Kραφί, kravíḥ and the original nom.-acc. sg. of the IE s-stem neuters

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1.1. – Today's communis opinio concerning the ablaut-pattern of the IE neuters in *s- is based on a paper by Jochem Schindler (1975:259-267). In this paper he argued that the directly reconstructable paradigm *mén-os ~ mén-es-(os) replaced an older pattern *mén-s ~ m(η)n-és-(s). The oblique stem is of minor concern for the present discussion. It is reconstructed with zero-grade in the root and accented e-grade in the suffix to account for cases like Lat. fīgus, Gr. ἰγος or Ved. infinitives of the type rcāse and demonstrates the basically proterokinetic pattern of these stems (Schindler 1975:261, 264-265). Less convincing is in my opinion the reconstruction of the nom.-acc. with suffixal zero-grade. Essentially this is based on the following arguments: First, there is the parallelism with other proterokinetic stems. This topic will be discussed at the very end of this paper (4.). Second, the Gr. neuters in -ας and the IIr. stems in *-is- could be understood as reflecting an older stage with zero-grade of the suffix in the nom.-acc. The evaluation of this argument makes up the main part of my presentation (2. and 3.).

1.2. – Schindler's third and last argument consists of a few aberrant forms in IIr. (1975:266). These are the Av. verbal compounds mazdā- ‘to perceive’ and yaozād- ‘to make whole’ both of which are attested with tmesis once (Y. 44.9 and Y. 9.31). In addition mōng and yaoś are used elliptically in OAv. This elliptical use is also attested by Ved. yōh ‘hail!’. That *mans-dʰaH- too is of IIr. date is suggested by Ved. mandhā-tār- ‘devout person’ which should be analyzed as a derivative of the compounded verb rather than as a nominal compound with a stem in -tr- as second member. In Schindler's view IIr. *mān-s and *jáu-š must have been independent word forms because verbal compounds with nominal first members did not exist in IE. I share his opinion that such compounds are out of place in Proto-IE, but that they did actually exist in IIr., precisely with the root *dʰeh₁- as second member, is shown by Av. zrazdā-, Ved. śrād-dhā- ‘trust’. The Av. form shows that this formation predates the change of groups of dental stops to sibilant plus dental stop in Ir. Nevertheless tmesis
is attested both in Av and in Ved. Considering this, one should not rely too much on IIr. *manzdhā- and *jaũždhā- because they might owe their suffixal zero-grades to the fact that they are compounded forms. But without the evidence of IIr. *máns and *iáuš the assumption of an original nom.-acc. **mén-s is based only on the neuters in -is- and -ač and especially on the sole word equation in this group: Gr. kρέας and Ved. kravīs-.

2.1. – Let us turn to the IIr. forms first. This small group of about thirty stems all in all is usually assumed to have two different sources. Beside the examples reconstructed as s-stems from sef roots with zero-grade of the suffix – for example Vedic kravīs- ‘flesh, gore’ or Avestan stairiš- ‘sacrificial grass’ – there are clear cases of secondary derivatives to stems in -i-. Even Schindler concedes this possibility, although he underrates the amount of examples that may contain IE *i (“... wobei im Ar. unklar bleibt, wieweit auch altes *-is beteiligt ist.” [1975:265]), and does not quote any of these cases.

2.2. – An illustrative case is Ved. sócīs- ‘light, flame’ (RV+). The root suc- is clearly anit as is shown by śukrā- ‘bright, white’. This stem also hints at the interpretation of sócīs-, as beside śukrā- we find śuci- ‘bright, white’ (RV+) and – in the compound sahásra-śokas- ‘spitting a thousand flames’ (RV 10.96.4) and the YAv. derivative saočahin- ‘flaming’ – a regular stem in *-as-. Together with sóciśtha- these stems form a quite clear case of a Caland system (Nussbaum 1976:1, 13, 75 and 105), which makes it most likely that the regular stem in *-as- was modified under the influence of sóci- and maybe sóciśtha-. I prefer this interpretation to the at first glance simpler assumption of a secondary derivative from another i-stem sócī- ‘shining’, because this

1 Yt. 9.26 (zrasča dāţ) and e.g. RV 10.39.5 (śrád arír yáthā dádhat).

2 Compounded forms and derivatives must be excluded from a discussion of paradigmatic ablaut-patterns, because they do not allow firm conclusions about their bases (cf. Schindler 1975:260).

3 See e.g. Wackernagel/Debrunner (1954:364-367). Only Émile Benveniste (1935:31-35) has tried to explain all the IIr. stems as containing IE *i: “Mais xrvīš- ne peut être séparé de xrvīforme de composition, non plus que skr. çociś- d’av. saočī-. Ceci donne la clé de la formation.” (1935:34) But his approach is generally ignored because of the untenable explanation he gives for the Gr. neuters in -ač (see below 3.1.).
is attested in the RV only as the second member of compounds and only in the vocative. Possibly śukrā-ṣocē and the like are analogical creations from the ambiguous nominative śukrā-ṣocīḥ, which can be taken as a bahuvṛtī compound with ṣocīs- as its second member. Further there is another bit of evidence showing that ṣocīs- was liable to the influence of śucī-: The RV attests two instances of a derivative in -mant- of this stem. Once we find expected ṣocīs-mant- (RV 2.4.7), but in the other case, where a nom. pl. śucayah stands next to it, we read șucīs-mant- (RV 6.6.4a: ye te șukrāsah șucayah șucīsmah).

The accent of șocīs- is expected, inasmuch as the majority of is-stems show accented -ís-, but it seems awkward to derive a stem with accented suffix out of a contamination of two root accented words. I assume this complication is caused by șucī-, since this can be taken as a decompositional stem (Wackernagel/Debrunner 1957:61) and the Caland i-stems attested as first members of compounds are usually accented on the suffix.4 Therefore I suggest that the accent of șucī- is secondary5 and that the actual contamination took place between the s-stem and the original Caland i-stem *șucī°.

Another clear example along the same lines is Ved. rocīs- ‘light’ (RV+). Although some set forms from the root ruc- are attested (e.g. rucitā- AVP+), there is ample evidence that originally it was an anīṭ root (e.g. rukmā- ‘name of a jewellery’ RV+, rukśa- ‘shining’ RV 6.3.7). Again the stem in -is- is embedded in a Caland system. Beside it we find the stem in -ma-, an s-stem (Av. raocāh- ‘light’ and Ved. svā-rocas- ‘self-gleaming’ TB)6, and the i-stem rūci- ‘light, splendour’ (AV+).7 Again the easiest way to account for rocīs- is to understand it as a modification of *rōcas- under the influence of rūci-.8

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4 cf. tuvī- (below 2.4.) and Wackernagel/Debrunner (1957:59sqq.).
5 Although the reasons for this secondary accentuation are not obvious to me. One possibility may be that it was taken from adjectives of the type cākri- (Wackernagel/Debrunner 1954) with their in the majority of cases accented reduplication.
6 On rōkaḥ (RV 6.66.6: rōka- m. or rōkas- n.?) see Nowicki (1976:105sq.).
7 See Schindler (1972:41) against a paradigmatic connection between rūci- and the root noun rūc- f. ‘light, splendour, reputation’ (RV+).
8 Again I assume an original *rucī°. The accent of rūci- can be due to its being a substantive.
A few more examples derived from *aniṭ roots can be explained along these lines, although not all of them are as evident as *socīs- and rocīs-. Whereas I am confident that cases like *bhrājīs-mant- ‘flickering’ (Br.)9 or rohis- ‘a certain kind of deer’ (Lex.)10 are best explained as contaminations of s- and i-stems, or – as I would prefer with arcīs- ‘beam, flame’ (RV+)11 and bhujīs-yā- ‘useful’ (AV+)12 – as derivatives in -s- from the i-stems, this is not entirely clear in other examples: Such an interpretation of barhīs- (RV+) and YAv. bāraziś- ‘sacrificial grass’ depends on the assumption that *-barhās- ‘strength’ (in ādī- barhās- RV+ ‘firm’) and Germ. *βαλγι- (in e.g. MHG Balg, ME belly) come from the same root (*βelγh- ‘swell’), or that the forms in question were associated strongly enough with the reflexes of the root *βergh- ‘high’ in IIr. to make an influence of its well developed Caland system (e.g. Av. bārazant- ~ bārazi-* ~ bārazah-) plausible.13 In the case of sarpīs- ‘ghee’ (RV+) a similar interpretation is not impossible, since an i-stem *srpl (or the like) would not be out of place beside srprdh- ‘greasy’ (RV) and Gr. ἐλπος- ἑλατων, στέαρ, εὐθηγιά (Hsch.)14. However as *srpl- is not attested at all and the s-stem is only found outside of IIr., it seems easier to assume that sarpīs- owes its suffix to hāvīs- ‘pouring, offering’ (RV+). On the other hand this stem itself is not very decisive: Although one could presume a coexistence of s- and i-
stem from *pra-hoṣ-ā- ‘offering’ (RV 1.150.2) and *havyā- ‘offering’ (RV+) analysed as *havi+ā-, it may be more reasonable to take it as an example of productive *-is-.15

The assumption that *-is- was slightly productive in IIr. becomes unavoidable anyway with cases like vartīs- ‘course’ (RV), where no s-stem is attested and an i-stem is found only in OHG wurt ‘luck’, or chadīs- ‘cover, roof’ (RV+) with its variant forms chardīs- ‘protection’ (RV+) and śardīs- ‘protection (?)’ (AV 18.3.16).16 Here too no s-stem is found, and the i-stem attested by nāva-ccadi- ‘with 9 roofs’ (TS) and a few similar compounds does not look like firm ground to build upon. Other cases of apparently productive *-is- include jyōtīs- (RV+), and dyotīs- (Kalidāsa) ‘light’, which certainly owe their suffix to the synonyms śocīs-, rocīs-, and arcīs-.17

2.3. – So far all examples were from ani roots and therefore rather uncontroversial. Now turning to set roots, basically the same picture emerges. The only difference between the two groups is that with set roots only the free forms in *-is- are of any use. Whereas above an example like bhrājiṣmant- from the ani root √bhrāj- and a free *is- stem like sarpīs- had basically the same value for this investigation, this is not the case with set roots. Unlike bhrājiṣmant-, which certainly contains *-is-, something like māhiṣvant- ‘powerful’ (RV 7.68.5) alone is no evidence for the existence of *māhis-. Rather mahiṣā- ‘buffalo’ (RV+) and similar derivatives can be compared with cases like vatsā- ‘calf’, which obviously cannot suggest a stem *vats-, but owes the suffixal zero-grade to a weakening of the stem in derivation.18 When a laryngeal precedes the suffix, such a weakening produces forms that look like stems in *-is- (e.g. *mēg-ẖ-os [>…

15 Note the frequent occurrence of ritual terms among the stems in *-is-, and in particular the parallelism between havīs-, hayād- (RV 7.34.14), hayavāhana- (RV+) and kravīs- (below 2.4.), kravyād- (RV+), kravyavāhana- (RV 10.16.11).

16 Both variants should be analysed as contaminations of chadīs- with sarman- ‘protection’ (RV+). See Dunkel (1987:12) for chardīs- and Sāyaṇa’s commentary ad loc. for śardīs-.

17 A possible trace of an s-stem is found only in jyōtsnā- ‘moonlight’ (MS, Br.+), which could also contain a complex suffix *-sn̥- (cf. Lat. lūnā, Gr. οὐλήνη), and the i-stems jyōti-, jyutī-, and dyutī- are late and scarcely attested.

18 *γέτ-os (Gr. ἔτος ‘year’) + -ό- → *γετ-s-ό-. In some such examples not only the suffix, but also the root is weakened: e.g. *rócas- → rukaśā- (cf. above 2.2.).
máḥas-] + -ō- → *meḡ-h₂-s-ō- [> mahiśā-]). Such examples evidently have no implications whatsoever for the shape of the stems they are based upon, since the derivatives of e.g. *máḥis- and máḥas- would be indistinguishable. Nevertheless these forms have sometimes to be examined, because there is no consensus on the development of laryngeals in internal syllables in Av.\(^{19}\) So if one believes that Av. mazišuuant- (name of a mountain) cannot contain a reflex of the laryngeal, the Caland system built on the IE adjective stem *meḡ-h₂- has to be taken into consideration.\(^{20}\) The reason why I favour the explanation by weakening of the regular s-stem in this case is that most true stems in -is- are accented on the suffix. Similar cases are avisyū- (RV+), avisyant- (RV) ‘eager to eat’, and avisyā- ‘eagerness to eat’, which are probably related to ávas- ‘help, support, etc.’ (pace Mayrhofer 1992:134) and contain its weakened stem *HáuH-s-. Also támisrā- ‘dark night’ (RV 2.27.14, Br.+ ) with its Lat. cognate tenebrae ‘darkness’ (< *temasrā-) is best taken as a derivative of the regular s-stem (Ved. támas-, Av. tāmah- ‘darkness’) of the set root *temh₂-, although this root shows Caland suffixes too.\(^{21}\)

2.4. – With the above considerations in mind, I shall now turn to those examples that are usually used to establish a class of s-stems with root final laryngeal and zero-grade of the suffix.\(^{22}\) Naturally the most important case is Ved. kravīs- ‘(raw) meat’ (RV+), which is believed to have an exact cognate in Gr. ἄρης. But when we take a closer look at the IIr. forms, nothing distinguishes this example from those discussed so far: Beside kravīs- we find YAv. xruuišiIant- ‘cruel’, which cannot directly go back to *kruH-s- and must therefore be influenced by the Caland i-stem found in xruui-dru- ‘with bloody club’. In fact there are at least traces that in Ved. too a stem in -i- existed beside krūrā- ‘bloody, cruel’. In the Kānyā version of the White YV krāvi- qualifies the name of Rudra, so that a translation ‘bloody’ is perfectly fitting (VSK 11.6.6.:

\(^{19}\) On this topic see Tichy (1985:229-244), Ravnaes (1981:247-273), Beekes (1981:275-287). Of course the forms under discussion here make up quite a significant part of the evidence.


\(^{21}\) Ved. támrā- ‘dark red’, OIr. teim ‘dark’, etc. (see Nussbaum 1976:75sq.).

\(^{22}\) Schindler (1975:265) quotes kravīs-, tuuIš-, staiš- and snalIš-. 
Moreover the assumption of such a stem is the easiest way to account for ákravihasta- ‘without bloody hands’ (RV 5.62.6), and finally one might even see this stem in kravyád- ‘eating carcass’ (RV+), which is in fact attested earlier and better than its presumed first member kravyá- ‘body, carcass’ (1x AVP, TS, MS; late). All in all there is no reason – aside from Gr. κρέας – why kravís- should not have been created along the same lines as described for the aní roots above. Closely connected with kravís- is its synonym ámis- ‘meat’ (RV), which is usually derived from a root *knm- (H) or similar. But in fact when a root final laryngeal is reconstructed then this is done only because of ámis-. On the other hand no stems in -i- or -s- from this root are known. Therefore I prefer to analyse this stem as containing productive -is- taken from its synonym kravís-.

An at first glance even clearer example than kravís- is OAv. tuuuiš- ‘cruelty’ (Y. 29.1). Beside this a regular s-stem is actually attested both in Av. (YAv. *-tauuah- ‘strength’) and in Ved. (tavás- ‘strong’ RV+), where we find a Caland i-stem tuví-* (RV+) too. Again, the assumption that the stem in -as- was influenced by the compositional i-stem seems obvious. Nevertheless this might not be the whole truth, because some Ved. forms belonging here tell a different story. Beside tavíśá- ‘strong, brave’ (RV+),

23 See Bloomfield (1932:29) and Sharma (1959/60:107) on the numerous variants in the texts of the different YV schools.

24 Scarlata (1999:36) assumes that a Caland i-stem *kruvi- (= Av. xruui-) was changed to kravi- under the influence of kravís-.

25 The very first occurrence of kravyá- is the compound kravyāvana- (RV 10.16.11 used as an epithet of Agni), which is best taken as an analogical formation after Agni’s common epithet havyāvana- (RV+). Therefore I suggest that kravyá- was in fact extracted out of these compounds. This interpretation implies that kravyád- is analysed as containing kravi- (from ákravihasta-) and -ād- taken from a compound like viśvād- ‘eating all’ (RV+). See Scarlata (1999:34sqq.) for a discussion of the cases attested in the RV.

26 See Mayrhofer (1992:170) for a discussion of the various proposals concerning the interpretation of the long root vowel.

27 Thus already Wackernagel (1957:13). The unexpected accentuation may stem from a presumable substantive *āma- ‘(raw) meat’ beside adjectival āma- ‘raw’.
which could reflect either *tauxHs-á- (from *táuxHas-) or *tauxHiś-á- (from *táuxHis-), is found taúviš- f. ‘strength, power’ (RV). This formation is of IIr. date, as is shown by Av. tauuīś- ‘strength, might’. Its accent and that of tūvišmant- ‘strong, powerful’ (RV+), which cannot go back to *túHs-mant- and should therefore be taken as a replacement of older *tauxHs-mant- influenced by tuvi-°, favor a direct derivation from *táuxH-as- (thus *táuxH-s-iH- and *táuxH-s-mant-). If this holds true, it becomes tempting to consider the hapax tauuś as a back-formation from the better attested tauuīś-. This approach is however hampered by the uncertainties surrounding the reflexes of the IIr. laryngeal in Av. If loss of the laryngeal in internal syllables is regular, and tauuīś is traced back to *táuxHsiH-, this must owe its second syllable to the influence of tauuīś-.

The only way to maintain the assumption of a back-formation in such a framework would be to place it in IIr. times, where *tauxHs- (realised as *tauxs-) could have influenced *tauxHiś-. This was thus realised as *tauxsī-, which accounts for Av. tauuīś- with its unexpected laryngeal reflex. If such a scenario is rendered impossible by new insights on the development of laryngeals in Av., one can still resort to *táuxHs- × *tuHī → *tauxHiś- and explain the accentuation of the Ved. derivatives along the lines of note 28. Either way no IE *téuHs is necessary.

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28 Or one could ascribe the accent of taúviš- to a substantivisation of adjectival taviš- / taviš- and that of *távišmant- to távasant- (RV 9.97.46). But since the latter is much rarer than távišmant-, I do not think this is preferable. The only form with accented í in this group (tuvišanta- ‘strongest, most superior’ RV, AV) should not be taken at face value, because its associated comparative tavástara- (RV) rather suggests that it is a replacement for *tavástama-. Again influence of tuvi-° (and távišmant-, one of the associated positives) must be assumed, be it directly on *tavástama- or maybe on something like *tavístama- created by contamination of *tavístama- with *tavístha- (presupposed by tavýas- RV+) and/or *távišmant-.

29 The explanation that it has been created after the development of *H > *i in the final syllable of *tauxHs- (Ravnæs 1981:254), is disfavored by the attestations of tauuīś- and tauuīś- / táviš- and of course argumenti causa.

30 I write *a (> Av. ɨ/ɨ) and *H (> Av. ə) for the allophons of */H/ in IIr. Though their exact distribution is still a matter under discussion (see e.g. Ravnæs [1981:261-267] for different positions taken in this matter), it is not very audacious to assume that */H/ was *a in final syllables (hence *tauxs-) but basically *H internally (hence *tauxHiś-). As soon as forms like *tauxsī- exist, the split of course becomes phonemic.
Less decisive is the case of YAv. *stairiś- ‘sacrificial grass’ belonging to the *set root (Ved. *strṛāti etc.). *i-stems are found only in OIr. (fossair ‘straw’ and cossair ‘bed’), and a stem in -s- is not attested at all. Rather than force a direct connection with the Celtic forms, I suggest that this stem contains productive -is-. This is especially likely since *stairiś- is attested three times directly beside and a fourth and last time in proximity of its synonym *baraziś-, which has a Ved. cognate in *barhīś- and should therefore be reconstructed already for IIr.\(^{31}\)

vyāthīś- ‘tottering, shaking’ (RV) is also not very clear. From the root vyath-, which lacks clear cognates outside of IIr. (see Mayrhofer 1996:591), we find avyathī- ‘not shaking’ and vithurā- ‘tottering, unsure’ (both RV+). Therefore an explanation with Caland suffixes is possible, but – due to the lack of a stem in -s- – less probable than in the other cases. Furthermore the -i- of avyathī- itself is sometimes taken as reflex of the laryngeal (Wackernagel/Debrunner 1954:296). Therefore it is possible that the form was created in IIr. by extension with -s- after the vocalisation of the laryngeal.

The use of the zero-grade of the suffix would be no surprise at a time when the phonetic realisation of the laryngeal was already a vowel. But perhaps here too we have simply a case of productive -is-.\(^{32}\)

From pāthīś- ‘dwelling place’ only a locative pāthiśi is found once in the YV (KS 16.18 and parallels), later the word occurs only in lexicographic works. This scanty attestation stands in sharp contrast with the synonymous pāthas- (RV+).\(^{33}\) The passage

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\(^{31}\) The inversion of this argument – namely that *barhīś- / *baraziś- was created after *stairiś- (thus e.g. Wackernagel/Debrunner 1954:366) – is less likely because of the broader attestation of *barhīś- / *baraziś- and its being easily motivated in the framework presented here.

\(^{32}\) Similar to this is Av. snaiśiś- ‘weapon’. The root snāś- ‘hit’ (= Ved. *nāth- ‘pierce’) is only scarcely attested and lacks clear cognates outside of IIr. Therefore it is no surprise that no decisive forms to explain this example are found. Either productive *-is- or IIr. *nāṭb+s- can be posited.

\(^{33}\) Meaning as well as etymology of pāthas- are not entirely clear (see Schmidt [1973:1-39] for the former and Mayrhofer [1996:119sq.] for the latter). I suggest a basic meaning ‘enclosed pasture’ or the like and an etymological connection with the root *peth₂- ‘spread out’: An s-stem to this root (*pāthas- ‘plain’) influenced by the root pā- ‘protect’ would neatly account for both form and meaning of pāthas-.
in the YV consists of a rather long sequence of identical sentences with only the locatives replaced each time. Now two of the sentences preceding the one attesting pāthiṣi contain the locatives jyotiṣi and sādhīṣi, which makes it extremely probable that pāthiṣi is an artificial form created ad hoc.

Ved. sādhis- ‘seat, abode’ and YAv. hādiḥ- ‘deity of the abode’ and OPers. hādiṣ- ‘residence’ are usually thought to be cognate with Lat. sēdēs ‘seat’ (see Kuiper 1942:23-29, Nowicki 1976:131), but this equation raises a few questions that are not so easy to answer. First the vocalism of Lat. sēdēs agrees with sēdeō, but not with the supposed IIR. *sād-H-s-; second the alternation of short and long e in the root (*sēd- for Lat. but *sēd- for IIR.) would argue for an acrostatic paradigm, which leaves no room for ablaut in the suffixes to account for Lat. -ēs (<*-eh1-(e)s) vs. IIR. *-H-s. Furthermore it is by no means undisputed that *h₁ like *h₂ aspirated a preceding plosive. Therefore I would prefer an alternative solution which in fact can be found thanks to an erroneous entry in Grassmann (1873:1464). He sets up a stem sā-dhiḥ for RV 8.43.9, where we rather should read sādhiḥ as the nom.-acc. of sādhis-. But a compound *sādhiḥ could indeed have meant ‘seat’ or ‘abode’ and a contamination of this with the well attested synonym sādas- can have produced sādhis-. To sum up, I think I have shown that IIR. *-is- is best understood as a complex suffix created within the cluster of Caland suffixes comparable to *-iro-, *-ulo-, *-nes- and the like (see Nussbaum 1976:62-97). It is also obvious that *-is- was slightly productive in IIR. For brevity's sake not all stems in *-is- were discussed in the paragraphs above. The few remaining cases (e.g. Av. sōdīṣ-, tbiṣiṣ-, vīdiṣ-, or Ved. kālīṣa-, timiṣa-) are simply too unclear to allow any conclusions.

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34 Thus e.g. Olsen (1994:267) with further references.

35 This would rather be a stem in -i- than a reflex of the laryngeal (see Klingenschmitt 1980:214 note 14 and Scarlata 1999:266sqq.). According to Scarlata (1999:268) the stems in *-dhī- are typically nomina rei actae (e.g. niḍhī ‘what is set down’) or nomina loci (e.g. iṣadhiḥ ‘where the arrows are placed’). Thus *sadhiḥ ‘place where something (e.g. people) are put together’.

36 The synonymous stem sadhāṣṭha- (RV+) is coined on upāṣṭha- (RV+), as is shown by the otherwise unexpected accent.
3.1. – Now turning to the Gr. forms, the situation is quite different. Gr. stems in \(-\text{ας}\) have – except for a few very special cases (e.g. \(\text{ǣλας}, -\text{ατος} \ ‘\text{salt’ Arist.}+<\text{acc. pl. \text{ǣλας or \text{δούρας AP 6.97.5 backformed from \text{δούρατα I.}+) – no other source than \(\text{*-h}_2\)-plus \text{*-s}-. So in Gr. the question is not whether these stems contain \text{*h}_2 or not, but rather \textit{when} the stems in question were created. If it can be demonstrated that we are dealing with stems created within Gr., the use of the zero-grade of the suffix to create secondary derivatives would not be surprising, because it is likely that the laryngeals were already vocalised at that time. Naturally one can only hope to discern when and how a stem is created if it has a reasonably clear etymology. Therefore most Gr. nouns in \(-\text{ας}\) are of little use for my investigation.\(^{37}\)

3.2. – I shall not go into detail about the inflectional patterns of these stems, which in fact are very interesting and exhibit a stunning amount of variation.\(^{38}\) Only a few short remarks are needed to exclude two explanations for the stems in \(-\text{ας}\) that come to mind easily or have actually been presented. First the assumption that they were created by paradigmatic levelling from earlier \(\text{*-os} \sim \text{*-as-} \) with colouring by the laryngeal only in the oblique cases (thus Stüber 2002:21) is ruled out by the observation that many of the words in question are only scantily attested in the oblique cases;\(^{39}\) furthermore they often have forms with \(\text{ε}\) instead of \(\alpha\) in these cases.\(^{40}\)

\(^{37}\) See Meissner (1995:153-157) for an overview over the attested cases.

\(^{38}\) Just to illustrate the point I list the case forms of \(\text{κέρας} \text{known to me: nom.-acc. sg. \text{κέρας (I.I.+, gen. sg. \text{κέρας (Arat.+), κέρως (Th.+), κέρες (Hdt.), κέρατος (Anaxag.+), κεράτος (Arat.+), dat. sg. \text{κέρατι (Hdn.), κέρατοι (Aristonicus \text{De signis Iliadis zu II.} 11.385), κέρας (II. 11.385, Th.), κέρατος (Hdt.), κέρατι (Th.+), nom.-acc. du. \text{κε-ρα-ε (PY Sa 840), [κέρ]ατε (IG I² 301.109), nom.-acc. pl. \text{κέρας (I.I.), [κε-ρα-α (KN K 872.1), κέραα (Hdn.), κέρα (Hdt.+), κέρη (N.T. Apoc.), κέρατα (Epimenid.+), κεράτα (Nic.+), gen. pl. κεράων (I.I.+), κερών (Aesop.+), κερέων (Hdt.), κεράτων (Pi.+), dat. pl. κέρασι(ν) (I.I.), κεράσιον(ν) (I.I.+), κεράσι (A.R.).}

\(^{39}\) An extreme example is \(\text{δέμας ‘bodily frame’ (II.+)}: \text{The nom.-acc. sg. is attested hundreds of times mostly in epic and poetic texts, whereas an oblique case (δέματι) is found just once in Pi. Pae. 6.80.}

\(^{40}\) E.g. \(\betaρέτας \ ‘\text{wooden image (of a god)’} \text{(A.+), where numerous forms with \(\varepsilon\) (e.g. \(\betaρέτες A. Supp. 885, \betaρέτερ A. Eu. 259) are found, whereas the only one with \(\alpha\) (\(\beta\)ρετάσσι Nic. fr. 74.68, Ath.) is late, rare, and an obviously artificial creation after Hom. δεπάσση and the like. Actually some examples are clearly regular stems in \(-\text{ος} \text{transferred to the} \ -\text{ας} \sim \text{-εος type: E.g. \(\κώς, \)}\)
An account of this “ε-inflection” of stems in -ας, which I believe to be of dialectal origin,\textsuperscript{41} would take another entire paper. Another approach, namely that stems in -ας result from transfer of other stem classes through oblique cases with τ-inflection,\textsuperscript{42} is disproved by chronological considerations. The first occurrences of stems in τ from neuters in -ας (κέρατα ‘horns’ Epimenid.+ and τέρατα ‘signs’ Emped.+), are found in the 6\textsuperscript{th} and 5\textsuperscript{th} centuries B.C. Therefore only a few later cases can be explained along these lines (e.g. πείρας ‘limit’ Xenoph., Pi., Parm., πέρας Anaximand. for πείραρ II.+).

3.3. – Taking a look at some of the crucial examples it is best to start with κρέας ‘meat’. In my eyes the path to its correct interpretation begins with the observation that – unlike with most other stems in -ας – the singular forms are much rarer than the plurals (e.g. nom.-acc.sg. κρέας Od.+, 4x in Hom. vs. nom.-acc.pl. κρέα Il.+, 28x in Hom.).\textsuperscript{43} But its frequency is not the only surprising feature of the nom.-acc. pl. κρέα. In Hom. it must always be read with short ξ, but it occurs only four times before a vowel, where one could understand it as elided for κρέαα. On the other hand we find nineteen instances before consonant and the Odyssey even has four attestations of elided κρέ’. κρέξ is also the normal form in tragedy and comedy.

Ferdinand Sommer has argued that this form replaced κρέάα before contraction took place, because a sequence of three short vowels was an oddity that hardly ever fits into the meter (1956/57:145-151). But the forms of the gen. pl. in Hom. make this

\begin{itemize}
\item κώεα ‘fleece’ (Od.+), vs. Myc. ko-wo (PY Un 718.4), and δέρας ‘skin’ (E.+, with δέρως and δέρατος only in Hdn.) vs. δέρος (Epich.+), with δέρως in Acus., D.S.).
\end{itemize}

\textsuperscript{41} The phenomenon is probably connected with the “transfer to the -εω type” (Buck 1955:125) of verbs in -άω in some dialects. Such forms are found in Dor., NWGr., and Ion. (see Schwyzer 1953:728 and Thumb/Kieckers 1932:191). The neuters in -ας agree well with this observation: Where a stem has both inflections, the forms with ε are used prevalently by authors such as Hdt. or Hp. (cf. e.g. the forms of κέρας in note 38), and the stems with constant ε-inflection usually are first attested in Hom. or the choral lyric (cf. e.g. βρέτας in note 40).

\textsuperscript{42} This is Benveniste’s explanation for the whole class of neuters in -ας: “les mots en -ας ne sont rien d’autre que d’anciens neutres en -αρ (*=τ) passés, avec leur voyelle -α-, au type en -s.” (1935:32)

\textsuperscript{43} This fact stands in sharp contrast with Ved. kravís-, which has no pl. forms at all.
argumentation less probable than it seems at first sight. Hom. lacks the *prima vista* expected form *κρέαων*, which would fit the meter. Instead he has once κρεῶν, which he has to force into the meter, and normally κρειών, a variant of κρεῶν with metrical lengthening. These forms are best understood if early contraction in the sequence of three vowels “εάω” is assumed. When Hom. tried to use the resulting κρεῶν in his verses, he had to create κρειῶν because κρέαων was not available any more. This interpretation of κρειῶν raises the question why κρέαα was not treated in a similar way. I think the answer should be as simple as possible: κρέα just never was κρέαα.44

To understand what κρέα really was, we had best turn to another example first. Alan J. Nussbaum has argued that Gr. κέρας ‘horn’ (Myc., Il.+ is no direct cognate of Vedic śīraḥ ‘head’, but rather an independent derivative in *-s- from a stem in *-ā- attested in the Myc. instr. sg. ke-ra ‘horn (material)’ (Nussbaum 1986:36-45 and 149-157). The use of the zero-grade of the suffix *-s- in this example argues for a derivation after the vocalisation of laryngeals in Pre- or Proto-Gr. Furthermore the relation between mass noun in *-ā- and derivative in *-s- denoting an object agrees well with the observation that among the Gr. stems in -ας we find more cases denoting concrete objects than among the normal neuters in -ος.

3.4. – Now trying to adopt this explanation to κρέα and κρέας one would expect κρέα to mean ‘meat’ as a mass noun and κρέας to denote an object consisting of meat. In fact this is exactly the usual meaning of these forms in Hom. (e.g. Od.14.109 κρέα τ’ ἰσθιε πινέ τε οἶνον vs. Od.8.477ff. κηρυκς, τῇ δῆ, τούτο πόρε κρέας, δήμα φάγῃσι | Δημοδόκω). κρέα is sometimes used as a true plural ‘pieces of meat’, but most often it denotes an unspecified amount of meat. The rare singular κρέας on the other hand always means ‘piece or portion of meat for one person’. If the semantics are in order, this raises the question of the morphological analysis of κρέα and κερά-, which were obviously integrated into the synchronic morphologic system in different ways. The different quantity of the α may actually be only apparent. The full grade root and the

44 I write κρέαα and κρεάων without asterisk because although not in Hom. they are actually attested in later texts (Tyrannion, Hdn.+ and h. Merc. 130, Nic., AP). These forms were renewed along the productive pattern of stems without a sequence of three vowels, where the contraction may be of later date.
presence of short \( \alpha \) in \( \kappa \varepsilon \rho \alpha \zeta \) seem to hint that \( \kappa \varepsilon \alpha \)- was still a proterokinetic stem, when \( \kappa \varepsilon \rho \alpha \zeta \) was created; whereas the Myc. form shows that the root vowel was levelled through the paradigm, it can not tell us anything about the exact form of the nom. At least in Proto-Gr., vowel gradation in the suffix of stems in -\( \vec{\alpha} \)– which in later times is only attested for the \( \vec{\alpha} \)-stems – may well have been intact. Therefore it is possible that the bases of \( \kappa \rho \varepsilon \alpha \zeta \) and \( \k \varepsilon \rho \alpha \zeta \) actually were formally identical at the time of their derivation.\(^{45}\)

For the morphological analysis of \(^{46}\) \( *\kappa \rho \varepsilon \alpha \) I see various possibilities. I think the first one, namely as the nom.-acc. sg. of a neuter root noun, should be ruled out, since this is a very rare category and there are no verbal forms to force us to reconstruct a root \( *\sqrt{\kappa \rho \varepsilon \alpha} \). The second and third possibilities are more attractive. \( *\kappa \rho \varepsilon \alpha \) could be a singular form with zero ending from a stem in \( *\cdot \vec{\alpha} \), which may be a collective noun or an adjective like \( \mu \varepsilon \gamma \alpha \).\(^{47}\) Both could easily mean what they should – most likely ‘gore’ in IE but ‘meat’ or even ‘roasted meat’ in Proto-Gr. – and both were an acceptable base for the secondary Caland system attested in various languages.\(^{48}\) A small disadvantage of these is that we are left with a root \( *\sqrt{\kappa \rho \varepsilon} \), for which only scanty

\(^{45}\) Actually there is an example, where both ways to integrate a form of the structure \( \text{R(\&)}-\vec{\alpha} \) into the morphological system are attested side by side. Beside \( \sigma \kappa \varepsilon \pi \alpha \zeta \) ‘covering, shelter’ (\( \text{Od.}+ \), almost exclusively in epic texts) a nom.-acc. pl. \( \sigma \kappa \varepsilon \pi \varepsilon \varepsilon \) (once in Hes. \( \text{Op.} \) 532) comparable to \( \kappa \rho \varepsilon \varepsilon \) coexists with the regular \( \vec{\alpha} \)-stem \( \sigma \kappa \varepsilon \pi \varepsilon \varepsilon \) ‘shelter, protection’ (\( \text{Hdt.}+ \)), which looks exactly parallel to what was expected, if Myc. \( \kappa \varepsilon \alpha \)- had survived in alphabetic Gr.

\(^{46}\) It is certainly not an “alte Stammform” (Schwyzer 1953:516) or a “nackter, unreflectierter Stamm” (J. Schmidt 1889:361).

\(^{47}\) That such an adjective is the base for \( \kappa \rho \varepsilon \alpha \zeta \) has been proposed by Torsten Meissner (1995:73), but as he accepts the reconstruction of Schindler (1975) he thinks this adjectival \( *\cdot \vec{\alpha} \) was contaminated into the \( s \)-stem noun at an early date. Instead I propose that Meissner’s younger example \( \text{pr\delta\r\varepsilon\nu\tau\alpha} \) is in fact the type to be expected for IE, whereas a stem in \( \cdot \alpha \zeta \) could only result at a later stage when \( *\vec{\alpha} \) had already become \( *\alpha \).

\(^{48}\) I share Meissner’s opinion that at least some of the roots in \( *\vec{\alpha} \) with a Caland system contain a suffix \( *\cdot \vec{\alpha} \) (1995:71sqq.), although I am not convinced that this is always adjectival \( *\vec{\alpha} \). But in fact it may be pointless to ask, which \( *\vec{\alpha} \) we are dealing with, since the amphikinetic inflection of these adjectives (see Nussbaum 1976:100) suggest that they may be internally derived from nouns in \( *\cdot \vec{\alpha} \).
evidence can be found. Moreover it seems quite hard to get the quasi-root-noun "kruh₂-" (e.g. OIr. crú, Slav. "kry") out of such a paradigm. Therefore I prefer the fourth possibility and analyse "kréga" as nom.-acc. pl. n. of an adjective in "u-" belonging to the root "kér-‘to cut’. To get "kruh₂-" and its Caland system from this starting point becomes pretty easy once we take account of the fact that "kr-ēg-h₂" is a well-formed n. pl. in Pre- or Proto-Gr., but not necessarily in IE. Forms like Skr. dārūṇi and also Gr. δῦρα suggest that rather the strong stem was used in thenom.-acc. pl. n., so that we could expect "kér-u-h₂" for IE. When this was hypostatised to form an animate substantive it may have followed an amphikinetic accentual pattern. The resulting "kér-h₂-s" would then have generalised its weak stem and was subsequently treated as a root noun. In Gr. on the other hand, "kér-u-h₂" was replaced by "kréγa", the productive nom.-acc. pl. n. of u-stem adjectives (cf. ἡδέα vs. Skr. svādūṇi).

3.5. – Another important example of a stem in "-ας" that on closer inspection looks like a secondary derivative is γέρας ‘gift of honour’ (Myc., II.+). The hints that "γερh₂-" is in fact a stem in "-h₂-" and not a root are not as straightforward as they were with κρέας, but I believe they make such an analysis at least possible. First, Hom. again has a neuter plural in short α before consonant, but this time it occurs only three times and does not recur in the later literature. Therefore it remains possible that it was only created on the model or κέρα (thus Sommer 1956/57:147). Second, γερατός ‘old’ (II.+). It is accented like παλαιός, which is built on the adverb πάλαι. This in turn is in my opinion best traced back to an old locative of a stem in "-ā-". Therefore γερατός could imply that an adverb "γέρατ", built on a stem in "-ā-" meaning ‘old age’, once

49 Or maybe "kór-u-h₂" (cf. δῦρα). I prefer "kér-u-h₂" because the form should mean ‘gory mass’ and therefore the assumed u-stem was probably a proterokinetic adjective rather than an acrostatic noun (on the interaction of these types see recently Widmer 2004:96-100 and passim). This agrees well with the renewed form "kréγa" which is built according to a proterokinetic pattern.

50 Amphikinetic accentual pattern is meant in the literal sense here. In most cases the ablaut pattern é-ð/ð-Ø ~ Ø-Ø-é is associated with this accentuation, but such secondary examples need not necessarily have copied this pattern along with the accentuation. That this pattern ceased to be productive at some point in time agrees well with some of the later restructuring of originally amphikinetic stems that took place in the IE languages (cf. e.g. Gr. μέγας ← *mēg-ðh₂).

51 A parallel case is Gr. δῦς f. ‘tree’, which I suggest to be built on the n. pl. "dór-u-h₂-".
existed. But given its semantic proximity, παλαιός could have influenced the expected *γεραιός to give γεραιός. Still, γεραιός is the only form in this group with short ε meaning ‘old’ and not ‘honoured’. If the last argument below – that the meaning ‘gift of honour’ of γήρας is caused by the derivation with *-s- – is accepted, this *γεραιός is better taken as derived from the stem in *-ā-.

Another minor argument can be made of γεραιός ‘honourable, old’ (II.+) with its untypical full grade root. This would be easier to understand if it was derived from a nominal stem, because in other cases where the root vowels of ro- and s-stems influenced each other, it is usually the zero-grade root of the ro-derivative that is generalised. Next, most accounts of γραύς ‘old woman’ and its dialectal variants (Att. γράς, γράδος, Ion. γηρᾶς/γρηῆς, γηῆς)52 make use of a full grade *γρή-h2-. This is easier to accept if *γέρ-h2- was a stem in *-h2- and not a root. Finally, a last hint comes from the paradigm of γήρας ‘old age’ (II.+) with its dative γήρα, which is one of the earliest and best attested of its kind. I prefer to derive these forms from stems in long *-ā-, because the alternative explanation as dative forms in *-eijing from stems in -aç is made less plausible by the fact that the stems in *-s- had generalized the locative ending *.i already in Myc. Of course not each and every form in -aç proves a stem in long *-ā-, as -aç was productive in later times, but some old cases like γήρα (Od.+), 53 are in my eyes the reason for this productivity. If the reconstruction of a stem *γέρα-

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52 See Peters (1980:252sq. note 210) for a clear synopsis of γραῦς and its derivatives.

53 E.g. *γρέμ-hú - ~ -iú (Peters 1980:252 note 210). A different approach was proposed by Nussbaum (1976:18): He sets up an amphikinetic stem *γρή-h2- ~ *γρή-tw-ēs, whose oblique stem developed to *grāw- and had been generalised to the strong cases. This explanation suffers from the fact that it is hard to see what in this framework led to the disyllabicity of Ion. γηῆς. To avoid this problem one could start from *γρή-h2- ~ *γρή-tw- (or *γρή-tw-) > *grāw- ~ *grāw-. Generalisation of *grā- had then led to γηῆς with preserved hiatus. Again a schwaneblaut form *γρή-tw- is needed.

54 Cf. Nussbaum (1986:45 note 50). He considers to ascribe Att. κέρα to a stem *-ā-, but thinks it to be “overly audacious” and admonishes that *-eijing vs. *.i could be due to dialectal variation. I agree with him concerning κέρα, but the case of γήρα is different, because of its early attestation, and the fact that it ended in the paradigm of γήρα, which continues the abstract meaning I assume for the base *γέρ-h2-.
‘old age’ is indeed justified, we can dispose of the purely semantic shift from ‘old age’ to ‘gift of honour’ usually assumed for γέρας. Instead the semantics would be rooted in the derivational pattern: γέρας is ‘the object representing old age’.

3.6. – Now if indeed *ĝér-h₂- was a nominal stem instead of a root, most people would expect it not to possess primary verbal derivatives. This may in fact be the case, because the Gr. presents γηράσκω (Od.+ and γηράω (X.+ ‘become old’ can be built on the s-aorist ἐγήρα (see Harðarson 1993:72-76), which has a Ved. cognate in jāriṣur. In addition, the Ved. presents jāryati and jīryati, which agree in meaning with the Gr. presents and the s-aorist, use the suffix -ya-, which is also used in denominative verbs. This leaves us with the thematic present jārati, which unlike the other stems cited so far has transitive meaning. Therefore it is erroneous to reconstruct this present for Gr. too because of γέρων, γέρων and its Ved. cognate járant- could not mean ‘old man’ if they were the participle of a transitive verb meaning ‘make old’. In fact the participle associated with jārati is jāryant-. Given this, I prefer to understand *ĝérh₂-ont- as a denominal formation like mahánt- ‘great’, and járati as a transitive back-formation from jāryati.

The last question that arises in connection with γέρας is, what the exact interpretation of γήρας should be. This stem has – unlike most of the neuters in -ας – an abstract meaning, and therefore I suggest that it was first created as a regular s-stem *γέρος, which was then influenced by the verbal forms with their long root vowel and by γέρας.

55 In my opinion all of them (including the s-aorist) can be taken as old (note the archaic look of the ablaut pattern between these forms) denominative formations. Rix/Kümmel et al. (2001:165) treat these as new formations, because of Ved. jāranti and the unreliable root aorist jurátam (RV 1.182.3).

56 See Nussbaum (1976:99sq.) for the secondary formation *még-(o)h₂-ont- ~ *mḡ-h₂-nt- (cf. Lat. ingens), and (1976:19) for an account of *ĝérh₂ont- that differs from the one presented here only inasmuch as Nussbaum of course assumes it to be a primary adjective.

57 This is made possible by pairs such as ránya-(ti) (RV+) ~ ránya-(ti) (RV), etc. (see Gotô 1987:59sq.). Since different ablaut alternations are found in such pairs, even jurátam could be a similar back formation.
4.1. – Having shown that the most important Gr. stems in -ας and the IIr. neuters in *-is- can be understood without assuming an IE nom.-acc. with zero-grade of the suffix, I can address Schindler’s last argument for an original nom.-acc. sg. **mén-ś. From the possibility of reconstructing a stem with accented é-grade of the root and one with zero-grade of the root and e-grade of the suffix he deduces that these two stems belong to a proterokinetic paradigm (Schindler 1975:264). Because the suffix in such a paradigm always contains an unaccented zero-grade in the strong stem, he assumes that the s-stem neuters too once had *-s-, and that this was only later replaced by *-os- (1975:265sq.). The motivation for this replacement had been the oddity that in the paradigm *mén-s ~ *mén-es-os (according to Schindler this replacement of **mn-és-s is of earlier date) a monosyllabic and a trisyllabic stem stood side by side. He assumes that in the stems built to set roots *-s- was not replaced because the laryngeals were already vocalised in word final syllable.

4.2. – For a number of reasons I am not convinced by this argumentation. First, the chronology of the replacement of *-s- and the vocalisation of laryngeals is set up completely ad hoc. Reflexes of a stem in *-os- are found in most IE languages, whereas the stems in “*°H-s-” are confined to IIr. and Gr. Second, if the reason to set up **mén-s in the first place was the parallelism with other proterokinetic nominatives, it seems odd to me that this parallelism would have been destroyed by the creation of *mén-os.59 Third, the parallelism of **mén-s and other proterokinetic strong stems is only apparent. All the relevant stem classes contain a sonant or laryngeal in the suffix, which can be syllabic in the zero-grade too. Therefore except for **mén-s all proterokinetic nom. and acc. have two syllables. To be truly parallel with the other proterokinetic stems, the stems in *-s- had to preserve the syllabicity of their suffix in the nom.-acc. sg. But because in IE syllabic šs apparently did not exist, its closest

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58 See Meissner (1995:156) for an argumentation why δέμας is not one of them (pace Schindler 1975:265).

59 When the direct evidence for s-stems with suffixal zero-grade is removed, there is furthermore no reason to assume that the replacement of **mn-és-s by *mén-es-os was of earlier date than that of **mén-s by *mén-os. Thus it is not clear whether a monosyllabic and a trisyllabic stem ever did coexist.
equivalent was used. This was of course *-os, since in IE unaccented *o is frequently found in alternation with accented *é. The directly reconstructed nom.-acc. sg. *mén-os thus conforms to the morphological system of IE. Furthermore I have shown that none of the examples discussed above force us to assume something like "*kréyh2-s" for IE. To set up an older form **mén-s instead of *mén-os is thus completely unnecessary, and I therefore conclude that *mén-os- was the form of the strong stem beside weak *m(n)h-és-as far back as can be reached by our reconstruction.61

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References:


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60 According to Rasmussen (1989:252sq.) this *o reflects an intermediate stage between pre-IE **e and IE *Ø.

61 Note that the reconstruction *mén-os ~ *mn-és-os still has a proterokinetic accentual pattern. Again ablaut pattern and accentual pattern are closely connected, but by no means identical (cf. note 50 above).
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