

Against a Proto-Indo-European phoneme **a*

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0. Introduction

The reconstruction of a primitive Proto-Indo-European phoneme **a* beside **e* and **o* has often been challenged. This alleged phoneme has a limited occurrence, is absent from endings and suffixes, shows practically no ablaut, and is confined to a few isolated words not belonging to the so-called 'vocabulaire fondamental'. These considerations have led many scholars to the assumption that the phoneme **a* was not Proto-Indo-European, but developed from (a combination with) **H₂(e)* in the separate languages.

Nevertheless, lately a communis opinio seems to have formed that the reconstruction of a Proto-Indo-European phoneme **a* is inevitable (as far as word-initial **a-* is concerned, the reconstruction **H₂e-* is generally accepted; cf., however, §5). The main reason for this view is the conviction that the words with **a*, however limited their number may be, cannot be explained away because the substitution of **H₂(e)* for **a* is impossible.

In the following I intend to discuss the arguments in favor of a primitive phoneme **a* which have hitherto been used, in order to demonstrate that the reconstruction of Proto-Indo-European **a* appears to be superfluous in the light of recent research. The material which will be discussed has no pretension to exhaustiveness, but as far as the reliable etymologies are concerned, I think that the list given below is fairly complete (in sections 6 and 7 I cite in full the lists given in Kurylowicz (1956:190ff.) and Wyatt (1970:29ff.)).

Before we proceed, some preliminary remarks may be necessary. The positive evidence for Proto-Indo-European **a* comes from the so-called 'Southern' languages (Greek, Armenian, Italian and Celtic) and Tocharian, because in the other languages **a* and **o* merged. The Tocharian material is difficult because many problems of Tocharian vocalism are still in dispute. As there is no consensus about the conditions under which Proto-Indo-European **o* yielded Arm. *a*, Armenian *a* cannot be used as independent evidence. There remain then only Greek and Italo-Celtic. The Italo-Celtic evidence, however, is not very strong, because both Latin and Celtic often show secondary *a* (cf. Kurylowicz 1956:174ff.). In particular, Latin is notorious for its frequent irregular *a*-vocalism.¹ It should therefore be borne in mind that the evidence of the Italo-Celtic languages is not indisputable and that the only reliable source of information about Proto-Indo-European **a* is Greek.

1. *a after a resonant

The idea of this argument is that in a sequence *RaC* one cannot substitute $*H_2$ or $*H_2e$ for *a* because both in *RH₂C* and in *RH₂eC* the resonant will be vocalized, $\bar{R}H_2C$ yielding *RāC* or *ī, ū*, $\bar{R}H_2eC$ yielding *VRaC* (the timbre of the vowel depending on the resonant and the language) in Greek and Italo-Celtic. However, reconsidering the material, we see that the sequence *RaC* only occurs when the resonant is word-initial, cf.:

- **mad*:- Gk. *madāō* ‘stream away’, Lat. *madēre* ‘be wet, drunk’, Skt. *mad-* ‘be glad, drunk’;
- **maġ*:- Gk. *mageîn*, *mássō* ‘to knead’, OS *makōn* ‘to make’;
- **mak*:- Gk. *makrós* ‘long, great’, Lat. *macer*, OHG *magr* ‘thin, meagre’; the long *ā* was reconstructed in Gk. *mēkos* n. ‘length’;
- **iaġ*:- Gk. *hagiós* ‘holy’, Skt. *yaj-* ‘to worship’;
- **uas*:- Gk. *ástu* n. ‘city’, Skt. *vāstu* n. ‘homestead’.

Recently, it was demonstrated by Beekes (forthcom.) that in the word-initial sequence *RHC*- not the resonant but the laryngeal was vocalized, yielding *-a-* in Italo-Celtic and Germanic and *e/a/o* (depending on the kind of laryngeal) in Greek. This means that the above-mentioned roots had an internal H_2 , which was vocalized in the zero grade.

For the Sanskrit forms, which cannot be explained in this way, see the next section.

2. Indo-Iranian *a* corresponding with Southern *ā*

As the vocalized laryngeals yield IIr. *i* (or zero), an IIr. $*a$ cannot go back to $*H_2$, while $*-H_2e-$ is either unmotivated, or impossible (e.g., in the case of *yaj-*, the reconstruction $*iH_2eġ-$ would yield Skt. $**iyaj-$ in the full grade and $**ij-$ in the zero-grade of the root).

There is no uniform explanation for all correspondences between IIr. *a* and Southern *ā*, so that I shall subdivide the material in several groups.

- 2.1 Skt. *pajrá-* ‘firm’: Gr. *pégnumi* ‘make fast’
 Skt. *svádati* ‘be sweet’: Gr. *hédús* ‘sweet’
 Skt. *bhájati* ‘to share’: Gr. *phageîn* ‘to eat’
 Skt. *rádati* ‘to bite’: Lat. *rādō* ‘scratch’
 Skt. *śāśadūḥ* (pf) ‘to excel’: Gr. *kekadménos* ‘to excel’
 Skt. *śad-* ‘to fall’: Lat. *cadere* ‘to fall’

To these words we may add Skt. *yaj-* and *mad-* from the previous section and, probably,

Skt. *skándati* 'to jump, fall': Gr. *skándalon* 'trap', Lat. *scando* 'to ascend'

Elsewhere I have argued (Lubotsky 1981) that in Indo-Iranian the laryngeals were lost before mediae when the latter were followed by another consonant. This development should be seen in the light of the glottalic theory, according to which the Proto-Indo-European voiced unaspirated stops were actually glottalic. In Indo-Iranian, where the three laryngeals merged into a glottal stop, the Proto-Indo-European clusters of laryngeals with mediae became $P^{\circ}C$, which led to the loss of the glottal stop when the cluster was followed by a consonant. For details I refer to the above-mentioned article.

The roots of this section must then be reconstructed with an internal $*H_2$: $*peH_2g-$, $*sueH_2d-$, $*b^heH_2g-$, etc. Note that Beekes' rule mentioned in the previous section explains the *-a-* in zero-grades of some of these roots in the Southern languages.

2.2 Skt. *sasyá-* n. 'crops', *sasá-* m.n. 'seed-field', Av. *hahya-* 'grain, crops', *hahhuš* n. 'fructus': ModW *haidd*, ModBr. *heiz* 'barley', Gaul. *asiam* (acc.) 'rye'.

Although this word-family is mentioned time and again as an example of Proto-Indo-European **a*, the evidence of the Celtic words is far from certain. The *-e-* in Br. *heiz* can go back either to Proto-Celtic $*-e-$, or to PC $-a-/o-$ with *i*-affection (Pedersen, VGK I 380–1). The same holds true for ModW *haidd*, which presupposes MW $*heidd$ because every MW $-ei-$ yields ModW $-ai-$ in the final syllable (Pedersen, VGK I 282). Accordingly, the only evidence for Proto-Indo-European **a* in this word is Gaul. *asiam*, which occurs in Pliny and where one must assume haplology for $*sasiam$. This seems to be a rather shaky basis for reconstructing *-a-* in the Celtic word.

Recently, Eichner (1982:26ff.) has proposed to connect Hitt. *šešd-* 'gedeihlich zunehmen, anwachsen' and *šeša-* 'Frucht' with the family of Skt. *sasá-*. This etymology, which appears convincing, proves that there was no *a*-vocalism in the root. A Proto-Indo-European root $*ses-$ seems improbable, however, as two equal consonants do not occur within a root in Proto-Indo-European (Benveniste 1935:170). In view of the formation of Indo-Iranian words (*-ya-* is a denominal suffix), it seems plausible to assume that $*sas-$ was originally a noun meaning 'sown area, seed-field', whence *sas-ya-* 'belonging to the seed-field, rumentarius' = 'crops, seed-corn' with further specification of the original meaning in Celtic (a kind of crops = 'barley, rye').

It seems obvious that IIr. $*sas-$ is a derivative from the Proto-Indo-European root $*seH_1-$ 'to sow' (Goth. *saian*, Lith. *sėti*, Lat. *sēmen*, etc.), being an original *-stem*. IIr. $*sas-$ continues then $*sH_1-es-$, a form which can also account for the Welsh and Breton words. Eichner (1982:27, n.60) reconstructed a reduplicated

noun **se-sH₁-o-* which gives rise to a secondary root **ses-*. I would still prefer to assume an *s*-stem, especially in view of Hitt. *šešd-* which must be a compound **s(H₁)es-d^hH₁-*. As is well known, the verbal root **d^heH₁-* formed compounds with *s*-stems in Proto-Indo-European, cf. **m̥s-d^heH₁* (Skt. *medhā* 'wisdom'), **mis-d^heH₁-* (Gk. *misthós* 'salary' with thematization), and, especially, **miHes-d^heH₁* (Skt. *miyédha-* 'sacrificial oblation').

2.3 Skt. *śaśá-* m. 'hare' (<**śas-a-*), Khot. *saha-* 'id.': Lat. *cānus* 'grey', Osc. *casnar* 'senex', OIc. *h̥ss*, OE *hasu* 'grey, brown', OHG *haso* 'hare', ModW *ceinach*, OPr. *sasins* 'id.'.

The evidence for **a* is confined to Italic. ModW *ceinach* does not offer independent evidence because it may have the *e*-grade of the root (cf. the previous section; the *o*-grade is less probable as we would expect W. y, Pedersen VGK I 375).

The solution which I have in mind is to some extent parallel to that of the previous section. Our word for 'hare' meant originally 'the grey one'. The divergent stem-formation of this adjective (*a*-stem in Indo-Iranian, suffixes with *-n-* or *-u-* elsewhere) makes probable that the protoform was **kas-*, to which productive suffixes were added.

It is tempting to compare this word with another Proto-Indo-European 'grey'-family glossed by Pok. 540–541 as *kei*-² (OIr. *ciar* 'dark-brown' < **kei-ro-*, OIc. *h̥arr*, OE *hār* 'grey, old' < **koi-ro-*, etc.). However, as was demonstrated by Pedersen (1905:176ff.), the Slavic representatives of this family show the reflex of an aspirate in the anlaut: OCz *šěry*, Pol. *szary*, OCS *šěrb* 'grey' < **xoi-ro-*. The initial *x-*, which is also found in Cz. *šedý*, Pol. *szady*, OCS *šědb* 'with grey hair' < **xoi-d^(h)o-*, has not received a plausible explanation. An expressive aspirate, which is mostly assumed, does not seem probable for an adjective meaning 'grey'. Also a loan from Germanic is unattractive. I believe that Slav. **x-* is here of the same origin as Skt. *kh-*, viz. a cluster with a laryngeal, cf. also Skt. *śākhā* 'branch', ORuss. *soxa* 'wooden plough, pole'. The same development **kH* > **k^h* probably took place in Armenian, e.g. *c'ax* 'branch': Skt. *śākhā* 'id.'; *xacanem* 'to bite': Skt. *khādati* 'to chew'; *sxalim* 'to fail': Skt. *skhālati* 'to stumble', etc. (Kortlandt 1976:91–92).

The conclusion is then that Slav. **xoi-ro-*, *xoi-d^(h)o-* points to **kHoi-ro-*, *kHoi-d^(h)o-*. In view of OIr. *ciar*, the laryngeal must be *H₁*, the Proto-Indo-European stem thus being **kH₁ei*-.³ Now if we assume that **kas-* is somehow related to the other adjective 'grey', we must reconstruct **kH₁s-*. The two adjectives for 'grey' appear to be derivatives of the root **keH₁-* which is attested in Skt. *śārā-* 'spotted, motley', Gk. *kērúlos* 'name of a bird, prob. fulmar'.

Reconstructing an *s*-stem adjective **kH₁es-*, we can explain all the forms. The zero grade **kH₁s-* accounts for the Italic and Welsh vocalism, while the *e*-grade of the suffix explains Skt. *śaśá-* and probably Norw. and Sw. dial. *jase*,

which points to Proto-Germanic *-e-*. As to OPr. *sasins*, we must assume either a secondary *-o-*vocalism, or postulate a proterodynamic genitive **kH₁-os-s*. Gmc. **has-* is ambiguous, as it can continue both **kH₁os-* and **kH₁s-*.

The only remaining problem is the initial consonant in Indo-Iranian because **kH-V-* would have yielded an aspirate. I believe that Indo-Iranian for a long time preserved a paradigm with ablaut. The forms **keH₁-s-* and **kH₁-s-* provided the initial Skt. *ś-*, which was then generalized.

2.4 Skt. *tavīti* 'to be strong': Gk. *taús·mégas, polús* (Hes.).

The Hesychius' gloss *taús* is mostly combined with the Greek adjective *sōs* (att., Hom., Hdt.), *sáos* (Il. + ; dial.), *sōos* (Hdt.) 'safe, healthy'. As Leumann (1959:266ff) has demonstrated, all these forms can go back to Pre-Greek **sáwos*, preserved in Cypr. *sawoklêwēs*. What can be the Proto-Indo-European form of this adjective? The reconstruction **tuə-uo-s*, given in most dictionaries, is impossible, because the constellation **tuə-C* (in laryngealist terms, **tuH₂-C*) would have yielded Gk. *tū-*.

In my opinion, the answer can be found in the fact that Greek adjectives in *-wo-* are often recent thematizations of original *u*-stems, cf. *tanaós* vs. *tanu^o*, *mānós* vs. *mānu-*, *stenós* vs. *stenu^o*, *eteós* vs. *étu-mos*, etc. Also the two forms of the adjective for 'empty', *kenós* (< **kenwós*) and *keneós* (< **kenewós*), point to an original *u*-stem.

The Proto-Indo-European inflection of *u*-adjectives is not clear, but most probably these adjectives had hysterodynamic inflection, cf. Beekes (1985: 165–166), who reconstructs the following paradigm:

Nom. CeC-u-s	or, in our case,	<i>*tueH₂-u-s</i>	> Pre-Gk. <i>*saus</i>
Acc. CC-eu-m		<i>*tuH₂-eu-m</i>	> <i>*tuwawa</i> (?)
Gen. CC-u-os		<i>*tuH₂-u-os</i>	> <i>*tūwos</i>

Thematicization of the nominative **saus* yielded *sawos*, while the introduction of *t-* from the oblique cases provided the nom. sg. *taús* reflected in Hesychius' gloss. It seems therefore that the connection with Skt. *tavīti* is correct, but the *-a-* of *taús* is not of the same origin as the *-a-* of *tavīti*.

A parallel development to that described above can be found in Latin. The Proto-Indo-European *u*-adjectives were transformed into *-i*-stems in Latin, but before the suffix *-i-* was added, some phonetic changes had taken place. Nom. sg. **g^wreH₂-u-s* (cf. Gk. *barús*, Skt. *gurú-* 'heavy' with zero-grade of the root) first became **graus*, and only then was the suffix *-i-* added, resulting in the attested form *gravis* (Fischer 1982).

Another example of this kind was suggested to me by P. Schrijver: Nom. sg. **leH₁i-u-s* > **lēiūs* got an *-i*-suffix yielding **lēiūs* > *lēuis* 'smooth' (Gk. *leĩos* is ambiguous: it can continue either **leH₁i-uos* or **lēiūs* with shortening in accordance with Osthoff's Law).

2.5 Skt. *rābhate* 'to seize, grasp': Gk. *lāphūra* pl. 'booty', *amphilaphēs* 'wide-spreading', OPr. and Latv. *labs* 'good', Lith. *lābas* adj. 'good, kind', m. 'welfare, goods', *lōbti* 'grow rich', *lōbis* 'wealth, riches'.

The Sanskrit and Greek roots can contain a vocalic nasal and go back to Proto-Indo-European **lmb^h-*, which is supported by the Sanskrit causative *rambhayati*, *lambhayati* (Br. +) and late/present *rambhate*. The latter forms were explained by Kuiper (1937:148–149) as secondary, being due to the influence of the root *ra(m)bh-* 'to lean', which, according to Kuiper, is etymologically unrelated with *rabh-* 'to seize'. The reason for this explanation is the Baltic *-a-*, which cannot go back to a nasal.

Nevertheless, the examination of the Baltic material shows unambiguously that the adjective **labas* 'good' is original for the Baltic family, which makes the connection with the Greek and Sanskrit words semantically improbable. Toporov (1984:401ff.), who discussed the whole Baltic family, saw the problem and tried to find 'the missing link' in the verb *lōbti*, which can also mean 'plunder'. This meaning, however, is most probably a secondary specification of 'getting rich', while the verb is derived from *lābas* along productive patterns (Stang 1966:121–122).

Traditionally, Skt. *rābhaḥ* n. 'violence, impetuosity', comparative *rābhyas* 'more impetuous', superl. *rābhiṣṭha-*, etc., are also derived from the root *rabh-* 'to take hold of, grasp'. This etymology is semantically plausible (cf. Skt. *sāhas* 'violence', *sāhate* 'to conquer' vs. Gk. *ékḥō* 'to have') and, in my opinion, must be upheld. On the contrary, the often suggested connection of *rābhaḥ* with Lat. *rabiēs* 'fury', Toch. A *rapurñe* 'passion' (e.g., Mayrhofer KEWA III:43) is semantically difficult. The original notion of the *rābhaḥ*-family is 'power, violence', while the Latin and Tocharian words express strong emotions. I would rather propose to connect the latter words with Gk. *éramai* < **H₁r(e)H₂-* 'heftig verlangen, begehren, lieben' and assume a root enlargement *-b^h-* for Latin and Tocharian.

3. The *a*-diphthongs

The argument based on the *a*-diphthongs has a different character. The proponents of a primitive phoneme **a* do not deny that in general every *-ai-* and *-au-* can go back to **-eH₂i-*, **-eH₂u-*, but they regard it as a theoretical possibility. In fact, however, the presence of a laryngeal in the *a*-diphthongs can be demonstrated.

As Kortlandt has shown (in several publications, cf. especially 1985:§3), the acute intonation in Balto-Slavic is due either to laryngeals, or to glottalic

obstruents. The acute tone in SCr. *djěvēr*, Lith. *dieveri* (acc. sg.) 'brother-in-law' or Lith. *káulas* 'bone, stalk' proves that the diphthongs contained a laryngeal. Moreover, it can be demonstrated that the laryngeal preceded the resonant. Illič-Svityč (1963:80 = 1979:63–64) pointed out that the retraction of the stress in Balto-Slavic known as Hirt's Law took place only if the vowel which received the stress was immediately followed by a laryngeal, cf. BSl. **d^hóH-naH* (Latv. *duõna*, Lith. *dúona* 'bread') vs. Skt. *dhānáḥ* pl. 'grain'; BSl. **d^húH-mos* (Latv. *dūmi* pl., Lith. *dūmai* pl. (1) 'smoke', SCr. *đim* (a) 'id.') vs. Skt. *dhūmá-* 'smoke', etc. The accent was not retracted if the laryngeal followed the resonant component of a diphthong, cf. BSl. **tenH-uós* (Latv. *tiēvs* 'thin') vs. Gr. *tanaós*.

Therefore, the barytonesis in Latv. *diēveris*, Lith. *dieveris* (l in dialects), SCr. *djěvēr* 'brother-in-law' as opposed to the oxytonesis in Gk. *dāēr* (< **daiuēr*) 'brother-in-law' and Skt. *devār-* 'younger brother of the husband' proves that the Proto-Indo-European form of this word must have been **deH₂iuer-*. In a similar way, Latv. *kaūls* 'bone', Lith. *káulas* (l) 'bone, stalk' in comparison with Gk. *kaulós* 'stalk, core' point to a Proto-Indo-European form **keH₂ulós*.

Of course, not always can a Balto-Slavic cognate be found in order to demonstrate the laryngeal in *a*-diphthongs, but it seems plausible to interpret every *-ai/-au-* as *-eH₂i/-eH₂u-* as long as there is no counter-evidence.⁴

This counter-evidence is present for the root **saus-* 'to be dry, to dry up' (Gk. (*h*)*aĩos* 'dry', Skt. *śuṣ-* 'to become dry', Lith. *saũsas* (4) 'dry', SCr. *sũh* 'id.', etc.). The circumflex intonation in Balto-Slavic and the short vowel in the Indo-Iranian zero grade prove that there is no internal laryngeal in this root. The root **saus-* was therefore considered as one of the most certain examples of the phoneme *a*. However, as I have shown elsewhere (Lubotsky 1985), Gk. (*h*)*aĩos* 'dry', which is the only ground for reconstructing an *-a-* in the root **saus-*, does not go back to **hauhos* < **sausos*, but to **ahuhos* < **H₂susos*. This is indicated by the reflexes of this adjective in the Greek dialects and by the hiatus in *aĩstalēos* 'dry', which contains the same root. Consequently, the Proto-Indo-European root for '(to be) dry' must be reconstructed as **H₂sus-*. In the above-mentioned article I have further argued that **H₂sus-* was originally a perfect participle of the root **H₂es-* 'to be dry' (Lat. *āreo*, Toch. AB *ās-*, etc.).

4. The root nouns

Three root nouns have been reconstructed with primitive *a*-vocalism and with lengthened grade *ā* in the nom. sg.:

**sal-* 'salt': Gk. *hāls*, Lat. *sāl*, *salis*, Latv. *sāls*, OCS *solb*, Skt. *salilā-* n. 'sea', etc.

**ǵʰans-* 'goose': Gk. *khēn*, Lat. *ānser*, Latv. *zūoss*, Slav. **ǵosъ*, Skt. *hamsā-*, etc.;

**nās-* 'nose': Lat. *nāris*, Skt. *nāsā* du., *nasós* gen. du., OE *nōse*, OHG *nasa*, Lith. *nósis*, Latv. *nāss*, OCS *nosъ*, etc.

Recently, Kortlandt (1985:§1.6) discussed the inflection of these words and reconstructed a hysterodynamic paradigm for the words for 'salt' and 'goose' and a proterodynamic one for the word for 'nose'.

	Balto-Slavic	Greek	Latin	PIE
nom.	Latv. <i>sāls</i>	<i>háls</i>	<i>sāl</i>	* <i>seH₂ls</i>
acc.	OCS <i>solnъ</i>	<i>hála</i>	<i>sale[m]</i>	* <i>sH₂elm</i>
gen.	* <i>sl-</i>	<i>halós</i>	<i>salis</i>	* <i>sH₂los</i>
	Balto-Slavic	Greek	Latin	PIE
nom.	Latv. <i>zūoss</i>	<i>khān</i>	<i>ānser</i>	* <i>ǵheH₂ns</i>
acc.	Latv. <i>zūosi</i>	<i>khāna</i>		* <i>ǵhH₂ensm</i>
gen.	Slavic <i>g-</i>	<i>khānós</i>		* <i>ǵhH₂nsos</i>
	Balto-Slavic	Vedic	Latin	PIE
nom.	Latv. <i>nāss</i>	du. <i>nāsā</i>	<i>nāris</i>	* <i>neH₂s</i>
acc.	Latv. <i>nāsi</i>	(OP <i>nāham</i>)	<i>nārem</i>	* <i>neH₂sm</i>
gen.	OCS <i>nos-</i>	du. <i>nasós</i>	<i>nāris</i>	* <i>nH₂sos</i>

One may argue about details of this reconstruction, but it is essential for our purpose that these words contained an internal laryngeal and had a mobile paradigm. There are several indications which point in this direction. First, the acute intonation of Lith. *sólymas* 'brine' and Lith. *nósis*, Latv. *nāss* must be due to a laryngeal (cf. section 3). The circumflex tone in Latv. *sāls* and *zūoss* can be explained by Kortlandt's rule that 'a laryngeal was lost after a PIE long vowel in Balto-Slavic' (1985:§1.6). It must have originated in the nominative singular with lengthened grade, which was probably generalized in this category in Balto-Slavic.

It appears then, that the word for 'salt' was an *l*-stem, and the word for 'nose' an *s*-stem.

Moreover, Germanic formations with *-d-* (OHG *ganzo*, OE *ganot* 'gander') show that in any case the *-s-* of **ǵʰans-* is of suffixal origin. The mobile paradigm of this word provides also a plausible explanation for the 'Gutturalwechsel' in Balto-Slavic if we assume with Kortlandt that the palato-velars were depalatalized in the position before a syllabic *n* (Kortlandt 1978:241). Slavic then generalized the obstruent in the position before *-n-* (an interconsonantal laryngeal always yields zero in Balto-Slavic, cf. Kortlandt 1975:3) and Baltic the one in the position before *-a-*. This alternation is also an indirect proof for the laryngeal in the word, as there exists no evidence for an ablaut *-a/-ø-*.

Taking these considerations into account, we can explain the words for 'salt', 'goose', and 'nose' without recourse to a Proto-Indo-European phoneme *a.

5. Hittite *a*:- Southern *a*-

The initial *a*- in the Southern languages points to Proto-Indo-European **H₂e*-, the usual reflex of which in Hittite is *ha*-. However, in some Hittite words we find only *a*- instead of *ha*-. To explain these cases, Kuryłowicz postulated the fourth laryngeal, which colored an adjacent *e* to *a*, but, in contradistinction to *H₂*, disappeared in Anatolian. His theory is now generally rejected, and in order to account for the correspondence Hitt. *a*:- Southern *a*- several scholars reconstruct an initial vowel **a*-.

This reconstruction is unattractive because it violates two principles of the general theory of Proto-Indo-European root structure, viz. (1) every Proto-Indo-European root has an initial consonant, and, if one reconstructs roots like **au*-, **ai*- (cf. e.g. Eichner 1978: 151, no. 28), (2) every Proto-Indo-European root contains at least two consonants (Benveniste 1935: 147ff.). Therefore, one would certainly prefer a solution without such far-reaching consequences.

An alternative explanation of Hittite *a*- was indicated by Kortlandt (1983: 13; 1984: 42), who assumed that in the neighborhood of Proto-Indo-European **o* the three laryngeals fell together into **Ho/oH*. This *H* merged with the reflex of *H₁* in Hittite, so that the initial **H₂o*- > **Ho*- yielded Hitt. *a*-. Consequently, the correspondence Hitt. *a*:- Southern *a*- must be explained as **H₂o*- generalized in Hittite versus **H₂e*- generalized elsewhere.

6. Kuryłowicz' list

It seems useful now to review the lists of correspondences testifying to primitive Proto-Indo-European **a*- given by Kuryłowicz (1956: 190–191) and Wyatt (1970: 29ff.).

Kuryłowicz does not include in his list onomatopoeias, expressive words, and words from children's language. Furthermore, he separately mentions words with word-initial *a*, secondary *a*, and words which are confined to the Southern languages. He then arrives at the list of 30 'rapprochements acceptables' which occur in both Indo-Iranian and Southern languages.

Of these 30 correspondences 13 are disputable:

- Skt. *kakúbh-* 'peak, summit': Lat. *cacūmen* (in any case, remodelled after *acūmen*, WH I 127);
- Skt. *karkaṭa-* m. 'crab': Gk. *karkinos*, Lat. *cancer* 'id.' (Mayrhofer, KEWA, I 169: uncertain);
- Skt. *karkara-* 'hard, firm': Gk. *kárkaros trakhús* (Hes.) (Mayrhofer, KEWA I 179: uncertain, Furnée 1972:130: non-Indo-European);
- Skt. *kekara-* 'squint-eyed': Lat. *caecus* 'blind' (Mayrhofer, KEWA I 264: 'keineswegs sicher'; the European words can go back to **kéH₂i-ko-*);
- Skt. *kévaṭa-* n. 'cave, hollow': Gk. *kaíata orúgmata* (Hes.) (Mayrhofer, KEWA I 267: 'unsicher', Furnée 1972:180: non-Indo-European);
- Skt. *késara-* n. 'hair, mane': Lat. *caesariēs* 'id.' (Mayrhofer, KEWA I 268: 'nicht ganz sicher'; one must assume a Prakrit form of **kesra-*);
- Skt. *pánka-* m.n. 'mud, mire': MĪr. (gloss) *an* 'water' (cf. Vendryes, Lexique étym. A-71);
- Skt. *mañjú-* 'beautiful': Gk. *mágganon* 'philtre' (Mayrhofer, KEWA II 553 does not even mention the Greek word);
- Skt. *riṣyati* 'be hurt': Gk. *raĩō* 'break' (this etymology is not mentioned by Mayrhofer KEWA III 62);
- Skt. *luṇáti* 'cut': Gk. *laĩon* 'ploughshare' (Mayrhofer KEWA III 93: uncertain);
- Skt. *śátru-* m. 'enemy': OĪr. *cath* 'battle' (difficult, Mayrhofer KEWA III 294);
- Skt. *śávīra-* 'strong': OĪr. *caur* 'hero' (the Celtic family is problematic, Pedersen VGK I 62);
- Skt. *héṣas* n. 'arrow': Gk. *khaĩos* 'shepherd's staff' (Frisk Gr.Et.W. II 1062: 'sowohl formal wie semantisch unbefriedigend'. Mayrhofer KEWA III 611: 'höchst unwahrscheinlich').

Two correspondences are loans from a non-Indo-European language:

- Skt. *mandurá* 'horse's stable': Gk. *mándrā* 'stable';
- Skt. *śaṇá-* 'a species of hemp': Gk. *kánnabis* 'hemp'.

For three correspondences the evidence for **a* is insufficient:

- Skt. *tvac-* 'skin': Gk. *sákos* 'shield' (Hitt. *tuēkkas* 'body', 'person' points to the *e*-vocalism; the Greek word can be a loan);
- Skt. *pastyā-* n. 'abode': Arm. *hast* 'firm, fixed', OĪc. *fastr* 'id.' (these words are probably not connected, cf. Mayrhofer, KEWA II 242);
- Skt. *śaṅkú-* m. 'peg, spike': W. *cainc*, OĪr. *géc* 'branch' (the Celtic words can contain *-ŋ-*, while Germanic and Slavic point to the *-o*-grade; it seems to be no problem to assume ablaut in this *-u*-stem).

Skt. *vaśá* 'cow': Lat. *vacca* 'id.', if connected, can possibly be explained by Hamp's rule (cf. note 1).

The remaining eleven items have now received an alternative explanation:

- Skt. *vāstu-* Gk. *ástu* cf. §1;

- Skt. *bhaj-*: Gk. *phag-*, Skt. *yaj-*: Gk. *hagnós*, Skt. *śad-*: Gk. *kekadménos*, and Skt. *śad-*: Lat. *cado*, cf. §2.1;
 Skt. *sasyá-*: W. *haidd*, cf. §2.2;
 Skt. *śasá-*: Lat. *cānus*, cf. §2.3;
 Skt. *devár-*: Gk. *dāēr* and Skt. *śuṣ-*: Gk. *(h)años*, cf. §3;
 Skt. *hamsá-*: Gk. *khén*, cf. §4.

7. Wyatt's list

Wyatt in his book on the Proto-Indo-European *a* (1970) sought to demonstrate that Proto-Indo-European **a* was reflected in Sanskrit as *a* when stressed and as *i* when unstressed. For this purpose he collected all cases of Skt. *a* corresponding to Southern *a* which he could find. In Appendix II (1970:60ff.) 68 items are presented which, according to Wyatt, must be rejected. His own material on non-initial *a* constitutes 34 etymologies (1970:20ff.) plus two words on p. 39. 17 of this total of 36 items are mentioned by Kuryłowicz and therefore discussed above.

Of the remaining 19 items two are disputable:

- Skt. *kadanam* 'destruction': Gk. *kekadōn* 'deprived of' (doubts in Frisk I 811; if this etymology can be accepted, it can constitute another example of Indo-Iranian loss of laryngeals before mediae, cf. §2.1).
 Skt. *vāñcati* 'totter, stagger': Lat. *vacillare* 'sway to and fro' (doubts in Mayrhofer KEWA III 127; Ernout-Meillet II 710 about the Latin word: 'Mot expressif, d'origine obscure').

Three words contain syllabic nasals:

- Skt. *dāśati* 'bites': Gk. *dakeîn* (cf. Skt. *dāmṣṭra-* 'tusk', Perf. *dadamśa*, OHG *zangar* 'beissend, scharf', etc.).
 Skt. *śamnīte* 'toils': Gk. *kámnō* 'work' have the root **kemH₂-*, cf. Gk. *a-kmēs*, *á-kmētos* 'unermüdlich', perf. *kékmēka*, etc. The nasal presents go back to **kṇ-n-H₂-* with regular vocalization.
 Skt. *(parva)śāḥ* '(glied)weise': Gk. *(andra)kás* 'man by man' can go back to **-kṇs*.

Six words can be explained if we reconstruct different ablaut grades for the Sanskrit word and its Southern cognate:

- Skt. *grāsati* 'swallow, devour' (< **gres-*): Gk. *gráō* 'gnaw, eat' (< **grs-*).
 Skt. *dāmśaḥ* 'marvelous power': Gk. *dēnea* 'counsels, plans, arts'. The Greek word is mostly explained from **dansea* with secondary *a*-vocalism on the

basis of forms like *daēnai*, etc., cf. Frisk I 382. Recently, Ruijgh (1970:319–20) proposed to see *dēnea* as a Homeric loan from Mycenaean, where *dēnos* is the regular phonetic development of **densos*.

Skt. *dháyate* 'sucks, drinks' (< **d^hH₁-eie-*): Goth. *daddjan* 'suck' (< **d^hH₁oi-*).

Skt. *kalyaḥ* 'healthy' (< **kol-i-*): Gk. *kalliōn* 'fairer' (< **k_l-i-*).

Skt. *kanīnaḥ* 'young' (< **koni-*): Gk. *kainós* 'new' (< **k_ṇ-i-*).

Skt. *jarás-* f. 'old age' (< **gerH₂-es-*): Gk. *géras* n. 'prize' (< **gerH₂-s*).

In one word *-a-* goes back to **H₂e*:

Skt. *dáyate* 'divides, imparts' and Gk. *daíomai* 'divide, distribute' can both go back to **dH₂-eie-*. For the root cf. Gk. *datéomai* 'divide among themselves', Skt. *ditáḥ* < **dH₂-(to,)-* and Skt. *dāti* 'cut' < **deH₂-*.

For the other seven items I refer to the previous sections:

Skt. *mádati*: Gk. *madáō*, Skt. *svádati*: Gk. *handánō*, Skt. *skándati*: Lat. *scando* cf. §2.1;

Skt. *tavīti*: Gk. *taús* cf. §2.4;

Skt. *rábhate*: Gk. *laphūra*, Skt. *rábhaḥ*: Lat. *rabiēs* cf. §2.5;

Skt. *kévala* 'exclusively one's own': Lat. *caelebs* 'unmarried', if connected, cf. §3.

8. Conclusion

When Kuryłowicz discussed his own material on Proto-Indo-European *a* (1956:193), he was perfectly aware of its uneven value. He suggested an alternative explanation for several correspondences, but his ultimate conclusion was: 'Quoi qu'il en soit, nous hésitons encore, en face d'étymologies comme **kaiko-*, **daiyer-*, **kanku-*, **kaso(n)*, **sauso-*, **ghans-*, à considérer comme définitive la preuve de l'origine *post-indo-européenne* (méridionale) du vocalisme *ā*' (1956:193). Since these etymologies have received a plausible explanation, the burden of proof is now on the shoulders of those who maintain that **a* did not originate in the separate languages but was a Proto-Indo-European phoneme.

Notes

1. Recently, Hamp proposed a rule, according to which Proto-Indo-European **(C)uo-* yielded Latin *(C)ua-* (1982:99). This rule, though not further specified by the author, seems to offer a plausible explanation for several Latin *a*'s. I wonder if this rule of delabialization operated in the position after other labials (*m*, *p*, *b*) too.

2. As Debrunner has demonstrated (1938: 171ff.), Skt. *śiti-*, *śitiṅgá-* 'white, whitish' do not belong to this root. In Vedic *śiti*^o appears only as the first member of compounds, the second member of which began with a labial consonant. Accordingly, *śiti*^o is dissimilated from *śvit*^o.
3. I believe that the root **kiē-*, *ki-* (Pok. 541: Skt. *śyāvā-* '(dark-)brown', Lith. *šyvas*, OCS *sivъ* 'grey (of horses)', Skt. *śyāmā-* 'dark-colored', Lith. *šėmas* 'blue', OCS *sinъ* 'dark-blue', probably also Lat. *cīmex* 'bug') mentioned by Pokorny under **kei-* as 'eine erweiterte Wurzelform gleicher Bedeutung' is not an enlarged form of **kei-*, but identical with it. If we reconstruct **kH₁ei-* instead of **kei-*, the zero-grade of this root is **kH₁i-*, which in the position before a consonant yields **kH₁i-* in most Indo-European languages. The attested derivatives mostly show the zero-grade of the root, the full grade **kiēH₁-* being secondarily formed on the basis of **kH₁i-*.
4. A problematic case is Gk. *laiós*, Lat. *laevus* 'left' with an *ai*-diphthong, but a circumflex intonation in SCr. *ljevī* 'id.'

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