vī*- im Rgveda. *40e anniversaire de la fondation de l'Institut de Civilisation indienne de l'Université de Paris 1967. Mélanges d'indianisme à la mémoire de Louis Renou*. Publ. de l'Institut de Civilisation indienne, série in-8°, Fasc. 28. Paris 1968, 613-624.

1969

[a] Alteuropa und das Slavische. Draye, H. (ed.), *Proceedings of the Ninth International Congress of Onomastic Sciences*. University College London, July 3-8 1966. Louvain 1969, 403-407.

[b] Zum Flußnamen *Nāva*. Studia Classica et Orientalia Antonino Pagliaro oblata III. Roma 1969, 217-222.

[c] Zur Geschichte des Formans **-āu̯on-/-āu̯o-/-ā*. *Indogermanische Forschungen* 74, 1969, 126-138.

[Rev. a]: Parpola, A., S. Koskenniemi, S. Parpola, P. Aalto, Decipherment of the Proto-Dravidian Inscriptions of the Indus Civilization. A first Announcement. (The Scandinavian Institute of Asian Studies, Special Publ., 1) Copenhagen 1969. *Indogermanische Forschungen* 74, 1969, 212-220.

1970

[a] Indisch-Iranische Appellativa und alteuropäische Gewässernamen. Boyce, M. and I. Gershevitch (eds.), *W. B. Henning Memorial Volume*. (Asia Major Library), London 1970, 376-384.

[b] Zur primären -u̯- Ableitung in einigen baltischen Gewässernamen. Rūķe-Draviņa, V. (ed.), *Donum Balticum. To Professor Christian S. Stang on the occasion of his seventieth birthday*, 15 March 1970. Stockholm 1970, 469-479.

[c] *Skizze einer allgemeinen Theorie der Wortarten* (Akademie der Wissenschaften and Literatur. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse. Jahrgang 1970, Nr. 5), Wiesbaden 1970.

1971

[a] Das Griechische und die alteuropäische Hydronymie Schmitt-Brandt, R. (eds), *Donum Indogermanicum. Festgabe für Anton Scherer zum 70.*

Geburtstag. Heidelberg 1971, 82-89.
[b] Zum litauischen Flußnamen *Aitra*. *Baltistica* 7, 1971, 37-42.

1972
[a] Baltische Gewässernamen und das vorgeschichtliche Europa, *Indogermanische Forschungen* 77, 1972, 1-18.
[b] *Die pragmatische Komponente in der Grammatik* (Akademie der Wissenschaften und der Literatur. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse. Jahrgang 1972, Nr. 9) Wiesbaden 1972.
[c] Über die Wortarten. *Baltistica,* I priedas, 1972, 165-167.

1973
[a] *Aura* und *Aurajoki. Baltistica* 9, 1973, 189-194.
[b] Sprachwissenschaftliche Bemerkungen zum hethitischen "Direktiv". Neu, E. und C. Rüster (Hrsg.), *Festschrift Heinrich Otten*, 27. Dez. 1973. Wiesbaden 1973, 291-301.
[c] Der Strukturalismus in der Sprachwissenschaft. Einem, H. von. + Born, K. E. + Schalk, F. + Schmid, W. P. (eds.), *Der Strukturbegriff in den Geisteswissenschaften*. *(Akademie der Wissenschaften und der Literatur.* Abhandlungen der Geistes- und Sozialwissenschaftliche Klasse. Jahrgang 1973, Nr. 2) Wiesbaden 1973, 43-52.

1975
[a] Baltische Gewässernamen und das vorgeschichtliche Europa. Georgiev, V. I. + Zaimov, J. D. (eds), *Actes du XIe Congrès International des Sciences Onomastiques*, Sofia, 28.VI.- 4.VII. 1972. Vol. 2. (Académie Bulgare des Sciences. Centre de Linguistique et Littérature) Sofia 1975, 259-260.
[b] Beiträge zur Diskussion über den Begriff "Bauer". Wenskus, R., H. Jankuhn und K. Grinda (Hrsg.), *Wort und Begriff "Bauer". Zusammenfassender Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas.* (Abhandlungen der Akademie der Wissenschaften in Göttingen. Philologisch-Historische Klasse, 3. Folge, Nr. 89) Göttingen 1975, s 222-227.
[c] Iranische Wortstudien (1. Zur Wurzel **raik-*, 2. Iran. **kr̥paka-*, 3. gav. *xᵛariθya. Indogermanische Forschungen* 80, 1975, 80-89.
[Rev. a]: Duridanov, I., Die Hydronymie des Vardarsystems als Geschichtsquelle. (Slavistische Forschungen 17) Köln, Wien 1975. *Indogermanische Forschungen* 80, 1975, 327-330.
[Rev. b]: Stang, Chr. S., Lexikalische Sonderübereinstimmungen zwischen dem Slavischen, Baltischen und Germanischen. (Skrifter utgitt av Det Norske Videnskaps-Akademi i Oslo, II. Hist.-Filos. Klasse, NS. 11) Oslo, Bergen, Tromsø 1971 (1972). *Indogermanische Forschungen* 80, 1975, 325-327.

1976
[a] Baltisch und Indogermanisch. *Baltistica* 12, 1976, 115-122.
[b] Baltische Sprachen und Völker. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke und R. Wenskus),

Reallexikon der Germanischen Altertumskunde. Bd. 2. Berlin, New York 1976, 14-20.

[c] Baltoslawische Spracheinheit. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke und R. Wenskus), *Reallexikon der Germanischen Altert*umskunde Bd. 2. Berlin, New York 1976, 20-22.

[d] Dhsakd◌ᵂw (Awroman). *Indogermanische Forschungen* 81, 1976, 45-46.

[Rev. a]: Schramm, G., Nordpontische Ströme, Namenphilologisch Zugänge zur Frühzeit des europäischen Ostens. Göttingen 1973 *Indogermanische Forschungen* 81, 1976, 435-441.

[Rev. b]: Vasmer, M., Schriften zur slavischen Altertumskunde und Namenkunde I. II. hrsg. von Herbert Bräuer. (Veröffentlichungen der Abteilung für slavische Sprachen und Literaturen des Osteuropa-Instituts (Slavisches Seminar) an der Freien Universität Berlin, 38) Berlin (Wiesbaden) 1971. *Indogermanische Forschungen* 81, 1976, 442-444.

1977

[a] Alteuropäisch und Indogermanisch (Nachdruck). Steger, H. (ed.), *Probleme der Namenforschung im deutschsprachigen Raum.* (Wege der Forschung, Bd. 383), Darmstadt 1977, 98-116.

[b] Sprachwissenschaftliche Bemerkungen zu den Wörtern für Bauer und Dorf im Slavischen. Jankuhn, H. + Schützeichel, R. + Schwind, F. (eds), *Das Dorf der Eisenzeit und des frühen Mittelalters Siedlungsform – wirtschaftliche Funktion – soziale Struktur. Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas in den Jahren 1973 und 1974.* (Abhandlungen der Akademie der Wissenschaften in Göttingen. Philologisch-Historische Klasse, 3. Folge, Nr. 101), Göttingen 1977, 41-61.

[Rev. a]: Tovar, A., Krahes alteuropäische Hydronymie und die westindogermanischen Sprachen. (Sitzungsberichte der Heidelberger Akademie der Wissenschaften, Phil.-Hist. Klasse, 1977. 2) Heidelberg 1977. *Indogermanische Forschungen* 82, 1977, 314-317.

1978

[a] Die Ausbildung der Sprachgemeinschaften in Osteuropa. Hellmann, M. (ed.), *Handbuch der Geschichte Rußlands.* Bd. 1 (Lfg. 2): *Von der Kiewer Reichsbildung bis zum Moskauer Zartum.* Stuttgart 1978, 102-121.

[b] *Indogermanistische Modelle und osteuropäische Frühgeschichte* (Akademie der Wissenschaften und der Literatur. Abhandlungen der Geistes- und Sozialwissenschaftliche Klasse. Jahrgang 1978, Nr. 1) Wiesbaden 1978.

[Rev. a]: Bynon, T., Historical Linguistics (Cambridge Textbooks in Linguistics). Cambridge, London, New York, Melbourne 1977. *Indogermanische Forschungen* 83, 1978, 370-374.

[Rev. b]: Collinder, B., Sprache und Sprachen. Einführung in die Sprachwissenschaft. Hamburg 1978. *Indogermanische Forschungen* 83, 1978, 364-367.

[Rev. c]: Palmer, L. R., Descriptive and Comparative Linguistics. A critical introduction. (Studies in General Linguistics) London 1972.

Indogermanische Forschungen 83, 1978, 367-370.

1979

[a] Etymologische Bemerkungen zu ahd. *huoba* "Hufe". Beck, H., D. + Denecke + Jankuhn, H. (eds), *Untersuchungen zur eisenzeitlichen und frühmittelalterlichen Flur in Mitteleuropa und ihrer Nutzung. Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas in den Jahren 1975 und 1976.* (Abhandlungen der Akademie der Wissenschaften in Göttingen. Philologisch-Historische Klasse, 3. Folge, Nr. 115, Teil 1) Göttingen 1979, 71-73.

[b] Zur Frage der Datierung iranischer Lehnwörter in den finnisch-ugrischen Sprachen. Gläser, Chr. + Pusztay, J. (eds), *Festschrift für Wolfgang Schlachter zum 70. Geburtstag.* (Veröffentlichungen der Societas Uralo-Altaica, Bd. 12), Wiesbaden 1979, 265-270.

[c] Das Hethitische in einem neuen Verwandtschaftsmodell. Neu, E. + Meid, W. (eds), *Hethitisch und Indogermanisch. Vergleichende Studien zur historischen Grammatik und zur dialektgeographischen Stellung der indogermanischen Sprachgruppe Altkleinasiens.* (Innsbrucker Beiträge zur Sprachwissenschaft, 25), Innsbruck 1979, 231-235.

[d] Lett. JUMIS, eine sprachwissenschaftliche Nachprüfung. *Humanitas Religiosa. Festschrift für Haralds Biezais zu seinem 70. Geburtstag dargebracht von Freunden und Kollegen.* Uppsala 1979, 261-267.

[e] Urheimat und Ausbreitung der Slawen. *Zeitschrift für Ostforschung* 28, 1979, 405-415.

[Rev. a]: Kahane, H., R. Kahane, Abendland und Byzanz: Sprache-Reallexikon der Byzantinistik (hrsg. von Peter Wirth) I, 345-640 (Heft 4-6, 1970-1976) Amsterdam (o.J.). *Indogermanische Forschungen* 84, 1979, 315-317.

1980

[a] Zur Etymologie des Wortes „Pflug". Beck, H., D. + Denecke + Jankuhn, H. (eds), *Untersuchungen zur eisenzeitlichen und frühmittelalterlichen Flur in Mitteleuropa und ihrer Nutzung. Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas in den Jahren 1975-1976.* (Abhandlungen der Akademie der Wissenschaften in Göttingen. Philologisch-Historische Klasse, 3. Folge, Nr. 116, Teil 2) Göttingen 1980, 77-81.

[Rev. a]: André, J., Les mots à redoublemenet en latin. (Étudese et Commentaires, 90) Paris 1978. *Indogermanische Forschungen* 85, 1980, 360-363.

[Rev. b]: Schmalstieg, W. R., An Old Prussian Grammar: The Phonology and Morphology of the Three Catechisms. Park, London 1974 (1975) *Indogermanische Forschungen* 85, 1980, 385-392.

[Rev. c]: Schmalstieg, W. R., Studies in Old Prussian. A Critical Review of the Relevant Literature in the Field since 1945. Park, London 1976 (1977). *Indogermanische Forschungen* 85, 1980, 385-392.

1981

[a] Die alteuropäische Hydronymie. Stand und Aufgaben ihrer Erforschung. *Beiträge zur Namenforschung* Neue Folge 16, 1981, 1-12.

[b] Das Verhältnis Eigenname/Appellativum innerhalb der alteuropäischen Hydronymie. Rymut, K. (ed.), *Proceedings of the 13th International Congress of Onomastic Sciences*. Cracow, August 21-25, 1978. Vol. 1. Wroclaw, Warszawa, Kraków, Gdańsk, Łódž 1981, 91-100.

1982
[a] Der Begriff "Alteuropa" und die Gewässernamen in Polen. *Onomastica* 27, 1982, 55-69.
[b] Boiotisch und Koine. Tischler, J. (ed.), *Serta Indogermanica*. Festschrift für Günter Neumann zum 60. Geburtstag. (Innsbrucker Beiträge zur Sprachwissenschaft, 40) Innsbruck 1982, 339-343.
[c] "Jesus, ich leid". Meid, W. + Ölberg, H. + Schmeja, H. (eds), *Sprachwissenschaft in Innsbruck*. (Arbeiten von Mitgliedern und Freunden des Instituts für Sprachwissenschaft der Universität Innsbruck aus Anlaß des fünfzigjährigen Bestehens des Instituts im Jahre 1978 und zum Gedenken an die 25. Wiederkehr des Todestages von Hermann Ammann am 12. September 1981). Innsbruck 1982, 205-208.
[Rev. a]: Schramm, G., Eroberer und Eingesessene Geographische Lehnnamen als Zeugen der Geschichte Südosteuropas im ersten Jahrtausend n. Chr. Stuttgart 1981. *Beiträge zur Namenforschung* 17, 1982, 461-466.
[Rev. b]: Schmitz, A., Die Orts- und Gewässernamen des Kreises Ostholstein. (Kieler Beiträge zur deutschen Sprachgeschichte, 3), Neumünster 1981. Beiträge zur Namenforschung, 17 (1982) s. 250-252.

1982/1983
[a] Der griechische Gewässername *Asōpós*. *Ponto-Baltica* 2-3, 1982-1983, 9-13.

1983
[a] Zum baltischen Dialekt auf der Kurischen Nehrung. *Indogermanische Forschungen* 88, 1983, 257-268.
[b] Gewässernamen zwischen Danuvius und Don. Lauer, R. + Schultze, B. (eds), *Slautsches Spektrum. Festschrift für Maximilian Braun zum 80. Geburtstag*. (Opera Slavica, Neue Folge, Band 4) Wiesbaden 1983, 410-422.
[c] Gibt es indogermanische Handwerksbezeichnungen? Jankuhn, H. + Janssen, W. + Schmidt-Wiegand, R. +Tiefenbach, H. (eds), *Das Handwerk in vor- und frühgeschichtlicher Zeit*. Teil II: *Archäologische und philologische Beiträge. Bericht über die Kolloquien der Kommission für die Altertumskunde Mittel- und Nordeuropas in den Jahren 1977 bis 1980*. (Abhandlungen der Akademie der Wissenschaften in Göttingen. Philologisch-Historische Klasse, 3. Folge, Nr. 123), Göttingen 1983, 636-641.
[d] Griechenland und Alteuropa im Blickfeld des Sprachhistorikers. *ΕΠΙΣΤΗΜΟΝΙΚΗ ΕΠΕΤΗΡΙΔΑ ΤΗΣ ΦΙΛΟΣΟΦΙΚΗΣ ΣΧΟΛΗΣ ΤΟΥ ΑΡΙΣΤΟΤΕΛΕΙΟΥ ΠΑΝΕΠΙΣΤΗΝΙΟΥ ΘΕΣΣΑΛΟΝΙΚΗΣ* 21, 1983, 397-412.
[e] Die pragmatische Komponente in der Grammatik. Rauh, G. (ed.), *Essays on Deixis*. (Tübinger Beiträge zur Linguistik, 188) Tübingen 1983, 61-78.

[f] Prußen, Slawen und die Goten in Südrußland. *Zeitschrift für Ostforschung* 32, 1983, 381-384.

[g] Das sprachgeschichtliche Problem Alteuropa. *Sprachwissenschaft* 8, 1983, 101-113.

[Rev. a]: Tovar, A., Die Indoeuropäisierung Westeuropas (Innsbrucker Beiträge zur Sprachwissenschaft, 28), Innsbruck 1982. *Beiträge zur Namenforschung.* 18, 1983, 223-224.

1984

[a] Alteuropa und das Baltikum. *Baltistica* 20, 1984, 4-10.

[b] Baltische und alteuropäische Namen längs der Ostseeküste. *Zeszyty Naukowe Wydzialu Humanistycznego Uniwersytetu Gdańskiego. Prace Językoznawczē* 10, 1984, 133-139.

[c] Dnjepr. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke und R. Wenskus). *Reallexikon der Germanischen Altertumskunde.* Bd. 5. Berlin – New York 1984, 505-508.

[d] Don. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke und R. Wenskus), *Reallexikon der Germanischen Altertumskunde.* Bd. 5. Berlin – New York 1984, 604-605.

[Rev. a]: Gindin, L. A., Drevnejšaja onomastika vostočnych Balkan (Frako-chettoluvijskie i frako-maloazijskie izoglossy). Sofia 1981. *Indogermanische Forschungen* 89, 1984, 362-363.

[Rev. b]: Solta, G. R., Einführung in die Balkanlinguistik mit besonderer Berücksichtigung des Substrats und des Balkanlateinischen. Darmstadt 1980. *Indogermanische Forschungen* 89, 1984, 359-362.

1985

[a] Donau. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke und R. Wenskus), *Reallexikon der Germanischen Altertumskunde.* Bd. 6. Berlin – New York 1985, 14-16.

[b] Duria. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mittwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke† und R. Wenskus), *Reallexikon der Germanischen Altertumskunde.* Bd. 6. Berlin – New York 1985, 294-295.

[c] Düna. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. K. Ranke† und R. Wenskus), *Reallexikon der Germanischen Altertumskunde.* Bd. 6. Berlin – New York 1985, 241-244.

[d] Die Flussnamen Λονδίας und Ἀῶς. Δωρημα στον I. Καραγιαννοπουλο. Βυζαντινά 13. Thessaloniki 1985, 315-320.

[e] (+ Beifuss, K. + Czepluch, H. + Tuschinsky, J.) Zur Klassifikation pragmatischer Elemente in der grammatischen Beschreibung. *Sprachwissenschaft* 10, 1985, 81-106.

[f] Das Lateinische und die Alteuropa-Theorie. *Indogermanische Forschungen* 90, 1985, 129-146.

[g] Wasser und Stein. Ölberg, H. M. + Schmidt, G. + Bothien, H. (eds), *Sprachwissenschaftliche Forschungen. Festschrift für Johann Knobloch.* Zum 65.

Geburtstag am 5. Januar 1984 dargebracht von Freunden und Kollegen. (Innsbrucker Beiträge zur Kulturwissenschaft, Bd. 23) Innsbruck 1985, 385-391.

[Rev. a]: Kilian, L., Zum Ursprung der Indogermanen. (Habelt Sachbuch, 3) Bonn 1983. *Indogermanische Forschungen* 90, 1985, 278-280.

1986

[a] Alteuropa und das Germanische. Beck, H. (ed.), *Germanenprobleme in heutiger Sicht*. Berlin, New York 1986, 155-167.

[b] Bemerkungen zur äolischen Konjugation der verba contracta. Etter, A. (ed.), *o-o-pe-ro-si*. *Festschrift für Ernst Risch zum 75. Geburtstag*. Berlin – New York 1986, 245-252.

[c] Bemerkungen zum Werden des "Germanischer". Hauck, K. + Kroeschell, K. + Sonderegger, S. + Hüpper, D. + von Olberg, G. (eds), *Sprache und Recht. Beiträge zur Kulturgeschichte des Mittelalters. Festschrift für Ruth Schmidt-Wiegand zum 60. Geburtstag*. Berlin – New York 1986, 711-721.

[d] Bier aus Olbia. *Archaeologische Mitteilungen aus Iran* 19, 1986, 187-190.

[e] Zur Dehnstufe in Baltischen und Slavischen. Olesch, R. + Rothe, H. (eds), *Festschrift für Herbert Bräuer zum 65. Geburtstag am 14. April 1986*. (Slavistische Forschungen, 53) Köln – Wien 1986, 457-466.

[f] Elbe. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. *Beck, H. Jankuhn, K. Ranket und R. Wenskus)*. *Reallexikon* der Germanischen Altertumskunde Bd. 7. Berlin – New York 1986, 100-101.

[i] Die "Germanismen" im sog. Polnisch-Jatvingischen Glossar. *Indogermanische Forschungen* 91,1986, 273-286.

[j] Eine revidierte Skizze einer allgemeinen Theorie der Wortarten. Swiggers, P. + van Hoecke, W. + Martinet, A. + Robins, R. H. + Schmid, W. P. (eds.), *Mot et parties du discours / Word and word Classes / Wort und Wortarten*. (La Pensée Linguistique, 1) Leuven – Paris 1986, 85-99.

[k] (+ Swiggers, P. + van Hoecke, W. + Martinet, A. + Robins, R. H.) (eds.), *Mot et parties du discours / Word and word Classes / Wort und Wortarten*. (La Pensée Linguistique, 1) Leuven –Paris 1986.

[Rev. a]: Blümel, W., Die aiolischen Dialekte. Phonologie und Morphologie der inschriftlichen Texte aus generativer Sicht (Ergänzungshefte zu KZ, 30) Göttingen 1982. *Indogermanische Forschungen* 91, 1986, 385- 389.

[Rev. b]: Brauer, W. R., Prussische Siedlungen westlich der Weichsel. Versucht einer etymologischen Deutung heimatlicher Flurnamen. (Schriften der Herder-Bibliothek Siegerland e. V., Bd. 11) Siegen 1983 *Zeitschrift für Ostforschung* 35, 1986, 442-446.

1987

[a] Beiträge zur Bestimmung der baltischen Westgrenze. *Baltistica* 23, 1987, 4-12.

[b] (+ Rymut, K. + Udolph, J.) *Hydronymia Europaea. Einführung, Ziele, Grundlagen, Methoden. (Zeszyt wstępny, Cel, Metoda, Zasady redakcyjne)*. (Kommission für Vergleichende Sprachwissenschaft der Akademie der Wissenschaften und der Literatur, Mainz) Stuttgart 1987.

[c] 'Indo-European' – 'Old European' (On the reexamination of two linguistic terms). Skomal, S. N. + Polomé, E. C. (eds.), *Proto-Indo-European: The archaeology of a linguistic problem. Studies in honor of Marija Gimbutas.* Washington 1987, 322-338.

[d] Zur thrakischen Grabinschrift aus Kölmen. *Zeitschrift für Vergleichende Sprachforschung* 100, 1987, 351-357.

[e] VIDIVARII. Hentschel, G. + Ineichen, G. + Pohl, A. (eds), *Sprach- und Kulturkontakte im Polnischen. Gesammelte Aufsätze für A. de Vincenz zum 65. Geburtstag.* (Specimina Philologiae Slavicae, Supplementband 23). München 1987, 349-358.

[f] Zur Wortart der Kardinalia. Bergmann, R. + Tiefenbach, H. + Voetz, L. (eds.), *Althochdeutsch.* Bd. 1: *Grammatik. Glossen und Texte.* (Germanische Bibliothek N.F., 3. Reihe: Untersuchungen). Heidelberg 1987, 459-463.

[Rev. a]: Brozio, W., Untersuchungen und Ergebnisse zur Herkunft des Familiennamens "Brozio" und anderer auf "-zio" endender masurischer Familiennamen, als Grundlage weiterer familien und siedlungsgeschichtlicher Forschungen. (Altpreußische Geschlechterkunde. Neue Folge. Blätter des Vereins f. Familienforschung in Ost- und Westpreußen, 13), Hamburg 1982. *Beiträge zur Namenforschung* 22, 1987, 317-318.

1988

[a] Dialekt(e). Schmitt, H. H. + Vogt, E. (eds), *Kleines Wörterbuch des Hellenismus.* Wiesbaden 1988, 127-130.

[b] Koine. Schmitt, H. H. + Vogt, E. (eds.), *Kleines Wörterbuch des Hellenismus.* Wiesbaden 1988, 373-374.

[c] Sprache. Schmitt, H. H. + Vogt, E. (eds.), *Kleines Wörterbuch des Hellenismus.* Wiesbaden 1988, 3647-657.

[d] Noch einmal zur Frage eines westfinnischen Substrats in Litauen. *Zeitschrift für Ostforschung* 37, 1988, 161-174.

[e] Hethitische Etyma zu alteuropäischen Gewässernamen. Neu, E. + Rüster, C. (eds.), *Documentum Asiae Minoris Antiquae. Festschrift für Heinrich Otten zum 75. Geburtstag.* Wiesbaden 1988, 307-315.

[f] Zu einigen keltisch-baltischen Namen-Entsprechungen. Kosta, P. + Lerch, G. + Olivier, P. (eds.), *Studia Indogermanica et Slavica. Festgabe für Werner Thomas zum 65. Geburtstag.* (Specimina Philologiae Slavicae, Supplementband 26) München 1988, 49-56.

1989

[a] Alteuropa und Skandinavien. *Namenkundliche Informationen* 56, 1989, 14-28.

[b] Alteuropa und das Thrakische. Lauer, R. + Schreiner, P. (eds.), *Kulturelle Traditionen in Bulgarien. Bericht über das Kolloquium der Südosteuropa-Kommission* 16.-18. Juni 1987. (*Abhandlungen der Akademie der Wissenschaften in Göttingen*, Philologisch-Historische Klasse, 3. Folge. Nr. 177) Göttingen 1989, 36-43.

[c] Ems. Hoops, J. (Zweite völlig neu bearbeitete und stark erweiterte Auflage unter Mitwirkung zahlreicher Fachgelehrter, hrsg. von H. Beck, H. Jankuhn, K. Ranke† und R. Wenskus), *Reallexikon der Germanischen*

Altertumskunde, Bd. 7. Berlin – New York 1989, 274.

[d] Zu den germanisch-baltischen Sprachbeziehungen: Die Komparative der Adjektive. Heller, K. + Panagl, O. + Tischler, J. (eds.), *Indogermanica Europaea.* Festschrift für Wolfgang Meid zum 60. Geburtstag am 12.11.1989. (Grazer Linguistische Monographien 4), Graz 1989, 241-250.

[e] Namen und Namenforschung. *Akademie der Wissenschaften und der Literatur Mainz 1949-1989.* Mainz, Wiesbaden 1989, 259-267.

[f] *Nehrungskurisch. Sprachhistorische und instrumentalphonetische Studien zu einem aussterbenden Dialekt.* (Akademie der Wissenschaften und der Literatur. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse. Jahrgang 1989, Nr. 2,) Stuttgart 1989.

[g] Spuren baltischer Sprachen in Pommern. Rymut, K. (ed.), *Hydronimia słowiańska. Materiały z IX konferencji Komisji Onomastyki Słowianskiej przy Międzynarodowym Komitecie Slawistów.* Mogilany, 16-18 IX 1986 r. Wrocław – Warszawa – Kraków – Gdańsk – Łódž 1989, 119-128.

[h] Vulgärlateinisches im ältesten Latein. Klenk, U. + Körner, K.-H. + Thümmel, W. (eds.), *Variatio Linguarum, Beiträge zu Sprachvergleich und Sprachentwicklung.* Festschrift zum 60. Geburtstag von Gustav Ineichen. Stuttgart 1989, 261-267.

[i] *Wort und Zahl. Sprachwissenschaftliche Betrachtungen der Kardinalzahlwörter.* (Akademie der Wissenschaften und der Literatur. Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse. Jahrgang 1989, Nr. 8), Stuttgart 1989.

1990

[a] Gewässernamenwörterbücher. Hausmann, F. J. + Reichmann, O. + Wiegand, H. E. + Zgusta, L. (eds.), *Wörterbücher. Ein internationales Handbuch zur Lexikographie.* 2. Teilband. Berlin –New York 1990, 1284-1291.

[b] Zum Namen der Dosse. *Namenkundliche Informationen* 58, 1990, 1-6.

[c] Zum vedischen Flußnamen *Kuliśī.* Holzer, G. (ed.), *Croatica – Slavica – Indoeuropaea. Wiener Slavistisches Jahrbuch Ergänzungsband VIII.* (Österreichische Akademie der Wissenschaften. Balkankommission (Linguistische Abteilung). Institut für Slavistik der Universität Wien) Wien 1990, 205-207.

[Rev. a]: Diebold, Jr., A. R., The Evolution of Indo-European Nomenclature for Salmonid Fish: The Case of 'Huchen' (*Hucho Spp.*). (Journal of Indo-European Studies, Monograph Series, 5) Washington 1986. *Indogermanische Forschungen* 95, 1990, 247-248.

[Rev. b]: Kilian, L., Zum Ursprung der Germanen (Habelt Sachbuch, 4) . Bonn 1988. *Indogermanische Forschungen* 95, 1990, 329-331.

[Rev. c]: Schmitz, A., Die Orts- und Gewässernamen des Kreises Plön (Kieler Beiträge zur deutschen Sprachgeschichte, 8). Neumünster 1986 *Indogermanische Forschungen* 95, 1990, 369-371.

1991

[a] Die Hydronymie in baltisch-polnischen Grenzgebieten. Eichler, E. (ed.), *Probleme der älteren Namenschichten. Leipziger Symposion 21. bis 22. November 1989.* Heidelberg 1991, 33-42.

---

[b] Die Lexikographie der baltischen Sprachen II: Lettisch. Hausmann, F. J. +. Reichmann, O +Wiegand, H.E. + Zgusta, L. (eds.), *Wörterbücher. Ein internationales Handbuch zur Lexikographie*, 3. Teilband. Berlin – New York 1991, 2354-2361.

[c] Nhd. *See* und Alteuropa. Emmerick, R. E. + Weber. D. (eds.), *Corolla Iranica, Papers in honour of Prof. Dr. D. N. MacKenzie on the occasion of his 65th birthday on April 8th, 1991.* Frankfurt/M. – Bern – New York – Paris 1991, 151-156.

[d] Skawa. In.: *Zeszyty naukowe wyzszej szkoly pedagogicznej im. Powstańców Śląskich w Opolu,* Językoznawstwo XIII. Opole 1991, 279-282.

[e] Der Name der Havel: ein methodolodisches Problem? Eichler, E. + Flascher, W. + Walter, H. + Billy, I. (eds.): *Studia onomastica VII.: Bernard Schlimpert zum 60. Geburtstag. VIII.* Leipzig 1991, 53-58.

1992

[a] Der Name der Kuren. *Uniwersytet Gdański, Filologia Polska, Prace Językoznaweze* 16, 1992, 229-235.

[b] Der Namenhorizont im germanischen Osten: Suebi und Veneti. Neumann, G. + Seemann, H. (eds.), *Beiträge zum Verständnis der Germania des Tacitus.* Teil II. *Bericht über die Kolloquien der Kommission für die Altertumskunde Nord- und Mitteleuropas im Jahre 1986 und 1987.* Göttingen 1992, 190-202.

[c] Die Stellung des Baltischen im Kreise der indogermanischen Sprachen. Barschel, B. + Kozianka, M. + Weber, K. (eds.), *Indogermanisch, Slawisch und Baltisch. Materialien des vom 21. – 22. September 1989 in Jena in Zusammenarbeit mit der Indogermanischen Gesellschaft durch geführten Kolloquiums.* (Slavistische Beiträge, Band 285) München 1992, 201-222.

1993

[a] *Zwischen Baltikum und Balkan: sprachwissenschaftliche Bemerkungen zu einer alten Grenzzone* (Sitzungsberichte der Sächsischen Akademie der Wissenschaften zu Leipzig Philologisch-Historisch Klasse, Band 132, Heft 5). Berlin 1993.

[b] Bemerkungen zu litauisch *giñtaras* 'Bernstein'. Grinda, K. R. + Wetzel, C.-D. (eds.), *Anglo-Saxonica. Beiträge zur Vor- und Frühgeschichte der englischen Sprache und zur altenglischen Literatur; Festschrift für Hans Schabram zum 65. Geburtstag.* München 1993,. 425-430.

[c] Zur Schichtung der Gewässernamen. Debus, F. (ed.), *Deutsch-slawischer Sprachkontakt im Lichte der Ortsnamen. Mit besonderer Berücksichtigung des Wendlandes.* (Kieler Beiträge zur deutschen Sprachgeschichte), Neumünster 1993, 37-46.

[d] Spätphrygische Kleinigkeiten. Heidermanns, F. + Rix, H. + Seebold, E. (eds.) *Sprachen und Schriften des antiken Mittelmeerraums. Festschrift für Jüngen Untermann zum 65. Geburtstag.* (Innsbrucker Beiträge zur Sprachwissenschaft), Innsbruck 1993, 377-383.

[e] Weiteres Material zu den preußisch-kurischen Sprachbeziehungen *Linguistic und Oriental Studies from Poznań* – Monograph Supplement 2. Contributions to Baltic Linguistics. Poznań 1993, 7-72.

[Rev. a]: Schmitz, A., Die Ortsnamen des Kreises Herzogtum Lauenburg

und der Stadt Lübeck. (Kieler Beiträge zur deutschen Sprachgeschichte, 14) Neumünster 1990. Indogermanische Forschungen 98, 1993, 365-368.

1994
[a] *Linguisticae scientiae collectanea. Ausgewählte Schriften von Wolfgang P. Schmid anlässlich seines 65. Geburtstage*, Berlin 1994.

1995
[a] (+ Bernowskis, I.) (eds.) *Nehrungskurisch II: sprachhistorische und instrumentalphonetische Studien zu einem aussterbenden Dialekt.* Mainz – Stuttgart 1995.
[b] Zur Charakteristik des Nehrungskurischen. Schmid, W. P. + Bernowskis, I (eds.) *Nehrungskurisch II: sprachhistorische und instrumentalphonetische Studien zu einem aussterbenden Dialekt.* Mainz – Stuttgart 1995. 9-15.
[c] *io*-präsentische Verben in neuhrungskurischen Texten. *Linguistica Baltica* 4, 1995, 55-60.

1996
[a] *Drawa, Sawa, Skawa* und verwandte Bildungen. Rymut, K. (ed.) *Hydronimia słowiańska II*. Kraków 1996, 85-92.

1997
[a] Idronimi antico-europei. *Res Balticae* 1997, 89-102.

1998
[a] Das baltische Zentrum in der alteuropäisches Hydronymie. *Baltistica* 33/2, 1998, 145-153.
[b] Methodische Bemerkungen zur Klassifikation: Alteuropäisch. *Onomastica Slavogermanica* 23, 1998, 21-28.
[c] Altpreussisch-Lettische Sprachbeziehungen. – *Baltistic*a 33/2, 1998, 199-208.

1999
[a] Noch einmal zu den abgeleiteten −$\bar{a}$- und −$\bar{e}$- stämmigen Verben. Anreiter, P. – Jerem, E. (eds), *Studia Celtica et Indogermanica*. Budapest, 1999, 425-432.
[b] Zu lit. *laĩvas*, lett. *laiva* "Boot". *Archiv für bulgarische Philologie* 3, 1999, 153-158.

Wolfgang P. Schmid was a collaborator on the Indo-European bibliography *Indogermanischen Chronik* in the Viennese journal *Die Sprache*, specializing in Baltic languages. His contributions were regular, overall totaling 22 notes:

13 (1967): 169-173;

14 (1968): 107, 222-227;
15 (1969): 105-109, 224-227;
16 (1970): 116-119, 224-227;
17 (1971): 110-116, 227-229;
18 (1972): 106-113, 234-237;
19 (1973): 118-120, 252-257;
20 (1974): 96-102, 210-213;
21 (1975): 110-112, 247-253;
22 (1976): 111-113, 221-225;
23 (1977): 119-121, 232-234;
24 (1978): 116-120, 232-241;
25 (1979): 114-118, 241-243;
26 (1980): 124-127, 243-247;
27 (1981): 116-120, 246-248;
28 (1982): 115-119, 239-244;
29 (1983): 146-151, 243-244;
30 (1984): 149*-151*, 286*-291*;
31 (1985): 204-214, 414-421;
32 (1986): 226-230, 710-715;
33 (1987): 432-451;
34 (1988-1990): 935-962.

Schmid´s bibliography till 1953 was published in his "selected writings" (1994), edited for his 65th birthday, which was the main source of our bibliographic data. A Festschrift was published for his 70th bithday: *Namenkundliche Beiträge* : Wolfgang P. Schmid zum 70. Geburtstag / Akademie der Wissenschaften und der Literatur, Mainz. Friedhelm Debus ... (Hrsg.). Stuttgart : Steiner (Akademie der Wissenschaften und der Literatur <Mainz>: Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse / Akademie der Wissenschaften und der Literatur, Mainz ; Jg. 2001, Nr. 1).

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Johann Knobloch
(*5 January 1919 – †25 July 2010)

This portrait with a selective bibliography should commemorate last year's decease of universal linguist Johann Knobloch, who did not cease with his rich publishing activity even in his advanced age. To a significant degree, he touched on linguistic themes both universal, where he acquired a distinctive perspective by studying original Caucasian languages, and Indo-European, in which he established his position as a classical philologist, Germanist and Slavicist and last but not least as an expert in Romany dialects and modern Balkan languages. A noteworthy part of his scholarly production includes themes of comparative mythology. We believe that the career and particularly the work by Johann Knobloch represent useful inspiration to all those interested in the above-mentioned themes.

Johann Knobloch was born on January 5th, 1919 in Vienna as the third child of a Major in the Austro-Hungarian army. After the dissolution of monarchy, the family moved to Prague, where his father died in 1920. His widowed mother moved to her parents' home in German Wiesbaden. Johann began school there at the age of four and thanks to a local teacher he was able to continue until he was six. At that time, the court decided that his guardian would become his father's brother living in Znojmo. Prior to attending school, he had to return to kindergarten, where he learned Czech. After five years in elementary school, he continued his studies at a German grammar school. In 1935, he undertook an adventurous journey to the Balkans even then led by his interest in the modern Balkan languages, particularly Albanian. A year later he spent his vacation studying French at *Alliance française* in Paris. In 1938, he took his school leaving exams at the grammar school. One of the subjects in the exam was Czech. In the same year he begins his studies at

the university in Vienna. Among his teachers were W. Havers (Indo-European linguistics), F. Liewehr (Slavistic), E. Frauwallner (Indology), H. Kofler (Semitic languages, especially Hebrew), W. Christian (cuneiform), W. Czermak (Egyptology), and R. Bleichsteiner (Caucasian languages). He engaged privately in studying Albanian from N. Jokl.

In December 1939 he was drafted into the Wehrmacht and the following year he was transferred to France where he suffered a serious injury. As JK said himself, the loss of his leg probably spared him from later losing his life, the fate of all his fellow students from the University of Vienna. As a disabled person, he was allowed to return to university, where, in 1944, he defended his dissertation on German Romany people *Sinti* in Burgenland and received his doctorate. It should be noted that the Romany people, whose language and customs he recorded, were sent to concentration camps. This unique work was published in 1953. At the University of Vienna, he also passed the state exam in Czech and Russian.

In the second half of the 40's, he made his living by teaching languages at a language school. He taught Czech, Russian, German for foreigners, Latin and Greek. Up until 1949, he did not have any citizenship - only then was he granted Austrian citizenship. In 1951, he submitted his habilitation thesis *Zur Vorgeschichte des indogermanischen Verbums* at the philosophical faculty of Innsbruck University. In the same year, he became the honorary assistant of H. Ammann in the Seminar for Comparative Linguistics at Innsbruck University. In 1953, he worked one semester as a lector of Russian at the university in Bonn, and after that as a professor at the university in Greifswald. A year later he became the director of the Department for Comparative Linguistics there. However, in 1957 he returned to Innsbruck, where he was appointed first an associate professor and later full professor of Comparative Indo-European Linguistics (1961). Meanwhile, he refused the same position in Mainz (1960), but in 1963 he accepted the offer of professorship after G. Deeters in Bonn. Four years later he also became the head of the Department of General Linguistics and occupied a double chair for General and Comparative Linguistics.

During that time he also obtained German citizenship (1965). In 1984, he retired but he still retained some lectures, regularly organized the "Linguistic colloquium" for both German and foreign linguists, and still continued to publish and popularize linguistics. Throughout this entire period, even the emeritus, he remained an indefatigable propagator of the Czech language. For as long as the Czech embassy resided in Bonn, JK was a regular honorary guest on the day of Czech bank holidays (28th October). In the last years of his long life he suffered from Alzheimer's and ceased to communicate with the people around him. Fortunately the memories of him retained by his students, colleagues and friends, and particularly his work, continue on even after his death in August 2010. *Sripta manet*

Knobloch's bibliography is extraordinarily rich, and comprises hundreds of articles and an even greater number of reviews. Just a selection is listed here. His most ambitious project was undoubtedly the *Sprachwissen-schaftliches Wörterbuch*, a detailed encyclopedia of general linguistics, which started publication in 1961 in Heidelberg, but remained unfinished, reaching the entries on the letter **G** (1998). In 1964 and 1967, together with his colleagues from the Bonn Linguistic Colloquium, he participated in the production of volumes 2 & 3 of the series "Europäische Schlüsselwörter" (Munich: Hueber). In 1974 he initiated the series *Semantische Hefte* (1974, 1975 Hamburg; 1976, 1981 Heidelberg). Since 1979 he participated in issuing the journal *Muttersprache: Zeitschrift zur Pflege und Erforschung der deutschen Sprache* (Wiesbaden). As editor or a co-editor, he assisted the publication of several Festschrifts and Gedankschrifts: *Amman-Festgabe*, I-II (Innsbruck 1953-54); *Natalicum Carolo Jax Septuagenario*, I-II (Innsbruck 1955); *Vorderasiatische Studien: Fs. für V. Christian* (Wien 1956); *Serta Philologica Aenipontana* (Innsbruck 1962); *Leo Weisgerber: Rhenania Germano-Celtica (Bonn 1969).* 1961 he organized and a year later published II. *Fachtagung für Indogermanische und Allgemeine Sprachwissenschaft (Innsbruck 1962).* He contributed dozens of entries to the encyclopedia *Die Weltliteratur. Biographisches, literarhistorisches und*

bibliographisches Lexikon in Übersicht und Stichwörtern, published in Vienna (1951-53-54). From his innumerable articles and papers, we select the following:

Bibliography

1950

(1950)   Volkskundliche Sinti-Texte. Berichte deutscher Zigeuner über ihre Stammessitten. *Anthropos* 45, 223-40.

1951

(1951a)   Ein Liebeslied der Sinti-Zigeuner. *Anthropos* 45, 1007.

(1951b)   Zur Vorgeschichte des indogermanischen Genitivs der *o*-Stämme aus *–sjo*. *Die Sprache* 2, 131-149. (1951c) Einige Bemerkungen zu den Verbalaffixen im Kabardinischen und im Sumerischen. *Abhandlungen der Österreichische Akademie der Wissenschaften* 87, 437-45.

1952

(1952)   Der Ursprung unserer Zahlwörter. *Die Pyramide* 2, 81-82.

1953

(1953a)   Gypsy tales concerning the 'Mulo'. *Journal for Gypsy Language Studies* 32, 124-32.

(1953b)   Romāni-Texte aus dem Burgenland (Eisenstadt: *Burgenländische Forschungen* 24).

(1953c)   La voyelle thématique *–e-/-o-* serait-elle un indice d'objet indo-européen? *Lingua* 3, 407-420.

1954

(1954a)   Wege und Ziele der indogermanischen Sprachwissenschaft. *Lexis* 3, 286-300.

(1954b)   Altitalisches. *Ammann Festgabe* II, Innsbruck, 34-40.

1955

(1955a)   Zur Erklärung des Genitivs Sing. fem. auf *–y* im Slawischen. *Wissenschaftliches Zeitschrift der Universität Greifswald* 4, 255-56.

(1955b)   Eine kabardinische Fassung des Motivs 'Wer ist stärker?' als Textprobe aus Kizburun (Baksan). *Anthropos* 567-576.

(1955c)   Reste von Singulativbildungen im Indogermanischen, In: *Fs. für Karl Jax*, Innsbruck, 207-10.

1956

(1956a)   Der Ausdruck des partitiven Verhältnisses im Slawischen und in einigen verwandten Sprachen. *Veröffentlichungen des Instituts für Slawistik* 8, 233-42.

(1956b)   Hethitische Etymologien (*šummittant-*, *humant-*), in: *Vorderasiatische Studien: Fs. für V. Christian*, Wien, 66-68.

(1956c)   Die historisch-komparative Methode und die allgemein
          vergleichende Methode. *Zeitschrift für Phonetik* 9, 331-35.
(1956d)   Zur Herkunft und Bedeutungsgeschichte von tschech. *švanda*.
          Zeitschrift für Slawistik 1, 85-92.

1958
(1958a)   Gallolat. *tucca* und ladin. *tocia*. *Die Sprache* 4, 108-10.
(1958b)   Ein kaukasisches Lehnwort in den klassischen Sprachen. *Die
          Sprache* 4, 198-200.
(1958c)   Zur faliskischen Ceres-Inschrift, *Rheinische Museum für
          Philologie* N.F. 101, 134-38.

1959
(1959)   Der Ursprung von nhd. Ostern, engl. Easter. *Die Sprache* 5,
          27.45.

1960
(1960)   Recherches sur le vocabulaire de la mission mérovingienne,
          Orbis 9, 427-437.

1961
(1961a)   Charakteristik und sprachliche Stellung des Georgischen,
          Atlantis 10, 550-555.
(1961b)   Kleine Beiträge zur russische Wortforschung, *Zeitschrift für
          Slawistik* 6, 602-605.
(1961c)   Zu armenisch *erkin* "Himmel", *erkir* "Erde", *Handes Amsorya*
          75, 541-44.

1962
(1962a)   Bemerkungen zur lateinischen Wortbildung, *Serta philologica
          Aenipontana*, Innsbruck, 359-61.

1964
(1964a)   N.S. Trubetzkoy: Der Bau der ostkaukasischen Sprachen,
          Wiener slavistisches Jahrbuch 11, 23-30.
(1964b)   Bausteine   zur   Lexikographie   der   Zigeunerdialekte.
          Anthropos 59, 128-58.
(1964c)   Lateinische Etymologien (*astūtus*, *īnsula*), *Zeitschrift für
          Phonetik* 17, 540-552.

1965
(1965a)   Haben die Slawen ihre Bezeichnung für Glas von den Goten
          übernommen? *Abhandlungen der Sachsischen Akademie der
          Wissenschaften zu Leipzig*, Phil-hist. Klasse 57, Hest 2, Berlin,
          211-215.
(1965b)   Vermeintliche gotische Lehnwörter im Slawischen, in:
          *Cyrillo-Methodianische Fragen: Acta Congressus historiae Slavicae
          Salisburgensis in memoriam Cyrilli et Methodii*, Wiesbaden, 168.

1966

(1966a) Jazykový odraz merovejsko-slovanských styků. *Studia Slavica Academiae Scientiarum Hungaricae* 12, 235-243.

(1966b) Zu den faliskischen Inschriften auf dem Schnabelkrüglein aus Altfalerii. *Die Sprache* 12, 48-49.

1967

(1967a) Lateinische Erbwörter oder mediterrane Kulturwörter?, in: *Atti e memorie del 1° Congresso internazionale di micenologia,* Città di Castello, 228-29.

(1967b) Nektar, in: *Beiträge zur Indogermanistik und Keltologie: Fs. für J. Pokorny,* Innsbruck, 39-43.

1968

(1968a) Probleme der nordkaukasischen Etymologie, in: *Verhandlungen des Zweiten Internationalen Dialektologenkongress,* Wiesbaden, 464-67.

(1968b) Zur Entstehung der germanischen und baltoslawischen Benennung des Pfluges. *Slavica* 8, 117-120.

1969

(1969a) Catull c53,5 und Cicero, *Rheinische Museum für Philologie* N.F. 112, 23-29.

(1969b) Deminuirte verbalabstrakta im Portuguesischen? *Archiv für das Studium der neueren Sprachen* 206, 201-03.

(1969c) Expresívne predpony v slovanských a románských jazykoch, *Jazykovedný asopis* 20, 141-47.

(1969d) Zwei indogermanische Gerätenamen, in: *Studi linguistici in onore di Vittore Pisani,* II, Brescia, 601-07.

1970

(1970a) Indogermanische Etymologien, in: *Actes du Xe Congrès International des Linguistes,* IV, Bucarest, 647-51.

(1970b) Zu apr. *Wissaseydis* 'Dienstag', in: *Donum Balticum: Fs. für Ch. Stang,* Stockholm, 270-72.

(1970c) Zur oskisch-lateinischen Wortforschung, *Zeitschrift für historische Sprachforschung* 84, 186.

1971

(1971a) Die indogermanische Benennung des Hundes, in: *Donum Indogermanicum: Fs. für A. Scherer,* Heidelberg, 39-40.

(1971b) Profanierte Heiligennamen, in: *Studien zur Namenkunde und Sprachgeographie: Fs. für K. Finsterwalder,* Innsbruck, 401-03.

(1971c) Deutsche historische Wortforschung (Aus Anlaß der 20. Auflage des 'Kluge-Mitzka', *Lingua* 26, 294-314.

1972

(1972a) Die Ratte, etymologisch betrachtet, *Rheinische Museum für Philologie* N.F. 115, 291-92.

(1972b) Rosenwasser. *Zeitschrift für slavische Philologie* 36, 339.

(1972c)   Zur   Entstehung   des   Terminus   "Systemzwang",
           Indogermanische Forschungen 77, 157-58.

1973
(1973a)   Aus dem Wortschatz der Soldaten und Seeleute in
           spätrömischer Zeit. Beiträge zur Lehrerfortbildung 8, 162-
           175.
(1973b)   Ethnolinguistik, in: *Lexikon der Germanistischen Linguistik*, ed.
           H.P. Althaus et al., Tübingen, 314-17.
(1973c)   Griechische Worterklärungen, in: *Proceedings of the 3rd
           International Cretological Congress*, Athens, 129-33.
(1973d)   Lat. *hellu , -ōnis* m. 'Prasser', *Die Sprache* 19, 63.
(1973e)   Mohn und Minze, *Glotta* 51, 98-100.

1974
(1974a)   Der Brachsen und der Stüber, *Zeitschrift für slavische Philologie*
           37, 371.
(1974b)   *Hornung* 'Februar': eine lateinische Lehnübersetzung?
           Zeitschrift für historische Sprachforschung 88, 122-25.
(1974c)   Lat. *vestīgium* '*Leitspur' und die Grundbedeutung der idg.
           Wurzel *steigh-. Zeitschrift für historische Sprachforschung* 88,
           126.
(1974d)   Kurd-Alægon i Volcānus, *Ėtimologija* 1972, 136-37.
(1974e)   Osk. **aiz* 'Vermögen' und die Beteilung mit irdischen
           Gütern, in: *Antiquitates Indogermanicae: Gs. für H. Güntert*,
           Innsbruck, 349-51.
(1974f)   Una denominazione indeuropea della signoria, *Incoltri
           Linguistici* 1, 89-90.

1975
(1975a)   Die oskische Fluchtafel Vetter 4, *Rendiconti dell' Istituto
           Lombardo di Scienze e Lettere, Classe di lettere e scienze morali e
           storiche* 109, 416-18.
(1975b)   Griech. κίνδυνος m. 'Gefahr' und das Würfspiel, *Glotta* 53, 78-
           81.
(1975c)   Lateinische   Wortforschung   und   indogermanische
           Etymologie, in: *Actes de la XIIᵉ conférence internationale études
           classiques "Eirene"*, Bukarest, 35-37.

1976
(1976a)   Die Brücke – eine griechisch-armenische Isoglosse?
           Zeitschrift für vergleichende Sprachforschung 89, 76-79.
(1976b)   Griech. βραβεύς 'Kamfrichter', *Glotta* 54, 99-100.
(1976c)   Eduard Sievers' Schallanalyse heute, in: *Proceedings of the 3rd
           World Congress of Phoneticians*, Tokyo, 161-73.

1977

(1977a) Berichte und Erzählungen württembergischer Zigeuner, in: *Zigeunerkundliche Forschungen* I, ed. J. Knobloch und I. Sudbrack, Innsbruck, 43-57.

(1977b) Der Name Schwalbe: eine griechisch-albanische Parallelbildung, in: *Akten des internationalen albanologischen Kolloquiums*, ed. H.M. Ölberg, Innsbruck, 335-37.

(1977c) Die Übersetzung von jungawest. *aēta-* m., *aētā-* f., *Aẖmosavluri pilologia* 4, 256-58.

(1977d) Das Problem der deutschen Monatsnamen, *Onoma* 21, 518-22.

(1977e) Lat. *fenus, pignus* und die Viehverstellung, *Rheinische Museum für Philologie* N.F. 120, 92-93.

(1977f) Problemi e metodi della paleontologia linguistica, in: *Paleontologia Linguistica: Atti del VI convegno*, Brescia, 19-38.

1978

(1978a) Lache, *Muttersprache* 88, 260.

(1978b) Neues zur oskischen Fluchtafel (Vetter 7), *Rheinisches Museum für Philologie* N.F. 121, 164-66.

(1978c) Untersuchungen zur umbrischen Wortkunde, *Rheinische Museum für Philologie* N.F. 121, 161-63.

(1978d) Die Quelle im Griechischen, *Glotta* 56, 48-50.

1979

(1979a) Bemerkungen zum tscherkessischen Wortschatz bei Pallas, in: *Wissenschaftgeschichtliche Beiträge zur Erforschung indogermanischer, finnisch-ugrischer und kaukasischer Sprachen bei Pallas*, ed. H. Haarmann, Hamburg, 139-42.

(1979b) Der tscherkessische Waldgott, in: A.S. Čikobava (Fs.), Tbilisi, 190-92.

(1979c) Die slawisch-griechische Benennung der Schwarzdrossel, *Glotta* 57, 76-77.

(1979d) Der Ursprung von nhd. "Schalk", got. "skalks" = Diener, Knecht, *Muttersprache* 89, 45-46.

(1979e) *Sprache und Religion*, 1.Band: Der älteste Mythos der Menschheit; Übersetzungsfehler in der Bibel, Heidelberg.

(1979f) Volkskundliche Sinti-Texte, *Saisons d'Alsace* N.S. 57, Strasbourg, 106-23.

1980

(1980a) Ethnolinguistik, in: *Lexikon der Germanistischen Lingistik*, ed. H.P. Althaus et al., 2. Aufl., Tübingen, 501-08.

(1980b) Griech. κόσμος, lat. *cōmis* und aksl. космъ, *Studia linguistica in honorem V.I. Georgiev*, Sofia, 310-11.

(1980c) Lat. *amplus*, gr. ἄμπελος und Verwandtes, *Rheinische Museum für Philologie* N.F. 123, 187-88.

1981

(1981a)   Ein rätselhaftes tschechische Wort und seine Deutung, *Zeitschrift für slavische Philologie* 42, 75-76.

(1981b)   Gr. κέραμος m. 'Töpfererde, Ziegel(dach), auch: 'unterirdisches Gefängnis (und Fass)', *Rheinische Museum für Philologie* N.F. 124, 95-96.

(1981c)   Ein südossetischer Text [mit G. Deeters], in: *Monumentum G. Morgenstierne* I, Leiden, 99-102.

(1981d)   Indogermanische Wurzelsemantik, *Lingua* 54, 41-46.

(1981e)   Wörter und Sachen im nachrömischen Europa, in: *Wörter und Sachen im Lichte der Bezeichnungsforschung*, ed. R. Schmid-Wiegand, Berlin, 41-51.

1982

(1982a)   Der Name der Kentauren, in: *Serta Indogermanica: Fs. für G. Neumann*, Innsbruck, 129-31.

(1982b)   Gotisch *ni þe haldis* und frz. *ne … pas*, in: *Sprachwissenschaft in Innsbruck: Gs. für H. Ammann*, Innsbruck, 91-93.

(1982c)   Von menschenfressenden Indogermanen und von fleischfressenden Särgen, *Glotta* 60, 2-7.

(1982d)   Eine gräcolateinische Krankheitsbezeichnung im Romanischen, *Rheinische Museum für Philologie* N.F. 125, 190-91. (1982e) König Priamos' Name, *Glossologia* 1, 71.

1983

(1983a)   Der Ursprung von tschech. *šaršún* "Schwert", *Zeitschrift für slavische Philologie* 43, 174.

(1983b)   Soziolinguistische Probleme in der Bundesrepublik Deutschland, in: *Proceedings of the XIIIth Int. Congress of Linguists*, Tokyo, 329-34.

(1983c)   *Sprache und Religion*, 2. Band, Heidelberg.

(1983d)   Schwierige Wörter im Griechischen, *Fs. für R. Muth*, Innsbruck, 193-94.

1984

(1984a)   Bastarnen und Bastarde, *Balkansko ezikoznanie* 27, 57-60.

(1984b)   Der griechische Ursprung von ne. *breechs* "Beinkleid", *Sprachwissenschaft* 9, 85-87.

1985

(1985a)   Der Name der Langobarden, in: *Giessener Flurnamen-Kolloquium*, Heidelberg, 391-394.

(1985b)   Zu fr. *bonnet* "Mütze", *Zeitschrift für romanische Philologie* 101, 405-06.

(1985c)   Zur Deutung der Aufschriften auf zwei kyprischen Trinkflaschen, *Glossologia* 2-3, 169-71.

(1985d)   Der Drachentöter im Griechischen, *Sprachwissenschaft* 10, 7-9.

(1985e)   Zur Blutrache im Indogermanischen, *Sprachwissenschaft* 10, 399-400.

1986

(1986a) Zwei slawische etymologien, *Zeitschrift für Slawistik* 31/5, 738-739.

(1986b) Kulturgeschichtliche bemerkenswerte slawische Wörter, in: *Festschrift für H. Bräuer*, ed. R. Olesch, H. Roth, Köln, 249-252.

(1986c) Italokeltisches Isoglossen im Sachgebiet des Kerbholzes, *Diachronica* 3/1, 127-129.

(1986d) *Sprache und Religion*, Bd. 3: *Weihnachten und Ostern*, Heidelberg.

1987

(1987a) "Untersuchungen zu kabardinischen Farbenbezeichnungen", in: *A world of language. Papers presented to S.A. Wurm on his 65th birthday*, ed. D.C. Laycock, W. Winter, Canberra, 365.

(1987b) "Zwei fachsprachliche Entlehnungen im Tschechischen", *Zeitschrift für slavische Philologie* 47/1, 162-163.

(1987c) "Engl. Godfather 'Pate', dt. *Gote* 'Patin'", *Rendiconti dell' istituto lombardo di Scienze e Lettere, Classe di lettere e scienze morali e storiche* 119, 1985[87]6 43-46ю

(1987d) "Über das Schweigen im Altsächsisch und in indogermanischen Sprachen überhaupt", in: *Sprache, Sprachen, Sprechen: Festschrift für H.M. Ölberg*, ed. H. Ortner et al., Innsbruck, 11-14.

(1987e) "Lat. *dalīvus* 'lässig' oder 'töricht'", *Glotta* 65, 133-134.

(1987f) "*Ast, Ranke* und *Rebe* im indogermanischen Sprachen", *Indogermanische Forschungen* 92, 29-32.

(1987g) "Die Kleidung der indogermanen und ihrer Erben: Schuhwerk", in: *Studien zum idg. Wortschatz*, ed. W. Meid, Innsbruck, 65-66.

1988

(1988a) "Ostgermanische Relikte im bairisch-österreichischen Sprachraum", in: *Languages und Cultures: Studies in Honor of E.C. Polomé*, ed. M.A. Jazayery, W. Winter, Berlin, 347-352.

(1988b) "*Eileithyia* und *Amaltheia*, die Helferinnen bei Geburt und Säuglingsbetrenung wortgeschichtliche Überlegungen", in: *Studia indogermanica et slavica: Festgabe für W. Thomas*, ed. P. Kosta et al., München, 13-15.

(1988c) "Indoevropejskaja i transindoevropejskaja ětimologija", *Ėtimologija* 1985[88], 126-131.

(1988d) "'Female speech' in Greek, Armenian, and Albanian", *Journal of Indo-European Studies* 16, 123-125.

(1988e) "Name und Herkunft der Göttin Artemis", in: *Gedankband für H. Herter*, 2. Ausgabe, Athéna, 214-215.

1989

(1989a) "Tschech. *pešek* 'Plumpsack' und *pendrek* 'Gummiknüttel'", *Zeitschrift für slavische Philologie* 49, 171-172.

(1989b) "Zwei lateinische Tierbezeichnungen", *Sprachwissenschaft*

14/2, 272-279.

(1989c)   "Alb und Vamp: die Internationalität des Aberglaubens", *Sprachwissenschaft* 14/2, 282-284.

(1989d)   "Der Fischname σμαρίς", *Historische Sprachforschung* 102, 68-69.

(1989e)   "Äskulap und Eidechse. Ein etymologischer Versuch", *Beiträge zur Namenforschung* 24, 55-56.

1990

(1990a)   "Die Deutung des Ortsnamen Speyer", *Beiträge zur Namenforschung* 25, 291-292.

(1990b)   "Karzer und Stockhaus", *Historische Sprachforschung* 103, 113-115.

(1990c)   "*Kirre machen* 'zähmen' und seine idg. Verwandten", *Historische Sprachforschung* 103, 286-288.

(1990d)   "Span. *alcoba*, dt. *Alkoven* 'Schlafnische' – kein arab. Lehnwort", *Sintagma* 2, 2-28.

(1990e)   "Lat. *tilia* f. 'Linde' und *vespertilio* m. 'Fledermaus'", *Incoltri linguistici* 13, 1989-90, 176-177.

(1990-91) "*Tusci* und *Etruria*: ein namenkundlicher Irrtum", *Onoma* 30, 1-4.

1991

(1991a)   *Homerische Helden und christliche heilige in der kaukasischen Nartenepik.* Heidelberg.

(1991b)   "Russisches *opasnost* und die Gefahr der Wurzel-etymologien", in: *Natalicia J. Schröpfer Festschrift für Johannes Schröpfer*, ed. L. Auburger, P. Hill, München, 291-292.

(1991c)   "Bildung und Bedeutungsgeschichte von engl. *handicap* 'Vorgaberinnen; Belastagung'", *Sprachwissenschaft* 16, 95-98.

(1991d)   "Kofel, Kogel, Kuchl als Bergnamen", *Beiträge zur Namenforschung* 26/1, 1-4.

(1991e)   "Gr. κερτομέω 'verspotte' und gr. σκερβόλω 'lästere' und ihr ethnolinguistischer Hintergrund", *Indogermanische Forschungen* 95, 1990, 99-100.

(1991f)   "Der Mensch – und die indogermanische Jägersprache", in: *Studia etymologica indoeuropaea. Memoriae A.J. Van Windekens dicata*, ed. L. Isebaert, Leuven, 155-159.

(1991g)   "Wer dürfte sich Gottes Vater nennen? Das Fortleben eines altägyptischen Titels bis in unsere Zeit", *Glossologia* 7-8, 1988-89[91], 51-52.

1992

(1992a)   "Die Ehrfurt vor dem Namen Gottes", *Beiträge zur Namenforschung* 27, 1-2.

(1992b)   "Σκαττέρδα: eine sportliche Kraftprobe der Griechen mit dem Versuch einer etymologischen Deutung", *Indogermanische Forschungen* 97, 65-67.

(1992c)   "Eine ossetisch-irische Isoglosse: der idg. 'Bergschuh'", *Indogermanische Forschungen* 97, 68-69.

1993

(1993a) "Kleine Beiträge zur tschechische Wortgeschichte", *Zeitschrift für Slawistik* 38, 200-201.

(1993b) "Gr. γυμνός: ein Relikt der mediterranean Frauensprache", *Historische Sprachforschung* 106, 303-304.

(1993c) Bedeutung und Morphologie von lat. *talabarrio, -unculus* m., *Rheinische Museum für Philologie* 136, 379-380.

1994

(1994) "Obelisk und Pyramide: Zwei griechische Bezeichnungen aus der Soldnersprache", in: *Zwischen den beiden Ewigkeiten: Festschrift für Gertrud Thausing*, ed. M. Bietak, J. Holaubek, H. Mukarovsky, Wien, 141-142.

(1994-95) "Zur kulturhistorischen Wortforschung", *Balkansko ezikoznanie* 37, 55-56.

1995

(1995a) "Etymologische Beobachtungen zum deutschen Wortschatz, Teil I", *Muttersprache* 105, 141-148.

(1995b) "Lateinisch-slawische Wortentsprechungen: grundsätzliche Überlegung zur indogermanischen Bedeutungforschung, in: *Studia językoznawcze dedykowane W. Mańczakowi*, ed. A. Bochnakowa, st. Widłak", Kraków, 103-104.

(1995c) "Vorgriechische Grundzahlwörter, ermittelt unter Rückgrift auf die Glottaltheorie", in: *Kuryłowicz memorial volume*, part I, ed. W. Smoczyński, Kraków, 381-383.

(1995d) "Vom Bildungswort zu etymologischer Wortforschung", *Sprachwissenschaft* 20/4, 468-474.

1996

(1996a) "Buchstabenzauber in der Spätantike", *SPPFFBU* A44, 15-16.

(1996b) "Miscellanea philologica et etymologica", *SPFFBU* A44, 17-19.

(1996c) "Etymologische Beobachtungen zum deutschen Wortschatz, Teil 2", *Muttersprache* 106, 16-21.

(1996d) "Substrate des Lateins", in: *Lexikon der Romanistischen Linguistik*, II/1: *Latein und Romanisch*, ed. G. Holtus et al., Tübingen, 19-31.

(1996e) "Adstrate des Lateins", in: *Lexikon der Romanistischen Linguistik*, II/1: *Latein und Romanisch*, ed. G. Holtus et al., Tübingen, 31-44.

(1996f) "Lat. *conspīrāre* und seine Bedeutung in verschiedenen sozialen Sondersprachen", *Journal of Indo-European Studies* 24, 107-109.

(1996g) "Namen Gottes und der Engel", in: *Namenforschung: ein internationales Handbuch zur Onomastik*, 2. Teilband, ed. E. Eichler et al., Berlin, 1846-1852.

(1996h) "Namen christlicher Heiliger", in: *Namenforschung: ein internationales Handbuch zur Onomastik*, 2. Teilband, ed. E. Eichler et al., Berlin, 1856-1860.

(1996i)   "Namenforschung und Religionsgeschichte", in: *Namenforschung: ein internationales Handbuch zur Onomastik*, 2. Teilband, ed. E. Eichler et al., Berlin, 1820-1823.

1997
(1997)   "La voyelle thématique …: Bemerkungen zu der Veröffentlichung des Briefs von Holger Pedersen", *Zeitschrift für celtische Philologie* 49-50, 378-381.

1998
(1998a)   "Das ossetische als Hilfe für indogermanische Rekonstruktionen", in: *Studia Iranica et Alanica: Festschrift for prof. V.I. Abaev on the occassion of his 95th birthday*, Roma, 217-219.
(1998b)   "Die Rolle des Schwagers im indogermanischen Hochzeitsbrauch: ein Beitrag zur Deutung der Homerstelle", in: *Wort-Text-Sprache und Kultur: Festschrift für Hans Schmeja*, ed. P. Anreiter, H.M. Ölberg, Innsbruck, 67-68.

1999
(1999a)   "Die kulturhistorische bedeutungsamkeit von ital. *zio* 'Onkel'", *Archiv für bulgarische Philologie* 3, 77-79.
(1999b)   "Ergologische Etymologien zum Wortschatz des indogermanischen Hausbaus", *Germanistische Linguistik* 145-146, 97-120.

2000
(2000a)   "Vulgonamen in Tirol", in: *Onomastické práce*, 4. *Sborník rozprav k 70. naroz. Ivana Lutterera*, ed. l. Olivová-Nezbedová, R. Šrámek, M. Harvalík, Praha, 216-219.
(2000b)   "Was bedeutet der Volksname der Tschechen eigentlich?", in: *Studia Etymologica Brunensia* 1, ed. Ilona Janyšková & Helena Karlíková. Praha: Euroslavica, 227-228.

2001
(2001)   "Nová cizí slova ve slovanských řečech", in: *Grammaticus: Studia linguistica A. Erharto quinque et septuagenario oblata*, ed. O. Šefčík, B. Vykypěl. Brno, 105.

2003
(2003)   "Heteroklitische Formantenpaare im Wechsel ihrer Funktionen", *General Linguistics* 40, 2000[2003], 53-55.

From the large amount of Knobloch's reviews at least the following should be mentioned:
Ernout, A. – Meillet, A.: *Dictionnaire étymologique de la langue latine*, 4e éd., Paris 1959, *Anzeiger für Altertumswissenschaft* 19, 1966, 244-247.
Kretschmer, P.: *Objektive Konjugation im Indogermanischen*,

Wien 1947, *Indogermanische Forschungen* 60, 1952, 320-23.

Machek, V.: *Etymologický slovník jazyka českého a slovenského*, Praha, *Zeitschrift für Slawistik* 7, 1962, 297-302.

Pisani, V.: *Le lingue dell'Italia antica oltre il latino*, Torino 1953, *Göttingische Gelehrte Anzeiger* 208, 1954, 166-179.

Pokorny, J.: *Indogermanisches etymologisches Wörterbuch*, Bern 1948-59, *Kratylos* 4, 1959, 29-41.

The biography of Johann Knobloch until 1984 was written by G. Schmidt, the complete biobliography until 1984 was compiled by H. Bothien, M. Efstathiou and U. Seefloth. This all as a part of publication *Sprachwissenschaftliche Forschungen: Festschrift für Johann Knobloch (zum 65. Geburtstag)*, ed. M. Ölberg, G. Schmidt, H. Bothien, Innsbruck 1985, XV-XVI, XVII-XLI.

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JIES Reviews

Linguistics

Светлана Янакиева. Тракийската хидронимиа [Svetlana Yanakijeva. *Thracian Hydronymy*] (= *Studia Thracica* 12). Sofia: Akademichno izdatelstvo "Prof. Marin Drinov" 2009. 232 p. ISBN 978-954-322-386-2. Lv. 7.-.

A certain stagnation in Thracian linguistic studies based principally or entirely on the analysis of place-names which we observe for the last decade or so[1] is nicely interrupted by the timely publication of this monograph. This new book by Svetlana Yanakijeva is of importance for place-name studies in ancient Thrace and also aims at clarification of some very important details of the Thracian language in general. It consists of an Introduction, two parts, a conclusion, a bibliography and an English resumé. In the Introduction (p. 7-12) the author states the aims and methods of her research. Although fragments of Thracian hydronymy have been analyzed by scholars, predominantly from Bulgaria (S. Mladenov, V. Georgiev, I. Duridanov, to mention just a few names), it has never been dealt with comprehensively, and with this publication Yanakijeva bridges this gap in Thracian and onomastic studies. In defining the geographical restrictions of her research, namely the Carpathian mountains in the north, the Aegean Sea in the south, the Black Sea (and north-western Asia Minor) in the east and the basin of the Morava and Vardar rivers in the west, she briefly addresses some fundamental questions of Palaeobalkan studies, such as the Thracian / Daco-Moesian controversy, to be returned to in a greater detail in the second part of this publication.

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[1]For some recent important work on the Thracian language see S. Yanakieva, Novi metody i podhodi v izsledvaneto na trakijskite ezikovi ostatsi v Bulgaria v načaloto na XXI vek, in *Balkanskoye yazykonaniye: itogi i perspektivy* (= *Acta Linguistica Petropolitana* 5/1, 2009) St. Petersburg 2009, p. 322-333.

The first part of the book (p.13-142) is an extremely useful collection of hydronyms from the selected area recorded in classical (and /or early Byzantine) sources, and several known from epigraphy, arranged alphabetically. Each entry contains a quote (or quotes) from the source(s) in which a hydronym is attested, sometimes followed by important philological comments (as, for instance, on p. 17 s.v. Ἀθύρας). Then comes a historical-geographical commentary, in which identification of the geographical object is provided (if known), and this is followed by a purely linguistic discussion. The author collects the views of various authors on the linguistic attribution and underlying etymology of a given hydronym with bibliographical references. Needless to say, these can be quite controversial, and in plenty of cases the existing etymologies are incompatible. As Yanakijeva (cf. p. 149-50) belongs to a group of scholars who remain very skeptical in regard to etymologizing the Thracian data in general, these etymological equilibristics not infrequently are aptly labeled in the book as "unsure" or "not trustworthy". This part of the book provides the academic community with a definite corpus of hydronymic objects of ancient Thrace and is indispensable for anyone involved in early toponymic studies of the Balkans and adjacent territories. It is also very useful to have an overview of the existing discussions, which is fairly comprehensive.[2] A broad and ample approach to the data has allowed Yanakijeva to get rid of phantom river-names (see, e.g., s.v. *Anamus* on p. 23) and offer valuable historical-geographical comments (e.g., s.v. *Appion* on p. 29). She also aptly considers rivers deduced from place-names, even when this deduction is claimed to be only possible, as s.v. *Serus on p. 126.[3] As

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[2]Thus, for example, I have not found references to a number of valuable discussions s.v. Πυρετός, identified by Yanakiyeva as Thracian. For a rejection of an Iranian linguistic attribution still popular some time ago see S. Tokhtas'ev, Problema skifskogo yazyka v sovremennoi nauke, in *Ethnic Contacts and Cultural Exchanges North and West of the Black Sea from the Greek Colonization to the Ottoman Conquest* (Iaşi 2005), p. 63-4; for a new Iranian etymology of the river-name see J. Cheung, *Studies in the Historical Development of the Ossetic Vocalism* (Wiesbaden 2002), p. 14 et passim. For other views see the discussion between W. Schmid and G. Schramm in *Indogermanische Forschungen* 81 (1976), p. 438 and 84 (1979), p. 72. These discussions normally consider also a later attested form of the river-name.

[3]A river-name *Marisca deduced by Veselin Beshevliev from a

noted above, there seems to be no need to go into further etymolological discussion of the majority of the instances considered by the author, and I probably should just remark here that the river name Βαρβύσης (var. Βάρβυσσος, p. 48) may be of onomatopoeic origin. Yanakijeva fairly admits that in certain cases a linguistic attribution of a hydronym remains disputable. It may be noted in parenthesis that the author does not consider several frameworks of the analysis of ancient hydronymy which may be relevant for the study, such as G. Schramm's hypothesis or F. Villar's theory.[4]

The second part of the monograph is dedicated to the study of aspects of the Thracian language based on the data of Thracian hydronymy and consists of four chapters. In the first chapter (p. 143-147) the author offers semantic and formal classifications of the river-names. Due to the obvious problems related to the etymological data the former analysis remains very tentative, and the majority of examples are accompanied by comments containing "if", "possibly", etc. The formal structural classification considers word-formation patterns. Interestingly, Yanakijeva here differentiates between Greek and Thracian models of suffixation, but does not provide a list of Thracian suffixes, which is given in a rather schematic way ("suffixes in -r-", etc.) on pp. 169-70. I think that generally this is quite justified, as there cannot be complete certainty, that, say, Ἄραρος, Κύδαρος, and *Pidaras* indeed belong to the same model and contain the same suffix[5]. It may also be the case that some of the data

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settlement name *Transmarisca* is not discussed here, probably in view of the disputable linguistic attribution of the place-name and continuing discussions in regard of the interpretation of its second component; see A. Falileyev, *Vostočnije Balkany na karte Ptolemeya. Kritiko-bibliografičeskije razyskanija* (München 2006), p. 71-72.

[4]See, e.g., G. Schramm, *Reki severnogo pričernomorya* (Moscow 1997) and F. Villar, *Indoeuropeos y no Indoeuropeos en la Hispania Prerromana* (Salamanca 2000).

[5]Apart from general uncertainties of morphological models in Thracian due to the character of the data, there is always a risk that a non-Thracian example may be introduced into the discussion, thus compromising a theory. It may also be recalled that the importance of separating historically heterogenous sequences from actual toponymic formants has long been stressed, cf. in this respect an elegant illustration provided by the late Yu. V. Otkupschikov (*Dogrečeskij substrat* (Leningrad 1988), p. 95):

listed under 2.1.2.2 "names with Thracian suffixes" may rather belong to section 2.2., where compounded names are collected. The second chapter of this part (p. 149-176) discusses linguistic peculiarities of Thracian hydronymy and its title echoes the name of Detschev's famous book, *Kharakteristika na trakijskija ezik.* It is ultimately important that the author explicitly states (p. 149) that her approach to the analysis is radically different from that accepted by Detschev and a famous group of students of Thracian, and indeed she is interested here not in etymologies, but rather attempts to clarify certain traces of the language on the basis of variations of spelling of a given hydronym, and also in comparing these with the other Thracian data. Of the results obtained from this study quite a few are extremely relevant for the study of the Thracian language. Thus, an uncertainty of the quantity of vowels in Thracian observed in a number of recent publications[6] should be dealt with in a more positive vein: Yanakijeva argues (p. 156-7) that the hydronymic data contains at least [ĕ], [ŏ] and [ā], [ē], [ī], [ū]. It is also important that her study (p. 158-160) points to the necessity to reject the *Lautverschiebung* postulated for Thracian consonantism by quite a few authorities. Generally, the analysis shows that the dichotomy between Thracian and Daco-Moesian, accepted by several authorities, does not find proof in the data observed. There are other interesting insights on these pages dedicated to phonetic and morphology which cannot be discussed in this short review.[7] On pp. 171-176 Yanakijeva offers a list of parallels between the river-names and the rest of the Thracian data. She admits that some parallels may be coincidental[8], and warns that these should

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Dubl-*in*, Pušk-*in* and Berl-*in*.

[6]E.g., P. Dimitrov, *Thracian Language and Greek and Thracian Epigraphy* (Newcastle upon Tyne 2009), p. 146.

[7]Some of the suggestions presented there may cause criticism, such as, e.g., an attempt to see a metathesis in Βρεγε-/Βεργ-, and certain conclusions on Thracian phonetics may find counterarguments.

[8]Thus, the personal names Γολας and Γολης quoted by her on p. 172 possibly do not constitute a proper parallel for the hydronym she discusses, as these have been claimed to be of non-Thracian origins; see S. Tokhtas'ev, Iz onomastiki Severnogo Pričernomorya. XIX. Maloazijskije imena na Bospore (V–IV vv. do n. e.), in *Vestnik drevnej istorii* 2007, p. 173

be treated cautiously. Chapter 3 (p. 177-183) deals with the parallels to Thracian river-names from outside of Thrace, with the same caveats as in the proceeding section. The results are interesting and sometimes quite unexpected: a considerable amount of parallels come from north and central Greece and western Asia Minor, while *Balticum* offers only a few of them. It is also worthy of note that Yanakijeva's study has shown that there is no need to use the label "Old European" in a discussion of hydronymy in ancient Thrace (p. 183). The last chapter of the second part (p. 185-196) discusses the validity of the discussed data for the analysis of the Hellenization/Romanization of Thrace. The author shows that ancient Thrace preserved its hydronyms in the Hellenistic and Roman age, and only a few rivers received Greek or Latin names, while the situation, say, in Asia Minor shows a completely different set of statistics. This observation may be used as an additional clue to the understanding of the linguistic situation in this part of the world in antiquity.

The book contains very useful maps and is nicely printed. I have no doubt that it will become a standard reference publication on Thracian hydronymy and an important research tool for the study of the Thracian language. The competence of the author and the extreme caution with which she deals with the tremendously difficult data makes this publication a most important contribution to Paleobalkan studies in recent times.

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with further bibl. The place-name Γολόη quoted here may indeed be Thracian but still remains problematic in its own right; see A. Falileyev, Ancient Place-Names of the Eastern Balkans: Defining Celtic Areas, in *In search of Celtic Tylis in Thrace* (Sofia 2010), p. 125 (bibl.). The form for which this is cited as a *comparandum*, Θιαγόλα, may be non-Thracian.

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Article in edited book
Watkins, C.
    1966   Italo-Celtic revisited. In: Birnbaum, Henrik and Jaan Puhvel
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