1. Introduction

SCHINDLER’s (1969; henceforth ‘SCHINDLER’) article on the Proto-Indo-European words for ‘bird’ and ‘egg’ has been the definitive exposition of these forms ever since it was first published. However, in the intervening forty years or so there have been advances in our understanding of both phonology and morphology in Proto-Indo-European languages which have a major impact on the reconstructions that SCHINDLER put forward for the words for ‘bird’ and ‘egg’. In this article I will argue that we should return to the traditional reconstruction of *H₂ōúj-o-m for ‘egg’ rather than SCHINDLER’s reconstruction *ō-Húj-o-m, and that Latin auis, Armenian

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1 This article has had an extremely long gestation period. Much of the research involved was carried out while in receipt of a Doctoral Competition grant from the Arts and Humanities Research Council of Great Britain (2006-2008) and a Rhŷs Scholarship in Celtic Studies at Jesus College, Oxford (2009). Versions were presented at the Oxford Comparative Philology seminar and at the 21st Annual Indo-European Conference at UCLA in 2009. At both of these I received many helpful questions and comments. I am grateful to Dr Tijmen PRONK and Dr Yoram COHEN, who very kindly provided me with pre-print versions of their articles. Professor Andreas WILLI and Dr James CLACKSON read earlier drafts of the article and their comments and advice have improved it beyond recognition. Special thanks are due to Dr Peter BARBER who has discussed ‘bird’ and ‘egg’ with me repeatedly over the last few years, and who has patiently educated me on the subject of Sievers’ Law, including allowing me to see drafts of his book on the subject (in preparation). As always, mistakes and omissions are my own.
haw, Vedic véḥ reflect an acrostic i-stem of the shape *H₂o/e Ho-i-s rather than a root-noun *H₂yo/eî-s, as supposed by SCHINDLER.²

2. ‘Bird’: preliminaries

The word for ‘bird’ is attested in several Indo-European languages, where it seems to reflect an original i-stem. In Vedic, the paradigm is mainly that of a standard i-stem, with the following parts of the paradigm attested: acc. sg. vím, gen. sg. véḥ, nom. pl. váyah, gen. pl. vínám, instr. pl. víbhiḥ, dat. pl. víbhyaḥ. The exception to the usual picture is the nom. sg., where beside expected víḥ we also find véḥ. In Avestan the word also appears as an i-stem, with only the expected nom. sg. in Young Avestan víš. The Italic evidence consists of Latin avis, Umbrian acc. pl. avif, in Armenian we have haw, and Greek has a derivative αἰετός, ἀετός ‘eagle’.

According to SCHINDLER, the Indo-European word was an acrostic root noun with nom. sg. *Hyoi-s, gen. sg. *Hyei-s, whence the Vedic nom. and gen. sg. véḥ, and with subsequent remodelling to fit the usual (proterodynamic) i-stems, nom. sg. víḥ (cf. nom. sg. agníḥ, gen. sg. agnéḥ ‘fire’). The rationale behind this reconstruction is very reasonable: that no model for the analogical creation of Vedic nom. sg. véḥ can be conceived of, and consequently it must be an archaism. However, this reconstruction meets with a serious objection in the form of the Italic and Armenian forms. SCHINDLER supposes that these can come regularly from *Hyo/eî- by means of an anaptic vowel, whence *Hyo/eî- > Lat. auis, Arm. haw. PETERS (1980: 40-2) expands on this theory by restricting the environment for the anaptyxis to originally monosyllabic forms. However, SCHRIJVER (1991: 25-31) has shown that anaptyxis never occurs in Italic before a single consonant.³ PETERS’ other example of *Hy- developing anaptic -a- in a monosyllable in Armenian is agay ‘spent the night’ < *H₂yēs-t, but this can be explained as an augmented form *e-H₂yēs-t (CLACKSON 1994: 105; accepted by LIV 294). The usual reflex of *Hy- in Armenian is g-, e.g. gel ‘desire’ <

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² In this article H stands for any laryngeal, V for any vowel.
³ It may occur before two consonants if Lat. āiō ‘say’ comes from *H₁g-ē/o- (thus SCHRIJVER). But cf. Lat. stella < *H₂ster-leH₂.
*H₁yel- (cf. Gk. ἐέλδω). Consequently, both Italic and Armenian contradict the Vedic evidence by suggesting a preform *HVᵲi-.

Further investigation allows us to gather more information about the quality of both the laryngeal and the vowel in the first syllable of the Italic and Armenian forms. In Armenian both *a- and *o- may be possible: KORTLANDT (1983: 12-15, 1984, 1987) maintains that *a- can come from *H₂e- or *H₃e-, KLINGENSCHMITT (1982: 173) that it can only reflect *H₂e-.

Latin and Umbrian a- can come from either original *a-, or from *o- before *-u- by Thurneysen-Havet’s law. According to VINE (2006), Thurneysen-Havet’s law turned *-ou- to *-au- in Proto-Italic in syllables which lacked the Proto-Indo-European accent. It would be possible to generate a preform *oús as the input for Thurneysen-Havet’s law by positing a protorodynamic i-stem with nom. sg. *H₃éy-i-s and gen. sg. *H₃u-éj-s, and supposing that Italic generalised the full-grade of the strong stem and the accentuation of the weak stem. However, Occam’s razor would suggest a stem *H₂eᵲ-ᵲ-, which is phonologically just as plausible.

Gk. αἰετός supports the reconstruction *H₂eᵲ-ᵲ-, since it points to *H₂eᵲ-ᵲ- or *H₂uᵲ-ᵲ- . However, HART (2004: 346-8) and OLSEN (2006: 237-8) have argued for initial *H₃- . In both cases, the primary evidence consists of Hittite šuwaiš, which shows a supposed development of *H₃- to Hitt. š- in a labial context (proposed independently, in slightly different form, by both scholars). But this form, originally identified as ‘bird’ by OTTEN/VON SODEN (1968: 40 fn. 2), has been shown by COHEN (forthcoming; followed by KLOEKHORST 2008: 795) to be an action noun meaning ‘abandonment, rejection’. Without the support of šuwaiš, the reconstruction with *H₃- becomes extremely unlikely: OLSEN (2006: 237-8) assumes an original paradigm *H₃ui-/H₃uᵲ-ᵲ- ; since this involves positing a/ø ablaut, such a reconstruction should be considered a last resort. HART supposes that Gk. oiōνός ‘large bird; bird of augury’ shows the original

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4 An acrostatic nominative stem *H₂oᵲ-ᵲ- or an acrostatic oblique stem *H₃eᵲ-ᵲ- are implausible because the Proto-Indo-European accent would be expected to correspond with the full grade (see SCHINDLER 1972, 1975; MEIER-BRÜGGER 2003: 201-18).
vocalism, and that αἰετός is a loan-word from a language where *-o- became *-a-. She explains Italic *αιιτ- by invoking a law of Schrijver’s (1991: 454-74) whereby *-o- gives *-a- after a labial consonant, and including *-H3- within the group of consonants supposed to have effected this change. Apart from the fact that no other evidence can be provided for such a development following *-H3-, this requires that the distinction between *H3o- and *H3e- was preserved into Proto-Italic, which seems unlikely (cf. Lat. onus ‘load, burden’ = Skt. ánas ‘cart’ < *H3enos, opus ‘labour, work’ = Skt. ápas ‘work’ < *H3epos). There is of course no reason to suppose Gk. αἰετός is not indigenous: it is phonologically and morphologically unexceptional (Vine 1998: 11-12), while οἰωνός can reflect an o-grade formation.

Since there is no real evidence for *H3-, I conclude, on the basis of Lat. auis, U. avif and Gk. αἰετός, that the initial laryngeal was *H2-. Lat. auis, U. avif and Arm. haw must go back to *H2ei-; on the other hand, Ved. vej must reflect *H2ei/oi-. In principle, three paradigms are reconstructable: acrostatic *H2o-i/*H2e-i-, acrostatic *H2oi/*H2ei-, or proterodynamic *H2ei/*H2o-i-. The last, which on the face of it could most easily give both sets of forms, is ruled out because in proterodynamic i-stems in Indo-Iranian a single stem was generalised throughout the paradigm, so that nom. sg. *auis, gen. sg. *uai/s would have been remodelled to nom. sg. viḥ, gen. sg. vēh without any opportunity for the creation of the by-form nom.sg. vēh (Schindler 152-3). Of the remaining acrostatic paradigms, *H2o-i/*H2e-i- could create the Italic and Armenian forms, but not the Indo-Iranian ones, and *H2oi/*H2ei- would explain the Indo-Iranian forms, but not the Italic and Armenian forms. Since they are mutually incompatible, clearly one must be correct, and the forms in the other families were created by some analogical process. A final conclusion can only be reached after we incorporate evidence so far unconsidered: let us turn to the Proto-Indo-European word for ‘egg’.

3. ‘Egg’: preliminaries

Proto-Indo-European ‘egg’ is even better attested than ‘bird’, but finding a coherent pre-form for all of these forms is just as difficult. Except where
specified, the discussions of the forms in individual languages below are based on Schindler (160-3). An apparently Proto-Indo-European sound law which pertains to the reconstruction of these forms must be mentioned briefly. This is Sievers’ Law, which will be discussed in much greater length shortly. However, in its simplest formulation, Sievers’ Law can be expressed as a constraint against consonantal *-i- and *-u- directly following a super-heavy syllable. Thus, it is maintained, we only find clusters of the shape *CVCCiV- and *CVCiV-, never *CVCCiV- and *CVCiV-. As we shall see, one possible reconstruction of the words for ‘egg’ is *H₂ōum, but if this version of Sievers’ Law is correct, a form of the shape *H₂ōum could not have existed in Proto-Indo-European, since it would instead have given *H₂ōuiom. In examining the Indo-European words for ‘egg’ we must consider whether or not they definitively point to either *H₂ōum or *H₂ōuiom, or to some other preform.

Young Avestan aēm, Modern Persian xāya and various other Iranian languages point to *ōum. However, some Modern Iranian forms such as Wazīrī yōwa and Tālīsī ūva seem to go back to *ōum. According to Hennig (1954: 291-2), this shows that the original Iranian preform was *ōuiom, which developed either to *ōum or *ōom in different Iranian languages. However, Schindler (160) remains undecided, and maintains that the forms which seem to show *ōom may have a secondary origin.

Serbo-Croatian jáje goes back regularly to *ōom, with epenthesis of j-. Armenian jow apparently goes back to *ōom, where the initial *-i- is not expected, and must be due to a sort of assimilation from *ōom. But Dr Clackson (personal communication) points out that -ow might be the regular result of *ōom, since *-ō- and *-ű- fall together in Armenian and since *-uā gives -ow in *mātruā > Arm. mawrow ‘step-mother’ (cf. Attic Greek μητρωά ‘step-mother’, Old English mōdrige ‘mother’s sister’; Clackson 1994: 145-7). Initial j- in jow would still have to be explained by some sort of *ōom > *ōom.6

5 There is apparently another reflex of *-uī- in Arm. aṟaj ‘front’ from *prH₂uīo- with -r- for *-r- by analogy with aṟ ‘to’ (Olsen 1999: 196-7, 811).
According to SCHINDLER (following HAMP 1955: 400), Albanian ve may reflect *āuiā, *āuijā or *āiā from *ōuiā etc. by way of a change *ōu- > *āu-. This is on the basis of North Geg /vōe/, in which, according to SCHINDLER, the -o- can only come from *-ē- or *-ā-. Whatever the precise details, the Albanian forms no doubt ultimately reflect *ōuiā, *ōuijā or *ōiā.

OE. æg, Old Norse egg, Old High German eiie (dat. sg.) go back to *aŷom < *ōŷom, for which the only plausible derivation is from *ōŷom by Osthoff's law < *ōuiom, although the only other evidence for *-ui- > *-ii- seems to consist of OE mōdrige, and the evidence for Osthoff’s law in Germanic is scanty (LÜHR 1976: 84 fn. 4; RINGE 2006: 75-8).

Latin ōuum comes from *ōyum, which may be derivable from *ōŷom, as there seem to be no other Latin examples of *-ui-. A preform *ōyiōm would have given xōuium.

Welsh wy, Breton vi, Middle Cornish oy can come from *āiōm < *ōŷom or from *ājōm (cf. W. mwy < *mājōs). They cannot come from *ōjōm > *ōyiōm by Sievers’ Law > *āiōm because this would have given *āyiōm > *ōyiōm > W. ewydd (see SCHRIJVER 1995: 296-8, 299-301, and for *-ui- > *-y- see SCHRIJVER forthcoming: §3.6.1). However, if Sievers’ Law originally applied to Celtic, it seems to have been subsequently eliminated (UHLICH 1993; SCHRIJVER 1995: 282-9) so it is possible that wy comes from an original *ōyiōm which became *ōyom again.

The evidence of the Greek forms for ‘egg’ is complicated because it is not clear that we can reliably tell the difference between *ōyom and *ōyiōm. The attested forms include Attic and Ionic φύν, Lesbian φῦν. These could probably come from *ōyiōm, by comparison with forms like Att. πρῶος, Ion. πρῶος ‘early’ and Att. πατρῶος, Ion. πατρῶος ‘coming from one’s father’. The former is derived from πρῶι ‘early in the day, early’ and therefore reflects *prōi-o- > *prōiō-. The latter is probably derived from the

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An alternative possibility is that Arm. jow comes from a different word entirely: OLSEN (1999: 54) suggests a reconstruction *gʰu-to-m, comparing Old Norse gjóta hrognnum ‘spawn’, Lat. fundō in the sense ‘engender, bear’.

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same preform as πάτρως ‘father’s brother’ with the possessive suffix 
*-iH3-o- and thus reflects *patrō- > *patrōi- rather than
*patrōjo- (on the suffix see below).

Although Ionic φόν shows an iota-subscript, which implies /όιον/ rather
than expected ἤφιόν as in πρῶτος, the word is found only in the prose of
Herodotus, where there is no metrical evidence to show that φιόν should
be preferred to φόν. In the original manuscripts the word would have been
written ΩΙΟΝ, so it is only a later editorial decision to write φόν rather
than φιόν, and the Ionic form as we have it does not argue against
*δυιόν. Lesbian ωιόν does seem to point to *δυιόν, since otherwise we
would probably find disyllabic οιόν or ὀν (the form comes from Sappho,
so we have metrical evidence for its trisyllabicity). However, SCHINDLER
suggests ωιόν might come from ὀεον, which is attested in Semonides and
Ibycus. There seems to have been an interchange (perhaps morphological
rather than phonological) between the material suffixes -ιο- and -εο- in
Aeolic; cf. ὀστέον beside ὀστέον ‘bone’.7 The origin of ὀεον and Argive
ὤβεα ‘eggs’ (Hesychius), ostensibly from *δυιόν, is unclear. If Lesb.
ωιόν is based on ὀεον, then it is possible that *δυιόν, if it had not under-
gone Sievers’ Law, could have given Att., Ion. φόν.

An argument in favour of *δυιόν is that, as SCHINDLER (160-1) points
out, *δυιίόν ought to have undergone Wheeler’s law, a pan-Greek rule by
which a final accent is retracted onto the previous syllable in dactylic
words (PROBERT 2006: 87-9, 91-6; COLLINGE 1985: 221-3). However it is
possible to suggest an explanation for the failure of Wheeler’s Law to op-
erate on *δυιίόν (see below, section 6). Consequently, based only on the
Greek evidence, both *δυιόν and *δυιόν seem to be possible. Which we
reconstruct may be affected by our pre-existing views on Sievers’ Law.

4. SCHINDLER’s reconstruction

We can see from the above that only Greek and perhaps Albanian and
Celtic have words for ‘egg’ which it is possible to trace back to a preform

*ōmyom. The others seem indirectly to attest *ōmyom by assimilation of the sequence *-ui- to *-u̯- or *-wu-. The problems involved with Sievers’ Law lead SCHINDLER to reconstruct Proto-Indo-European *ōHujom instead of *ōmyom. Since his assumptions regarding the further development of this sequence into the attested languages are expressed in a rather condensed fashion in two different places, it is worth quoting the key passages in full:

“Der Ansatz *ōHujom ist nur berechtigt, wenn angenommen werden darf, daß die Reduktion von ōu zu ō noch voreinzelsprachlich nach Laryngalschwund und der Tilgung des Hiats möglich war. Dabei muß unter Umständen damit gerechnet werden, daß h nach langem Vokal früher als nach kurzem geschwunden ist” (SCHINDLER 165).


SCHINDLER (166) explains *ōHujom as a substantivised prepositional hypostasis *ō-Huj-o:m meaning “‘das beim Vogel Befindliche’”, consisting of the preposition *ō ‘near, near to, towards’, the stem of the word for ‘bird’ in the zero grade, and a composition suffix *-o-. This is parallel to compounds like Ved. ā-pathi- ‘travelling hither, near’ (without composition-suffix) and ánu-path-a-‘following the road’.

This explanation seems to me to be very unlikely, for several reasons. Semantically, it seems strange to call eggs ‘things that are near the bird’; as we shall see later, a meaning ‘belonging to the bird’ makes a lot of sense, but ‘near the bird’ is curiously unspecific.9 In terms of word-composition, *ō is a perfectly common preposition to use in compounds of this sort in Indo-Iranian, but outside the Indo-Iranian languages it only appears in a

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8 I.e. Sievers’ Law.
9 And cf. BEEKES (1992: 135 fn. 6): “[t]he meaning is quite unconvincing”.

short form \( *o^{10} \) (for example, in Gk. \( \dot{o} \kappa\ell\lambda\omega \) “run ashore, run aground”).\(^{11}\)

There is therefore very little proof that it goes back as far as the proto-language. These objections have already been raised by De Vaan (2008: 438).

The reconstruction \( *\ddot{H}u\acute{u} \text{om} \) is also problematic on formal and phonological grounds. Schindler admits that there is very little evidence for a Proto-Indo-European (or at least pre-dialectal) loss of laryngeals after long vowels to give \( *\ddot{\text{u}}\acute{u} \text{om} \). Between vowels laryngeals were lost only relatively late in Indo-Iranian, as is shown by Ved. \( \text{vātaḥ} \), YAv. \( \text{vāta} \) ‘wind’ < \( *\text{H}_2\text{yē}\text{H}_2\text{ŋtō} \), which often scan as though they were \( *\text{yaH}\text{ata} \), Ved. \( \text{rayim} \) (acc. sg.) ‘riches’ < \( *\text{reH}-i \) (Mayrhofer 1986: 124). Contraction of vowels in hiatus occurred only later. Presumably Schindler posits the earlier loss of laryngeals after long vowels to allow the change of \( *\ddot{\text{u}}\acute{u} \text{om} \) to \( *\text{ā} \text{om} \) in Avestan (for which of course there is no parallel); if the laryngeal were lost as usual between vowels in Indo-Iranian, we would expect \( *\ddot{H}u\acute{u} \text{om} > *\ddot{\text{u}}\acute{\text{um}} \) to lose the hiatus and give \( *\ddot{\text{u}} \text{om} \), the beginning of which might be expected to be preserved as Young Avestan \( \ddot{\text{a}}\text{u} \) (Hoffmann/Forssman 2004: 72). However, if the laryngeal in \( *\ddot{H}u\acute{u} \text{om} \) were already lost in Proto-Indo-European, it seems very unlikely that the hiatus would last all the way into Latin to allow \( *\ddot{\text{u}}\acute{\text{um}} > *\text{ōu} \text{om} > *\ddot{\text{u}} \text{om} \), as apparently envisaged by Schindler. An early development to \( *\ddot{\text{u}}\acute{\text{om}} \) is far more probable.

As it happens, it will be suggested below that the Iranian forms may come directly from \( *\ddot{\text{u}}\acute{\text{om}} > *\ddot{\text{u}} \text{om} \). It has already been mentioned that Lat. \( \text{ōuum} \) may come from \( *\ddot{\text{u}}\acute{\text{om}} \), and that Proto-Germanic \( *\text{aija} \)- probably comes from \( *\text{oujo} < *\ddot{\text{ujo}} \). But part of the point of Schindler’s reconstruction \( *\ddot{H}u\acute{u} \text{om} \) is evidently to explain why the Indo-European languages show so many reflexes of the word for ‘egg’. If we assume that \( *\ddot{H}u\acute{u} \text{om} \) gave \( *\ddot{\text{ujo}} \text{om} \) directly in the individual languages as a result of contraction of \( *\ddot{\text{u}}\acute{\text{om}} \), which then underwent individual developments in each language, Schindler’s argument loses much of its force. It becomes

\(^{10}\) Note that \( *\text{o-H}_2\text{ujo-o} \)-, with the short form of the preposition, will not give the desired result, since it would become \( *\text{oujo} > *\ddot{\text{ujo}} \).

\(^{11}\) But Bекезех (1992: 172-3) doubts the existence of \( *o \) at all.
only a way to avoid Sievers’ Law while retaining the early-dialectal reconstruction *ōuiōm.

Even if we were to follow this sort of reduced version of SCHINDLER’s etymology, it still runs into difficulties in Greek, since to get *ōuiōm from *ōuiōm we have to assume that Sievers’ Law was still in operation to prevent this becoming *ōuiōm in Proto-Greek. In fact, it will be argued below that Sievers’ Law may have been an independent but parallel sound change in several Indo-European languages. But of course this is not SCHINDLER’s position, and if it were accepted, it removes the other reason to reconstruct *ōHujom: the avoidance of Sievers’ Law operating in Proto-Indo-European. SCHINDLER’s assumption, without further evidence, that Sievers’ Law occurred twice, is circular and further weakens his argument. It is only necessary to invoke it once in Proto-Indo-European and once in Proto-Greek in order to explain away the problems involved in his reconstruction of ‘egg’. Furthermore, Wheeler’s Law is still a problem, since it should have applied regardless of which of SCHINDLER’s putative pre-stages *ō’uiöm and *ōuijöm it operated at.

The drawbacks listed above seem to me to be enough to make SCHINDLER’s approach quite implausible. Since other examples of *ōHu- are impossible to find, it is true that it is very hard categorically to disprove SCHINDLER’s proposal. However, so many developments from an already unconvincing starting point are required to be taken on trust, without any positive evidence in their favour, that we are at liberty to consider more promising approaches.

5. ‘Egg’ as a vrddhi derivative of ‘bird’

According to DARMS (1978: 509 fn. 277), the true Proto-Indo-European preform was *ōjóm, which can give many of the attested words. The Latin (ōuum as a replacement for *ōjóm) and the Greek forms were altered by analogy with the word for ‘bird’ (a popular etymology was already suggested by ERNOUT/MEILLET 1960: 472). Of course, this is once again not

12 Which seems in the end to be SCHINDLER’s (167) preferred preform for Greek.
disprovable, but it seems fairly unlikely: *ōjom and *āuis (uel. sim.) would hardly be formally similar enough for even folk-etymology to have much room to forge a connection. Curiously, DARMS’ proposal also ignores the problem of Proto-Germanic *aija-, which is equally difficult to explain by a folk-etymological connection with *āuis (which is anyway not attested in Germanic). In general, explanations by means of folk-etymology must be a last resort when formal derivation is completely impossible (as noted by DARMS). In this case, I would argue, it is at least possible to make a case for development by regular phonological changes.

Perhaps the oldest view of ‘egg’ is to see it as a vṛddhi derivation from the word for ‘bird’ (going back to BOPP and BRUGMANN; for the history of this idea see SCHINDLER 165-6 and DARMS 1978: 321). Vṛddhi is a way of deriving adjectives or nouns from nouns, involving the insertion of a full-grade vowel into the base form and addition of a thematic vowel as a suffix to athematic stems. The semantics of the derived form generally reflect a meaning of belonging to, or being made of the same sort of material, as the base form. Vṛddhi is very productive in Indo-Iranian, but there is enough relic evidence in the other languages to allow us to trace it back to Proto-Indo-European (WACKERNAGEL/DEBRUNNER 1954: 103-36; DARMS 1978: 1-2 and passim). So if it were a vṛddhi form, *ōjom would have originally meant ‘pertaining to a bird, bird’s’; as Dr. Adam HYLLESTED points out to me (p.c.), *ōjom may well have originally been an adjective modifying the Proto-Indo-European noun for ‘egg’ which then came to be used for the ‘egg’ itself; cf. Latin ficātum ‘(liver) stuffed with figs’, from which come the usual words for ‘liver’ in the Romance languages such as Italian fegato, French foie (VÄÄNÄNEN 1981: 81).

If we start from a preform *ōjom it is reasonable to assume that in the languages in which we find *ōjom assimilation of *-u- to *-i- had occurred, even though we may have no further evidence for this sequence; assimilation is a common Indo-European development. In most

13 Admittedly, οἰωνός may have suggested a connection with *ōjom in Greek, but οἰωνός itself is taken to be derived from φῶν by SCHMEJA (1963: 35-6), followed by PETERS (1980: 292-305).
languages, *-įį- was treated the same as, or simplified to, *-į-.

In Germanic, where there was already a phonemic distinction between *-į- and *-įį- due to the development of *-įH- to *-įiy-, the difference was of course also maintained in the word for ‘egg’. In Latin, on the other hand, *-yį- evidently assimilated to *-uyu- > *-u- (prior to Osthoff’s Law) or simply lost *-į-.

DARMS (1978: 322) argues against *ōyjom being seen as a ṣṛddhi derivation on the grounds that ṣṛddhi formations are always based on the weak stem of a noun, for example *deīyom- ‘divine’, which is based on *diy-, not *díey-. However, that this is not always the case is suggested by Gk. ὐα, ὀα 14 ‘sheepskin; border, fringe; edge’ < *ōyja. According to DARMS (1978: 323-4) this comes from *H3ēyēH2 derived by ṣṛddhi from *H3eiu-i- > Attic. ὀζ ‘sheep’. A necessary assumption is that Eichner’s Law, by which the vowel in *H2/3ēi- is alleged not to have been coloured by the preceding laryngeal, did not apply in Greek. 15 However, more important is that PIE ‘sheep’ must be reconstructed as *H2ōu-i/ *H2eiu-i- on account of Lyc. xawā (acc. sg.) ‘sheep’, Toch. B. āw ‘ewe’, Ved. aviḥ ‘sheep’. 16 We can

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14 There seems to have been some confusion of the length of the first vowel in words where long -ō- preceded another vowel, and variants with both ə and o are found without a clear pattern. This reflects a tendency to shorten the first of two long vowels in hiatus, according to Threatte (1980: 227-8). According to Peters (1980: 292-305) the form əə is the expected reflex of *ōuə > *ōuə > Old Attic *ōuə by shortening of long vowels before ŋ(i) followed by another long vowel. The existence of əə in Attic (no earlier than the 4th century BC) is therefore surprising, although perhaps it could be a loan word from Doric where shortening did not occur (cf. Cretan (β)ōt(ə)? According to ADRADOS (1950: 410, 416-17) it is an archaism preserved by a semantic split with əə, which only means ‘border, fringe’, while əə normally means ‘sheepskin’.


16 *H3- was lost in Lycian: compare Lyc. epirye- ‘sell’ (Kimball 1987); Toch. B. āw cannot come from *ouī- but must reflect *aii- (Pinault 1997: 182-4, 190-3; Kim 2000); the lack of lengthening by Brugmann’s Law in Ved. aviḥ suggests *aii- rather than *ouī-, although it could be analogical on forms like gen. sg.
therefore see that the *vrddhi* derivation that gave Gk. ὀς, ὢς must have been based on the strong stem *H₂oʊi-* rather than weak *H₃eʊi-*. 

**6. Sievers’ Law**

As already pointed out, the major problem with a preform *déuilm* is that it ought to have given *déuilm* by Sievers’ Law, if Sievers’ Law was a Proto-Indo-European development.

Sievers’ Law has been a topic for debate for nearly a hundred and fifty years, and cannot be adequately discussed here in all its aspects. We have already seen that, ignoring complications, Sievers’ law can be described as a rule that causes *-i-* and *-y-* to become *-i/io-* and *-yυ-* after a super-heavy syllable. Discussions and further bibliography can be found in SEEBOLD (1972), COLLINGE (1985: 159-74), SCHINDLER (1977), MAYRHOFER (1986: 164-7).

The identification of forms which demonstrate Sievers’ Law in the individual languages is complicated by the fact that there seems to be an originally adjectival suffix *-i/io-* unrelated to Sievers’ Law phenomena. This has been explained as a possessive suffix *-iH₂-o-* > *-i/io-* (mentioned above), which may be connected to the Italic and Celtic o-stem genitive singular in *-i* (BURROW 1949: 58; KLINGENSCHMITT 1975: 154 fn. 10; HARDARSON 1993: 164 fn. 25). MAYRHOFER (1986: 161, 165-6), following a suggestion of SCHINDLER’s, suggests a thematisation of the locative ending *-i-, which is always syllabic, whence *-i-o-* > *-i/io-* in forms like Ved. dámiya- ‘being in a house’. It is possible that both explanations may be correct and that we have originally two suffixes.

The language families which give us reliable evidence for the operation of Sievers’ Law are Indo-Iranian, Germanic, and perhaps Greek. In Vedic Sanskrit, for example, we find the trisyllabic adjective dáiviya- ‘divine’ < *dēi/io-* compared with disyllabic satyá- ‘true’. In Gothic Sievers’ Law *avyah*, in which Brugmann’s Law would have been prevented in a closed syllable (KIM 2000: 39 fn. 4). For more on ‘sheep’ see section 7 below.

In texts of the Veda the variant suffixes are not usually distinguished, but the vocalic variant can be reconstructed on the basis of the meter.
variation is found in verbs formed with the suffix *-jo-. After a heavy syllable the usual result of *-je- in Gothic is -ji-, e.g. bidijþ ‘(s)he requests’ < *gwhedh-e-ti (SEEBOLD 1970: 91-3). After a super-heavy syllable we find Gothic -ei- < *-i- < *-iij- < *-ije-, e.g. sōkeiþ ‘(s)he seeks’ < *sāgiijeti < *sāg-je-ti. In Greek, Sievers’ Law may be reflected in the comparative suffix, where *-jon- tends to occur after heavy syllables (e.g. Gk. μέγον ‘greater’ < *meg-on-), but *-ijon- after super-heavy syllables (e.g. ἀλγίων ‘more painful’).\(^\text{18}\)

The evidence for Sievers’ Law in other languages is far more opaque. For example, in Latin the distinction between verbs of the capiō, capere and audiō, audīre types may reflect a Sievers’-style development. Verbs which have a super-heavy root syllable do belong to the i-type (by way of *-ije- > *-i-?), but so do most verbs with heavy root syllables ending in a liquid, nasal or *-u- (e.g. uenīre). Verbs with heavy root syllables ending in a stop, however, belong to the i-type (e.g. capere). Furthermore, some (but not all) verbs with a disyllabic root also show up as i-type verbs (e.g. sepelīre); perhaps these group with the super-heavy root type. An added complexity is that in early Latin many verbs of the i-type have alternants of the ī-type, e.g. cupere/cupīre. It is possible to fit these facts into a framework based on Sievers’ Law (thus SEEBOLD 1972: 110-21), but they do not provide firm evidence for it (and see SCHRIJVER 2003 for an explanation which largely does without Sievers’ Law).

Postconsonantally the glides *-i- and *-u- are in general particularly prone to interchange with their vocalic counterparts (as SIHLER 2006: 6 points out), which will tend to wipe out the evidence of Sievers’-type variations. For example, in Latin postconsonantal *-i- became *-i-, while *-u- became *-u- after *-t- and *-u- gave *-u- after a liquid (MEISER 1998: 91-93). Therefore the clear absence of Sievers’ law in e.g. Celtic (UHLICH 1993; SCHRIJVER 1995: 281-9) is not evidence against it being a Proto-Indo-European law, since the traces of Sievers’ Law might have been erased by subsequent developments.

\(^{18}\) But there are exceptions, e.g. Ἱσσόν ‘weaker’ < *sēk-jon-.
To assume, on the basis of its existence in Germanic, Indo-Iranian and perhaps Greek, that Sievers’ Law took place in Proto-Indo-European itself, is at first sight the most efficient hypothesis, and methodologically sound. However, there is some evidence that suggests Sievers’ Law might have been an independent but parallel development in the languages in which it occurred, like Grassman’s Law in Indo-Iranian and Greek (Lejeune 1972: 56-8) or Osthoff’s Law in Greek (Lejeune 1972: 219-20), Latin (Meiser 1998: 75-6), Celtic (McCone 1996: 63-4), Germanic (Ringe 2006: 75-8) and perhaps Balto-Slavic (Jasanoff 2004: 251-2).

Tocharian provides some evidence that the development of an independent Sievers’-type variation was possible. Although there is only slim evidence that it underwent Sievers’ Law per se (thus Ringe 1991, 1996: 11-12), Pronk (2009) shows that an anaptyctic *-ä- was created before any resonant in Tocharian when proceeded by a super-heavy syllable.19 This was a Proto-Tocharian (or Tocharian B) change rather than a Proto-Indo-European development, since any vowel other than *-ä- < *-e-, *-i-, *-u- in the previous syllable counts as long for the purpose of syllable weight. Therefore, it demonstrates that Sievers’ Law-type variation could occur independently.

Sihler (1995: 176, 2006: 185-91) argues for independent Sievers’ Laws. He points out that in Germanic Sievers’ Law took place also after sequences which became super-heavy only as a result of purely Germanic developments. Thus, for example, Gothic waurkeib ‘(s)he works’ < *yurkiθ < *yurkiθ < *yrrg-je-ti had a super-heavy first syllable only after vocalic *-r- became *-ur- in Proto-Germanic, but still shows the result of the Sievers’ Law sequence *-iī- < *-iē-. It should also be noted that Gothic shows the same pattern of super-heavy syllable + -ei- vs. heavy syllable + -ji- even in verbs formed with the iterative/causative present suffix *-eje- > *-iī-, e.g. *yort-eje-ti > *yardiθ > (fra-)wardeib ‘(s)he destroys’ but *logh-eje-ti > *lagiθ > lagiθ ‘(s)he lays’. It is possible that these

19 Thus making it similar to the ‘extended’ version of Sievers’ Law, which supposes that *-l-, *-r-, *-m- and *-n- also developed vocalic alternants after super-heavy syllables (i.e. to *-l- etc.). There is very little evidence for the extended version of the law in other Indo-European languages (Sihler 2006, passim).
developments are just an extension of the inherited original pattern put in place by the Proto-Indo-European operation of Sievers’ Law. But it is just as likely, and perhaps more efficient, to suppose that Sievers’ Law in Germanic took place only once, after the changes of \(^{-R} \rightarrow ^{-uR}\) and \(^{-e} \rightarrow ^{-i}\) had already occurred.\(^{20}\)

Another possible example of Sievers’ Law operating within an individual language may be a restriction to the clusters which count as creating a super-heavy syllable in Vedic. According to SCHINDLER (1977: 60-61), Sievers’ Law did not apply after \(^{CVCC}\) clusters when the first of the final consonants were obstruents. Thus, the Vedic absolutive suffixes -tvī, -tvā and -tvāya never show the expected Sievers’ variations, even when preceded by a consonant, e.g. yuk-tvā. Similarly, Ved. mātsya- ‘fish’ does not show vocalic \(^{-i}\). If this restriction is correct, it suggests a different environment for Sievers’ Law from Germanic, where obstruents did not prevent the operation of Sievers’ Law, e.g. Goth. wahseip ‘(s)he grows’ < \(^{yahsiιθ} < ^{H2yogs-ειε-τι}\). However, none of the examples of the restriction provided by SCHINDLER can definitely be shown to go back to Proto-Indo-European, so it is possible that they were all created or borrowed after Sievers’ Law had ceased to operate. SIHLER (2006: 185-8) also finds a couple of apparent Vedic examples of Sievers’ Law operating on this cluster, e.g. gábhastiyos ‘arms, hands’ (although these may very well be Vedic creations as well).

Altogether, there is a certain amount of evidence to suggest that Sievers’ Law might have applied independently in Germanic and in Indo-Iranian, two of the main language families for which we have solid evidence for its existence. On that basis, and since the Tocharian evidence suggests that a Sievers’-type development could happen independently, we are not compelled to assume that Sievers’ Law was a Proto-Indo-European development rather than a parallel development in Indo-Iranian, Germanic and Greek, along the lines of Osthoff’s and Grassman’s Laws.

\(^{20}\) In that case Sievers’ Law, at least in Germanic, would not be purely a constraint on \(^{-i}\) following super-heavy syllables but would also prevent \(^{-i\eta}\) following heavy syllables (often called the ‘converse of Sievers’ Law’).
This may help explain the problems we raised earlier with regard to the development of Gk. ϕόν < *ōujom. If it had undergone Sievers’ Law *ōuijóm would be expected to give *ōuįom by Wheeler’s Law (>χφον). If Sievers’ Law did not take place at all in Greek, *ōuįom could already have become *ōįom before Osthoff’s Law took place (which would otherwise have given *ōujom > *ōuįom). Alternatively, we could say that the Greek version of Sievers’ Law must have operated before Osthoff’s Law, but after Wheeler’s Law. When Wheeler’s Law applied the word for ‘egg’ was still *ōuįom and thus remained unaffected. It was then changed to *ōuįóm prior to Osthoff’s Law and hence escaped the shortening of its initial vowel. The reverse order of Sievers’ and Osthoff’s Law can be seen in Germanic, where *ōujom became *ōujom (> *aijam) by Osthoff’s Law and was therefore unaffected by Sievers’ Law.

The development of *ōujom > YAv. aēm is more problematic; as SCHINDLER (165) points out, we know that Sievers’ Law should have operated on this sequence in Indo-Iranian, on the basis of vṛddhi forms like Ved. kāviya- beside kavi-. Obviously, if this was always the case, then *ōujom must have given *ōuįom in Proto-Indo-Iranian. However, vṛddhi was an extremely productive and synchronically transparent process in Indo-Iranian, so we need not assume that forms like kāviya- are very old. There seem to be two possible ways out of the problem. One is that Sievers’ Law came into existence independently in Indic and Iranian. In that case, it may be that original clusters of *-ṳ- gave *-ṳ- in Iranian before Sievers’ Law took place. If it is the case that forms like Wazīrī yōwy and Tālišī ῤva reflect *ōuom, the result of the original cluster *-不可思- might not in fact have been *-骺-, but *-ỵ-, with this cluster being simplified either to *-i- or to *-y- in the different Iranian languages.

The other possibility is that *-ṳ- gave *-ū- in Indo-Iranian before Sievers’ Law. In that case Vedic forms like kāviya- would have to be secondary, or re-formed after the base form: thus *kāuyo- > *kāujo- > *kāyjo- (after kavi-) > *kāyiyo- (Sievers’ Law). Evidently the etymological connection between *ōuįom > ōįom and the word for ‘bird’ was not recognised, perhaps because ‘bird’ had already been remodelled to *H₂uſi-H₂yei- (on which see below).
7. ‘Bird’ from \( *H_2o.eu-i-s \)

We have seen that a reconstruction \( *H_2\partial ij-o- \) is by far the most plausible reconstruction for PIE ‘egg’. This gives us valuable information about the original form of the word for ‘bird’. We left the decision between an acrostatic noun with full grade I (\( *H_2o-y-i-/ *H_2e-y-i- \)) or II (\( *H_2\partial ej-/ *H_2e\partial ej- \)) open in our previous discussion. There is a weak presumption in favour of the former, since it is suggested by two language families which are not closely related (Italic and Armenian), against the evidence for full-grade II in Indo-Iranian. However, RIEKEN (1999: 24) has explained the creation of the Italic and Armenian forms from full-grade II by an analogy based on a reinterpretation of the oblique stem: the gen. sg. \( *H_2e\partial ej-s \) was equivalent to the gen. sg. of a proterodynamic noun of the type \( *m\partial-\partial ej-s \), which led to the creation of a new nom. sg. \( *H_2e-y-i-s \) equivalent to nom. sg. \( *men-ti-s \). On its own this is quite plausible, but \( *H_2\partial ij-o- ‘egg’ provides the evidence for full grade I, since \( *H_2o-yi- \) must have been the source from which the \( \text{vṛddhi} \) form \( *H_2\partial ij-o- \) was derived. Contrary to SCHINDLER, therefore, we see that Lat. \( auis \), U. \( avif \), Arm. \( haw \) must directly reflect the weak stem of an acrostatic \( i \)-stem \( *H_2o/eu-i- \).21 It should be noted that this means that the word for ‘bird’ was homophonous with the word for ‘sheep’ (on which more directly below).22 This seems remarkable, but that is the way the evidence points.

How then are we to explain Ved. \( \text{vé}h \), since it cannot reflect the original noun formation? This is admittedly problematic, but one possibility may lie in the tendency for the Indo-European languages to replace \( e \)-grade in the weak stems of acrostatic nouns with the productive zero grade, and position the full grade in the stem or ending as in proterodynamic/amphidynamic noun paradigms (SCHINDLER 1972: 35-6, 1975: 7; JASANOFF 2003: 68-9). This was particularly characteristic of neuter \( u \)-stems in Indo-Iranian. Thus the new ‘semi-proterodynamic’ paradigm is preserved in YAv. \( \ddot{a}i\ddot{i}u < *H_2\partial i-u- \), OAv. gen. sg. \( yao\ddot{s} ‘age’ < *H_2\partial e-y-s \) (cf. Gk. \( \alpha\ddot{i}e\ddot{i} ‘forever’ < *H_2\ddot{e}i-y-e\ddot{i} \)), and in Ved. \( \ddot{a}ru < *doru \), gen. sg. \( dr\ddot{h} ‘wood’ <

21 Or, less likely, the strong stem.

22 Nom. sg. \( *H_2o-y-i-s \) > Gk. Hom. \( \tilde{o}\zeta \), Lat. \( ouis \), Lyc. acc. sg. \( xaw\ddot{a} ‘sheep’ \); gen.sg. \( *H_2e-y-i-s \) > Toch. B. \( \ddot{a}_w ‘ewe’ \), Ved. \( \ddot{a}v\ddot{i}h ‘sheep’ \).
*dr-eu-s. However, this paradigm did not remain stable for long. The Indo-Iranian languages tended to generalise a single stem, and subsequently to treat this stem as a standard u-stem: thus Ved. gen. sg. snóḥ < *sn-eu-s ‘summit’ was replaced by sánoḥ after the nom. sg. sánu < *son-u-s, and we find that the stem of nom. sg. Ved. āyu ‘age’ has been spread through the entire paradigm in loc. sg. āyuni.

If the creation of a ‘semi-proterodynamic’ paradigm occurred to the word for ‘bird’, the result would be nom. sg. *H₂ou-i-s, gen. sg. *H₂y-ej-s. As it happens, the originally acrostatic i-stems did not alter their original paradigm so uniformly as the u-stems, if Ved. áhiḥ, Av. aži- ‘snake’ reflect the original weak stem seen in gen. sg. *H₁egʷh-i-. But the shift remained a possibility, as shown by YAv. ərəzi- ‘scrotum’ from gen. sg. *H₁ergʰ-ej-s ← *H₁ergʰ-i- (cf. a similar change in Hitt. arkiBes ‘testicles’, but Gk. ὠρχίς, Mlr. uirge ‘testicle’, which are derived from nom. sg. *H₁orgʰ-i-; WATKINS 1975).

In the case of *H₂ou-i-s, *H₂e-u-i-s ‘bird’, the creation of the ‘semi-proterodynamic’ paradigm may well have been favoured by the unfortunate homophony with *H₂ou-i-s, *H₂e-u-i-s ‘sheep’. The resulting paradigm had nom.sg. *H₂ou-i-s, gen. sg. *H₂y-ej-s, and from here it is easy to see how the paradigm could have been altered to follow the regular proterodynamic pattern by changing the vowel in the nom. sg. to give *H₂e-u-i-s, by analogy with the type nom. sg. *men-ti-s, gen. sg. *mŋ-tej-s. ‘Bird’ then took part in the usual generalising of the weak root in i-stems to give attested Ved. víḥ (cf. Ved. matíḥ ‘thought’ < *mŋ-ti-s ← *men-ti-s).24 However, for ‘bird’ another way of regularising the paradigm was also possible: rather than replace the vowel in nom. sg. *H₂ou-i- it was possible to retain it, but move it into full-grade II to give *H₂yoi-s. Beside gen. sg. *H₂y-ej-s, now reinterpreted as *H₂yej-s, this would give a perfectly regular acrostatic type usually found in root-nouns. The change would have been particularly

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24 The same process evidently occurred with YAv. ərəzi- ‘scrotum’ < *H₁ergʰ-i- ← *H₁orgʰ-i-.
promoted by the loss of laryngeals, when the ‘root’ of gen. sg. \( *y-e\ddash i-s \) would seem to consist of only \( *y- \). This anomaly could be rectified by analysing \( *y-e\ddash i-s \) as \( *y\ddash e\ddash i-s \), for which a nom. sg. \( *y\ddash o\ddash i-s \) would be regularly expected.

Eventually the treatment of ‘bird’ as an originally proterodynamic \( i \)-stem with nom. sg. \( \ddash v\ddash i\ddash h \) won out in Vedic, but the relic form \( \ddash v\ddash e\ddash h \) shows that at an earlier stage a competing analysis as an originally acrostatic root-noun was also possible. Neither was original, but was the result of a sequence of Indo-Iranian processes which we can see also in the originally acrostatic \( u \)-stems: first the creation of ‘semi-proterodynamic’ paradigms with \( o/\ddash o \) root-ablaut followed by regularisation of a single stem. In the case of \( u \)-stems the strong stem forms were generalised, in the \( i \)-stems it was the weak stem forms.

8. Conclusion

The Proto-Indo-European word for ‘bird’ was an acrostatic \( i \)-stem \( \ddash H_2\ddash o/\ddash e\ddash u\ddash i \), the oblique stem of which is directly represented by Lat. \( a\ddash u\ddash i\ddash s \), U. \( \ddash a\ddash v\ddash i\ddash f \), Armenian \( h\ddash a\ddash w \). Vedic \( \ddash v\ddash e\ddash h \) is an analogical creation based on a new oblique stem demonstrated by a gen. sg. \( \ddash H_2\ddash y\ddash e\ddash i\ddash s \) with the productive proterotonic type of full grade. It should be noted that the words for ‘bird’ and ‘sheep’ were homophonous in Proto-Indo-European. No doubt for that reason, the individual languages generalised different parts of the paradigm of ‘sheep’ and ‘bird’ (e.g. Lat. \( a\ddash u\ddash i\ddash s \) ‘bird, \( o\ddash u\ddash i\ddash s \) ‘sheep’) and the homophony probably added to the pressure for the remodelling of the paradigm of \( \ddash v\ddash e\ddash h \).

The word for ‘egg’ was \( \ddash H_2\ddash o\ddash i\ddash o\ddash m \), a \( v\ddash r\ddash d\ddash d\ddash h\ddash i \) derivation from the strong stem of ‘bird’ originally meaning ‘bird’s (egg)’. SCHINDLER’s reconstruction \( \ddash o\ddash H\ddash u\ddash j\ddash o\ddash m \) ‘what’s next to the bird’ is improbable both semantically and for formal reasons.


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