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Old Irish *aue* 'descendant' and its descendants

Abstract: This paper intends to study the history of the Old Irish word *aue* 'descendant, grandchild' in both qualitative and quantitative approaches. The former approach tries to demonstrate what forms this word evolved into from the early Old Irish period up to the end of the Middle Irish period, and to establish the phonological changes it underwent in accordance with our present understanding of the history of the Irish language. The latter approach is based on a linguistically annotated corpus of the *Annals of Ulster*, and shows the distribution of variant forms of *aue* in relation to the period they are attested in. The discrepancy between the two observations is discussed and various hypotheses are raised to explain it.

Keywords: Old Irish, *aue*, *Annals of Ulster*, phonological changes, quantitative analysis

1 Classical Old Irish *aue* 'descendant' and its prehistory

The word for 'descendant, grandson' in Old Irish is *aue*, which is a masculine *i̯o*-stem noun. Forms of *aue* spelled with initial ⟨au⟩[1] are, for convenience' sake, hereafter referred to as "au-forms". Manuscripts written in the Old Irish period (c. 7th–9th century CE) provide several attestations of the au-forms:

Additamenta, **Book of Armagh fol. 18rb11 (Thes.: 2, 241.6; Bieler & Kelly 1979: 176):** acc.pl. *auu*; *Notulae* in the same manuscript fol. 19ra24 (Bieler & Kelly 1979: 182): acc.pl. *au*;

St. Gall Priscian glosses (Bauer 2015): nom.sg. *haue* (29a10), nom.pl. *háui* (30b12), *aui* (30b12) and dat.pl. *auib* (28a20);

Poems in Codex St. Pauli, V. quatrain 5 (Thes.: 2, 295.10–11): nom.sg. *aue* (bis).[2]

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1 Here and thereafter in this article I use pointed brackets ⟨...⟩ to indicate orthographic forms, and slashes /.../ to indicate phonological values.

2 As Uhlich points out to me in personal communications, this text shows rhymes between originally distinct unstressed final vowels, so that the spelling *aue* is probably an archaising effort.

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Au-forms are also found in some Old Irish texts recorded in late medieval manuscripts, e.g.:

Críth Gablach: nom.sg. *aue* (Binchy 1941: l. 335 = CIH: 566.19, 782.25);

Baile Chuinn:[3] nom.sg. N *auæ*, E *uæ* (§25), N *au*, E *hua* (§35), gen.sg. N, E *aui* (§2, but *maicc aui* may stand for original *moccu* here).[4]

Other Old Irish forms found in later manuscripts are collected in Ó Corráin 2015: 301–306.[5]

From the historical point of view, *aue* is indeed the expected (early) Old Irish reflect of the etymon **au̯io-*, which is itself a Celtic derivative of Proto-Indo-European **h₂eu̯h₂-o-* '(maternal) grandfather' (EDPC: 50; Zair 2012: 250).[6] However, Schrijver (1995: 300–301) deduces Celtic **āu̯io-*, based on Welsh *wyr* 'grandchild' < **ɔ̄io-* < **ɔ̄u̯io-*, remodelled on the *r*-stem kinship nouns, whereas Celtic **au̯io-* would have produced Middle Welsh ***eu(r)*. The loss of **u̯* in **ɔ̄u̯io-* is proposed on the basis of a single piece of evidence, that of Welsh *wy* 'egg' < British **ɔ̄u̯ion* < **āu̯ion* < **h₂ōu̯iom* (Schrijver 1995: 299). If **āu̯io-* could be established as the (Insular) Celtic pre-form, the early Old Irish word should be *áue* with a long initial vowel, which is not distinguishable from *aue* in the orthography of the Old Irish manuscripts, and there is no example in a rhyming position to decide the length. However, one faces difficulties trying to connect the putative Celtic **āu̯io-* to Indo-European pre-forms. In light of Hittite *ḫuḫḫaš* 'grandfather', PIE **h₂eu̯h₂-* may already be a vṛddhi-derivative; all attested cognates outside of the Anatolian branch (except Welsh *wyr*) show full-grade **h₂eu̯h₂-*, but none has lengthened-grade **h₂ēu̯h₂-* (IEW: 89; EDHIL: 352–353), even Middle Welsh *ewythr*, Middle Breton *eontr* 'uncle' < **au̯-on-tīr*. Even if such a lengthened-grade derivative ever existed, it is questionable whether this **h₂ēu̯* could have become Celtic **āu̯*. Eichner's Law may have prohibited the **ē* from being coloured by the laryngeal, though the situation in Celtic is obscure (Zair 2012: 249–253), and it is unlikely that pre-Celtic **ēu̯* would have become Celtic **ōu̯*

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3 The sigla and section numbers used in the edition of Bhreathnach & Murray 2005 are quoted here: N = Dublin, Royal Irish Academy MS 23 N 10, pp. 73–74; E = London, British Library MS Egerton 88, fol. 12va. Further sigla used are MS(S) = manuscript(s), PN = personal name, RIA = Royal Irish Academy, TCD = Trinity College Dublin.

4 But notice nom.sg. N *ua*, E *uæ* (§28).

5 Stokes' edition of *Félire Óengusso* contains three disyllabic forms of the word (Feb. 8, Apr. 11 and May 16) which are printed as *auë* or *auï* (Stokes 1905), but none of the cited manuscript witnesses actually spells the word as *aue* or *aui*, e.g. *Fél.* Feb. 8, MSS *Hua* R1 LB, *Hoa* L F, *Hue* C; Apr. 11, MSS *Hua* R1 L, *ua* LB, *uæ* F B; May 16, MSS *hui* R1 L, *hoe* F, *.h.* LB.

6 Literally 'of the grandfather, belonging to the grandfather', cf. Old Prussian *awis*, Lithuanian *avýnas*, Old Church Slavonic *ujь*, etc. 'uncle (on mother's side)' < Balto-Slavic **au̯io-* (Derksen 2008: 507).

> *$*\bar{a}\underset{\sim}{u}$* by rounding as in pre-Celtic *$*e\underset{\sim}{u}$* > *$*o\underset{\sim}{u}$*.[7] Schrijver's proposal of *$*\bar{a}\underset{\sim}{u}io$-* should best be regarded as unproven, and, as will be demonstrated below, the trajectory *$*\bar{a}\underset{\sim}{u}io$-* > *áue* > *óe* is not supported by the actual data. This paper, therefore, will operate on the basis of *$*a\underset{\sim}{u}io$-* as the Celtic etymon for Old Irish *aue*.

The developments from *$*a\underset{\sim}{u}io$-* to Old Irish *aue* 'descendant, grandson' have been discussed in tandem with other words that contain intervocalic *$*\underset{\sim}{u}$* by Greene (1976) and Uhlich (1995). According to Greene and Uhlich, the Common Celtic form of the nom.sg. of the word is *$*a\underset{\sim}{u}ios$*. It then becomes Goidelic *$*a\underset{\sim}{u}iios$*, and the *i* in the second syllable is lowered in Primitive Irish *$*a\underset{\sim}{u}eiah$*, whereas in the genitive singular it is not lowered, producing *$*a\underset{\sim}{u}i\bar{\imath}$* or *$*a\underset{\sim}{u}\bar{\imath}$*, attested in Ogham inscriptions as *AVI* (Ziegler 1994: 132). The intervocalic *$*\underset{\sim}{u}$* caused a *u*-infection (or more precisely, *$\underset{\sim}{u}$*-infection) of the preceding /a/. The outcome of this infection is in all likelihood different from the diphthong /a$\underset{\sim}{u}$/, as will be argued on p. 345 below. Since, however, both phonemes are written in Old Irish as ⟨au⟩, I will write this sound as /a^u/ to distinguish it from the diphthong /a$\underset{\sim}{u}$/. So the infection produces *$*a^u\underset{\sim}{u}V$-* before apocope. After apocope (and also syncope, which is not applicable here)[8] we have nom.sg. *$*a^u\underset{\sim}{u}e$*. Then the intervocalic *$*\underset{\sim}{u}$* is lost, yielding /a^u.e/ in Early Old Irish, which is spelled ⟨aue⟩.

The derived word *íarmue* 'great-grandson', attested in nom.pl. *iarmui* (Ml.: 119b12),[9] shows a similar infection for the unstressed *a* before *$*\underset{\sim}{u}$*, namely nom.pl. *$*e(\varphi)i-(\varphi)rom-a\underset{\sim}{u}i\bar{\imath}$* > *$*\bar{e}roma^u\underset{\sim}{u}\bar{\imath}$* > *$*\bar{e}r\underset{\centerdot}{m}a^u\underset{\sim}{u}\bar{\imath}$* > *$*\bar{e}r\underset{\centerdot}{m}a^u$.i*, with, however, the unstressed infected *$*a^u$* becoming /u/ already in the Milan glosses.[10]

As for the time of this *$\underset{\sim}{u}$*-infection, Uhlich only says "at some stage before the EOIr. period" (1995: 39), but implies that it must have happened before apocope (1995: 34, n. 122). Greene considers it to be the same process as the *u*-infection of stressed /a/ by an /u/ in the following syllable (Greene 1976: 29), which must have taken place before lowering (e.g. Ogham *CALUNO-* > *Caulann* 'PN'). Moreover, if this *$\underset{\sim}{u}$*-infection happened at the same time as the *u*-infection of stressed *e*, *i* and *o* by a *u* lost in apocope, it must postdate raising, since *(as)·biur* 'I say' < *$*bi\underset{\sim}{u}r\bar{u}$* < *$*bir\bar{u}$* < *$*ber\bar{u}$*.[11]

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7 The other possibility is to assume a long *o*-grade vṛddhi-derivative *$*h_2\bar{o}\underset{\sim}{u}h_2$-* > pre-Celtic *$*\bar{o}\underset{\sim}{u}$-* > Irish *áu-*, cf. *$*h_2\bar{o}\underset{\sim}{u}io$-* 'egg' < *$*h_2e\underset{\sim}{u}-i-$* 'bird' (Zair 2011b), but again, there is no other evidence in Indo-European for *$*h_2\bar{o}\underset{\sim}{u}h_2$-*.

8 Forms such as *Eugen* 'PN' < *$*i\underset{\sim}{u}o-geno$-* indicate that syncope happened before the loss of intervocalic /$\underset{\sim}{u}$/.

9 The form *iarmoa* (AU: 1177) is best regarded as due to analogy to the two *oa* 'grandson' in the same entry.

10 For more about /$\underset{\sim}{u}$/ between unstressed vowels see Kortlandt 1986.

11 An unstressed /e/, when infected by the following /u/ lost in apocope, became /u/ rather than /iu/ in Old Irish, e.g. prototonic *$*^{\backprime}ess-ber\bar{u}$* > *·epur* 'I say'. McCone (1996: 111) argues that unstressed

Particularly confusing and worth distinguishing is the Old Irish spelling ⟨au⟩ which can represent different vowels arising from multiple contexts. Below are some more regular ctegories of phonological changes leading to vowels that are spelled ⟨au⟩ in (Early) Old Irish, partly based on Uhlich 1995: 39 but with many emendations:

1. Pre-Old Irish *$a\underline{u}$ followed by a syllable or word boundary. The spelling ⟨au⟩ is extremely scarce for this type, but Early Old Irish still retained the diphthong /a$\underline{u}$/, fossilised in the phrase *co nómad n-au* 'until the ninth (man) away' (Binchy 1984; Hamp 1990). This expression is found in *Audacht Morainn* and *Críth Gablach*, displaying *au, ao* < *$a\underline{u}$ 'from it' (Kelly 1976: 66; Binchy 1941: l. 326). The 7th-century Cambrai Homily already shows monophthongised /o:/ in the conjugated personal forms of *ó* 'from': 3sg.masc./neut. *$a\underline{u}$-de > ood* (Camb. = Thes.: 2, 244.25), 1pl. *$a\underline{u}$-snos > ón(ni)* (Wb.: 4b19; Camb. = Thes.: 2, 246.21). The form *$a\underline{u}$C- > ōC-* also occurs in *$a\underline{u}$tīt-o/ā- > óthad* 'few' (Sg.: 198a22) and the verbal root *$ta\underline{u}$ssī- > ·tóissi* 'be silent, listen'.[12] This /o:/ eventually joined non-final /o:/ < pre-Old Irish *$o\underline{u}$ in breaking into /uə/, e.g. *óthad > úathad* (Greene 1971: 180), *huanaib* 'from them' (Sg.: 33b8).

   A peculiar form *aur* 'gold' is attested in the Southampton Psalter Irish glosses,[13] while all instances in eDIL of this word are written with the long vowel ⟨ó⟩. It is debatable whether the underlying Latin word from which Irish borrowed had /a$\underline{u}$/ or /o:/ in the first syllable.[14] If the former, this *hapax legomenon*

/a/ is not infected by the following /u/, e.g. *$mar\underline{u}$ātus > marbad*, not **marbud*, but this example is not telling since /θ/ seems to always hinder *u*-infection of /a/, at least of a stressed /a/, e.g. **katus* 'battle' > *cath*, not **cauth* or **cuth*, while nom.sg. **karuts* 'champion' duly evolved into *caur* and then *cur*.

12 E.g. *con·tóiset* 'they are silent, they listen' (LU: 8421), *arda·tuaissi* 'who hears them' (Ml.: 129b2).

13 The Latin lemma reads: *Et dedit erugini fructus eorum* 'and he rendered their fruit to the rust', and the glosses (Old Irish and Latin) read: *.i. glasar .i. do aurlarcud aura est noxia* 'i.e. rust (?), i.e. to gold or silver the moist is harmful'. See Thes.: 1, 5.10–11; Ó Néill 2012: 206 and Blom 2017: 74–75. Ó Néill correctly points out that the *l* in MS *aurlarcud* is an error for the Tironian *ł* (2012: lxv) and therefore should read *do aur ł arcud* 'to gold or silver'. Latin *aerūgo* (< *aes* 'copper, bronze') originally meant 'verdigris, copper-rust' but in the Latin lemma must mean the plant disease that renders the crop cankered. The glossator, on the other hand, seems to have James 5.3 on his mind: *aurum et argentum vestrum aeruginavit* 'your gold and your silver are corroded'. I thank the reviewer for pointing this out to me.

14 Already in the second century CE, Classical Latin /a$\underline{u}$/ had been monophthongised in some words (especially names of persons and of rustic items) to the close long vowel /o:/, perhaps reflecting contact between Latin speakers and speakers of other Italic languages (e.g. Umbrian) (Adams 2013: 83; Calabrese 2003: 71–72). This sound change can also be observed in early Latin loanwords into Irish, e.g. Lat. *Paulus* /po:lus/ > *Pól*. Later in some areas of the Empire, an overall monophthongisation occurred to Classical /a$\underline{u}$/, but this time to an open vowel, leaving /o/ in

constitutes the only evidence known to me so far of *aṷC-* before it became *ōC-*. On the other hand, the Southampton *aur* may be a learned spelling much like Irish *augtar* 'author' and *laur* 'laurel',[15] especially when in the same gloss Latin *aura* 'breeze, moist' is found.[16] The *ó* in *ór* 'gold' does not break into *úa* as in *úathad* and *úaimm*, or as in *úar* 'hour, time' from Latin *hōra*, a fact that indicates that the *ó* in *ór* was pronounced with an open /ɔː/ and probably did not result from the sound change *aṷC-* > *ōC-*. Moreover, the linguistic profile of the Irish glosses in the Southampton Psalter does not appear to be archaic. The main text of the Psalter was probably written in the late tenth or the early eleventh century (Ó Néill 2012: xxxvi). Ó Néill considered the Irish glosses, which are apparently copied rather than composed by the scribes of the Psalter, to belong to the first half of the ninth century (2012: lxvii–lxx). Although the attribution of the glosses to this period is uncertain, like most other efforts in dating texts on purely linguistic criteria, the later forms that Ó Néill highlights indeed argue against the possibility that these Irish glosses date back to the seventh century or even earlier.

2. Pre-Old Irish *a|ṷ* separated by a syllable boundary, when the *a* is stressed. In this case *ṷ*-infection should have occurred before apocope, e.g. *aṷiịos* 'descendant, grandson' > *aue* /a^u.e/, *daṷiks* 'PN'[17] > *Daui* /da^{u}ị/. The phonological value of /a^u/ is unclear, but in all likelihood a short high back vowel, given that this /a^u/ did not evolve into /oː/ as did the true diphthong /aṷ/, but directly into /u/ when it did not stand directly before /ṷ/ or /ị/ (< /ṷ'/) in auslaut. In those cases, /a^{u}ṷ#/ > /ɔː/ (see 5 below) and /a^{u}ị#/ > /aị/:

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modern French, /ɔ/ in Italian and Castilian Spanish, while the diphthong is retained in Rumanian and Old Occitan (Herman 2000: 31). Old Welsh *our*, Middle Welsh *eur* suggests that at least in Britain, from where the Irish most likely borrowed the term, the prevalent Latin form had a diphthong /aṷ/ or /aːṷ/ (Jackson 1953: 322).

15 These two words were, in all likelihood, borrowed with a round monophthong, since the ⟨au⟩ in them alternates frequently with ⟨u⟩.

16 Latin *aura*, as in the case of *aurum* 'gold', underwent the sound change /aṷ/ > /ɔː/ in some Romance languages, e.g. Old French *ore* 'souffle, vent' (Grandsaignes d'Hauterive 1947: 443), Spanish *orear* 'to air'. All these languages (including English), however, re-borrowed the Classical Latin form in the early modern era for scientific, literary and spiritual usages.

17 eDIL: s.v. *Daui* offers the etymology of this name as *daṷo-ṷik-* or *daso-ṷik-*, but the latter is unlikely as it should have evolved into nom.sg. **Daaí*. On the other hand, the **o* in *daṷo-ṷik-* lies between two identical consonants and may have been syncopated before the general syncope took place, thus resulting in *daṷik-*, cf. *deks^{ṷ}o-s^{ṷ}elo-* > *deks^{ṷ}elo-* > *deisel* 'clock-wise'.

– nom.sg. *$dau̯iks$ > *Dauí*,[18] gen.sg. *Dauäch*[19] > *Duach*;[20]
– Latin *Dauid* 'David' > *Duaid, Duid*;
– nom.sg. *$au̯ets$ > *aí* 'poetic composition',[21] gen.sg. *uath* (< *$a^u.eθ$ < *$au̯etos$), dat.sg. *uaidh*, etc.;
– *$kau̯ii̯o$- > *caue* 'cavity' (Zair 2011a) > *cuë, cúa*;[22]
– *caí*, gen. *cuach* 'cuckoo' is once attested in the poem on Sg.: 203–204 as nom.sg. *cói*, in LL: 356 marg.sup. as nom.sg. *chuí*, and acc.sg. *cauig* is found in the glosses to the commentary to Virgil (Lambert 1986). The pre-form may possibly be *$kau̯ik$-, although on onomatopoetic grounds one would rather expect something with *ku-,[23] cf. Welsh *cog* < *$kukā$-, German *Gauch* < *$kūka$-, and Lat. *cuculus* (LEIA: C, 9). Reconstructions *$kuu̯ik$- or *$kou̯ik$- can explain *cói, caí, cuach* etc., given that /oi̯/, /ui̯/ and /ai̯/ had started to merge by the time of Sg., but *cauig*, if it is a genuine reflection of the phonological form of the word rather than an archaising spelling, indicates *$kau̯ik$- or *$kau̯ek$-;
– cf. also nom.sg. *$krau̯os$[24] > *$kra^uu̯$ > *crao, cró* 'enclosure', gen.sg. *$krau̯ī$ > *$kra^ui̯$ > *craí*, dat.sg. *$krau̯ū$ > *$kruu̯$ (*u*-infection) > *crú*, but dat.pl. *$krau̯obis$ > *$kra^uu̯aβ$' > *cruib*.

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18 The nom.sg. form, which represents /da^{u}i̯/ < *$da^uu̯$', becomes /dai̯/, as indicated by the later forms *Dae, Doe, Dui*, etc. in eDIL: s.v. *Daui*.

19 The only instance provided by eDIL of the au-form of the gen.sg. is found in Dublin, RIA MS 23 P 12 (Book of Ballymote), fol. 99v e2 = CGH: 151a32. Another possible example occurs in a marginal poem recorded in the Dublin, TCD MS 1282 copy of AU. It reads *duach* in the manuscript but rhymes with *n-auch* 'eared (?)'. The adjective *auach* or *uach* is attested in CormY: 414, though perhaps as an artificial etymological component rather than a real word: *Dabach, .i. de-uach, .i. da auo fuirri, ar ni bitis oi for na henaib ar tus* 'Dabach (a type of vessel), that is, two-eared, that is, two ears on it, for there used not to be ears on the drinking vessels in the beginning'. The verse, however, betrays a number of innovative linguistic features, and all other copies of it have *n-uach* : *duach*, so the evidential value of this form *duach* is highly doubtful.

20 The unique instance of *Doach* in the longer and later recension of *Cóir Anmann* (CA 3) §90 (Arbuthnot 2006: 26) seems to be a scribal innovation, since the same name is always written in the three recensions of *Cóir Anmann* as *Duach* (nom.sg.).

21 The etymology for this word is supported by Welsh *awel* 'wind, breeze' < *$au̯elā$-. The nom.sg. follows the same development of /a^{u}i̯/ > /ai̯/, but the earlier form *aui* is never attested.

22 In Ml.: 96c08 Latin *concaua* is glossed *inna cocui .i. caeli* 'the hollows, i.e. of the sky', where *cocui* is the nom.pl.neut. of *$cocua$ < *$kom-kau̯ii̯o$-, and the unstressed *-$au̯ii̯ī$ here becomes *ui* as in the case of *iarmui* (see p. 344 above).

23 The reviewer points out to me that Proto-Slavic *$kavъka$ 'jackdaw', perhaps also onomatopoetic in origin, is reminiscent of the pre-form *$kau̯ik$- here (ĖSSJa: 9, 166). However, the voice of a jackdaw is quite different from that of a cuckoo (captured nicely by *ka and *ku respectively), so this etymology may not be relevant to the present discussion.

24 See Greene 1983: 3–4 and LEIA: C, 240 for the etymology.

3. Pre-Old Irish *aCu*, when the *a* is stressed and the medial consonant is voiced. In this case *u*-infection may have occurred before lowering. The phonological value of this infected *a* is also unclear, but perhaps the same as or similar to /aᵘ/, since it too changes into /u/ later, e.g.:

    – *magu-* > *maug* > *mug* 'male slave', cf. *Maugdornorum*,[25] *Maugdornu*;[26]
    – *kaluno-* > *Caulann* > *Culann* 'PN' (Ogham *CALUNOVIC*[A]);
    – *karuts* > *caur* > *cur*, gen.sg. *karutos* > *caurad* 'champion' > *curad*;
    – *abūl-* > *aubul* > *ubull* 'apple', cf. gen.sg. *aublo* (AU: 632; Stifter 2019);
    – *lagūs* > *laugu* 'less' (Wb.: 6b12), *lugu* (Wb.: 16c26; Ml.: 23a13).[27]

4. The rich variation in the stressed syllable *air-*, *aur-*, *er-*, *ir-* etc. is probably *sui generis*. The obscure vowel represented by this dazzling array of symbols probably first arose in a very specific context, viz. stressed /a/ before a syncopated /y/ fronted from /u/ in *aCuCi*, similarly found in *taulach*, *tulach*, *telach* etc. 'mound, hill', which became a mid-high front vowel, perhaps /œ/ (Stifter 1998: 227 n. 2). This vowel then spread to other contexts, especially when preverbs *ar* and *ad* in the stressed position are followed by the preverb *uss*, which was syncopated.

5. Since in Old Irish orthography vocalic length is not consistently indicated, ⟨au⟩ can also stand for /aᵘː/, resulting from pre-Old Irish *aːǀu̯V separated by a syllable boundary, e.g. gen.sg. *nāu̯iiās* > *nauë*, *nóë* 'of a ship'; *gāu̯iiās* > *gáuë*, *góë* 'of falsehood'. The resulting /aᵘː/ seems to have been realised phonetically identically to stressed /aᵘːu̯#/ in auslaut, e.g. *gāu̯ā* 'falsehood' > *gáu*, *gó*. This category is different from 1 in that Early Old Irish ⟨au⟩ resulting from the process described here in 5 developed into Classical Old Irish ⟨ó⟩, which did not break into /uə/ and so perhaps represents /ɔː/. Moreover, post-apocope *aᵘu̯#* and *ou̯#* appear to yield the same phoneme, because length is neutralised for stressed vowels in auslaut (Breatnach 2003), e.g. nom.acc.sg. *krau̯os* 'enclosure' > *cró*; *du̯o* 'two' > *dou*, *dau*, *dó*; gen.sg. *kru̯os* > *krou̯os*

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25 In the late seventh-century *Vita Columbae* by Adomnán (M. O. Anderson & A. O. Anderson 1990: 78).

26 In the seventh-century Life of St. Patrick by Tírechán (Thes.: 2, 269.22). Later nom.sg. *mog* is also attested, according to eDIL, but this can be explained as an analogous form based on gen.sg. *mogo*, *moga*, nom.pl. *mogae* etc., which are again influenced by the vowel variation common in the *u*-stem inflection, so that the original paradigm nom.sg. *maug* : gen.sg. *mago* > *mug* : *mogo*.

27 The form *laigiu* (Ml.: 17c7; Sg.: 120b2) is probably based on the pattern of the comparative and superlative forms of other adjectives, cf. *siniu*, *sinem* (McCone 1994: 125).

> *crou, crau, cró* 'of blood' (Joseph 1988); gen.sg. **boṷos* 'of a cow' (McCone 1991) > *bou, bau, bó*.[28]

2 Subsequent phonological developments in *aue*

The next stage in the phonological development of *aue*, however, is more opaque. Theoretically, as we have observed, it belongs to category 2 and should yield *ue, ui, uaib* etc. in late Old Irish and Middle Irish. However, already in 1910 Ó Máille observed that, using the data from the *Annals of Ulster* (hereafter AU), "there are two developments side by side, ... *au* becomes *ó* which gives the g[en].pl. *oa* etc. ... [or] the initial *a* of the diphthong *au* fell away" (Ó Máille 1910: 50–51).

eDIL has cited under its headword "*úa, óa, ó*" a large number of instances, and these can be divided into three types according to their initial vowels. The first type consists of forms spelled ⟨auV⟩, namely the "au-form" discussed above. Because this is the only type attested in contemporary Old Irish manuscripts, it seems to be the earliest of the three, and, at least initially, contains a hiatus after ⟨au⟩ due to the loss of intervocalic /ṷ/. The second type begins with ⟨u⟩, i.e. *ue, ui, uaib* etc., and is here termed the "u-form."[29] The third type begins with ⟨o⟩, i.e. *oa, oi, oaib* etc., and is here termed the "o-form." I assume, for the moment, that the spellings ⟨au⟩, ⟨u⟩ and ⟨o⟩ represent three distinct vowels /a^u/, /u/ and /o/, respectively. This cannot be guaranteed, of course, considering that, for example, *air-, er-* and *aur-* are probably just orthographic variants of an obscure vowel (see above, category 4) plus *r*, but it will be tested later in this article with an actual corpus.

The assumed phonological values of /u/ or /o/ represented by such spellings can only have evolved from earlier /a^u/ < **a^{u}ṷV*. This immediately poses a problem, since a single phonological process should not have produced two different results. Also, according to the analysis in category 2 above, regular phonological development should have produced only the u-forms of *aue*. A number of hypotheses can thus be suggested. These hypotheses will be tested, again, with data from a corpus.

1. The first hypothesis is given by Ó Máille (1910: 51–52). He explains the two later variants of *aue* in terms of different stress patterns. According to Ó Máille, after the middle of the eighth century, *aue* starts to be used as part of the patronym and is treated as a proclitic word, whereas the generic noun *aue*

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28 In this sense, (early) Old Irish *bou* may represent the phonetic value /bɔːṷ/, which became indistinguishable from /ba^{u}ːṷ/.

29 The existence of the hiatus in this and the following type is difficult to determine, unless good metrical evidence is provided.

bears the normal accentuation. The former "weak" form develops into the u-forms, whereas the latter "strong" form evolves into the o-forms.

2. It is also possible that the variation between the o- and u-forms is diachronic. This hypothesis has been voiced by Cowgill (1967: 130):

> At first sight it might seem that **w* underwent a different treatment when preceded by *a* or *ā*. Here early texts write *au* before a vowel; a bit later *o* appears, and if this does not contract with a following vowel, it develops on to *u*.

Greene (1976: 42) expresses the same idea, although with the caveat that the o- and u-forms may not have arisen by the same process as in category 3, where pre-Old Irish **aCu > auC > uC*:

> Although Sc. G. *ogha* 'grandson' and *othan* 'froth', corresponding to OIr. *aue* and *auen* respectively, seem to show that *au* in hiatus became *o* before being raised to *u*, this is not in keeping with the treatment of *au* in preconsonantal position, where it regularly becomes *u*, nor with the evidence of our sources, which usually show *uë* as the stage immediately before reduction to monosyllabic *úa*.

On the other hand, Uhlich (1995: 17, 39) overlooks the o-forms altogether in his seminal paper on intervocalic *u̯*:

> EOIr. *auë* > OIr. *uë* > Mid.Ir. *úa* 'grandson' ... In these positions [i.e. stressed /aᵘ/ resulting from earlier /aᵘu̯/ – FQ], too, short *au* later yielded *u*, as in *aue* 'grandson' > *(h)uë, huae, (h)úa* and gen. *aue* of 'ear' > *úae*.

3. The variation between o- and u-forms may also be diatopic, i.e. differences between local dialects, or diastratic, i.e. variation between social classes. But these hypotheses are hardly possible to prove given the anonymous nature of the Old Irish textual sources.

4. An alternative possible interpretation for the variation between o- and u-forms, which I believe is more likely and will be detailed below, is synchronic variation based on intra-paradigmatic analogy.

3 Data from *Annals of Ulster*, A.D. 431–1131

In order to test these hypotheses, data from the *Annals of Ulster*, A.D. 431–1131 are introduced here. This dataset is part of the corpus of Old Irish texts compiled and annotated in the project *Chronologicon Hibernicum* (ChronHib), hosted in Maynooth University, Ireland. It is based on the edition by Mac Airt & Mac Niocaill (AU) and

has been digitised and checked against the manuscript used for the edition (Dublin, TCD MS 1282). All Irish words have been POS- and morphologically annotated, and each word is tagged with the lemma to which it belongs, so it is very easy to find all inflected forms of *aue* 'descendant' in a given text.

The *Annals of Ulster* provides abundant examples of *aue* as well as a chronological framework by which each individual form can be theoretically dated to a certain year, and therefore it is chosen as the dataset for this study. However, the evidential value of AU as to its linguistic forms is questionable. The two extant copies of AU are from the late 15th and the early 16th century, and must have undergone substantial editorial and scribal interventions at various stages of textual transmission. Throughout the textual history of AU, entries have been added or removed, while the chronology in the early Middle Ages has been to some extent confused.[30] The overall linguistic profile of AU before the 8th century is not contemporary and cannot be regarded as reflecting the linguistic profile of Early Old Irish.[31] In particular, various forms of *aue* are spelled out in full many more times in AU than in other annalistic texts, which almost always use the abbreviation *.h.* instead.[32] One can reasonably suspect that the AU full forms were expanded in the late Middle Ages from *.h.* in earlier exemplars and as a result do not reflect contemporary phonology. That being said, the two copies of AU preserve quite faithfully many old forms and expressions that may be the genuine vestiges of early medieval records, compared to the so-called "Clonmacnoise group" of annals such as the "Annals of Tigernach" and *Chronicon Scotorum*, which seem to have been extensively revised in the 10th century (see Grabowski & Dumville 1984; Evans 2010: chap. 2). Such wholesale revisions usually create a more or less even distribution of linguistic features, as is exemplified by the "second recension" of *Táin Bó Cúailgne* 'The Cattle-Raid of Cooley' in the Book of Leinster, in comparison to the Old Irish recension on which it is based (O'Rahilly 1967; Mac Gearailt 1996). If AU shows statistically significant distributional clusters of different forms of *aue*, it is likely that such a distribution reflects the actual diachronic situation.

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30 Scholarly works on the transmission and adaptation of the Irish annalistic texts are abundant, see e.g. Smyth 1972; Grabowski & Dumville 1984; McCarthy 2008; Evans 2010.

31 The pre-Patrician annals (before 431 A.D.) are a mixture of Latin world history, papal and imperial lists, and synthetic history based on vernacular literature and regal lists, see McCarthy 2008 and Evans 2010: chap. 5. These surely do not represent contemporary Irish records, which probably began in the monastery of Iona in the mid-6th century, see Bannerman 1968. However, a recent quantitative study questions even the overall linguistic contemporaneity of the records in AU: 554–704, see Qiu forthc.

32 Ó Corráin (2015) suggests that this *h* arose from the Tironian symbol of *a*, which stands for the initial *a* in the original form *aue*.

Table 1: Number of tokens in each group from 431–1131

interval	au-group	u-group	o-group	total in period
431–455	0	0	0	0
456–480	0	0	0	0
481–505	0	0	1	1
506–530	0	0	0	0
531–555	0	0	0	0
556–580	0	2	1	3
581–605	0	1	0	1
606–630	0	0	0	0
631–655	1	3	0	4
656–680	0	3	1	4
681–705	1	0	0	1
706–730	1	0	0	1
731–755	11	8	2	21
756–780	2	13	1	16
781–805	0	3	3	6
806–830	0	13	3	16
831–855	0	3	4	7
856–880	1	0	9	10
881–905	0	2	5	7
906–930	0	5	6	11
931–955	0	6	3	9
956–980	0	5	1	6
981–1005	0	8	0	8
1006–1030	0	10	0	10
1031–1055	0	24	0	24
1056–1080	0	13	2	15
1081–1105	0	18	1	19
1106–1131	0	28	1	29
sum	**17**	**168**	**44**	**229**

All instances of fully spelled out forms of *aue* 'descendant, grandson' from AU: 431–1131 have been collected, which amount to 229 tokens. The data will be given in the Appendix (p. 366). The number of tokens in each group is given in Table 1, divided into 25-year bins. Of these instances, 17 belong to the au-group, 168 to the u-group, three of which are the dat.pl. form *ib* (1119.7, 1120.3, 1124.6), showing the shift of syllabic nucleus from /u/ to /i/ in Early Modern Irish. Forty-four belong to the o-group, including two dat.sg. forms (954.5, 1129.4) that have the short version *ó*.

The distributions of the three groups are more clearly illustrated by Figure 1.
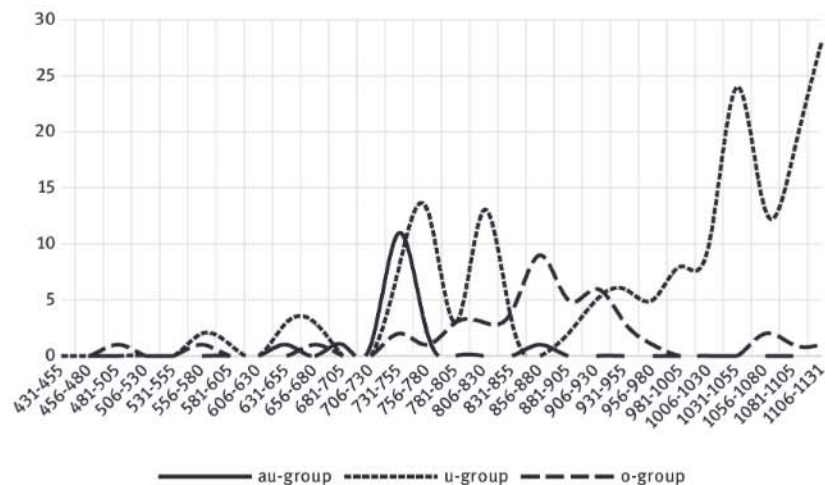
Fig. 1: Distribution of the three groups in AU: 431–1131

Given the late dates of the AU manuscripts, one has to test if the spelling variants in the initial vowel of *aue* are randomly distributed across the dataset. If that is the case, it is highly probable that such a variation was introduced by later scribes and therefore does not represent the phonological reality in the period under consideration. If, on the contrary, the distribution is not random, then the variation cannot be reasonably ascribed to overall later modification.

It immediately comes to notice that the au-forms concentrate in a relatively short period from 701–764, apart from two outliers, each at one end of the chronological spectrum (*aue*, 647.02 and *auib*, 878.03).[33] This is shown in Table 2. The

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[33] The period of 701–764 agrees with the dates of the au-forms attested in the *Additamenta* (early 8th century) and the *Notulae* (second half of the 8th century) in the Book of Armagh (Bieler & Kelly

o-forms show a conspicuous peak between 831 and 930, although sporadic tokens from this group appear throughout the period. The u-forms display an almost complementary distribution to the o-forms, and enjoy a significant rise by the 950s, achieving absolute dominance over the other two forms thereafter.

Table 2: Au-forms in AU: 431–1131

case	form	AU entry	case	form	AU entry	case	form	AU entry
nom.sg.	*aue*	647.02	gen.sg.	*aui*	707.07	nom.du.	*auę*	744.06
	auę	701.02		*aui*	732.01	dat.pl.	*auibh*	750.09
	aui	738.04		*aui*	738.04		*auibh*	757.03
	aua	745.03		*aui*	738.04		*auib*	878.03
	aua	764.08		*aui*	738.08	acc.pl.	*auu*	743.05
				aui	748.08			
				aui	750.07			

To bring these observations in line with a quantitative perspective, one shall assume for the moment that the distributions of the three groups are random, hence the null hypothesis H_0 = 'the distribution of the types of attested forms has no statistically significant difference'. Since the distributions are not parametric, and the numbers of tokens are not the same, parametric statistical tests such as the t-test are less useful in this situation. Instead, the Wilcoxon rank sum test is run on the data to test the null hypothesis. The year in which each token is attested is imported into the R software as a numeric value, and these values are categorised into three vectors ("au_group", "u_group" and "o_group"). Comparing the vectors in groups of two and using the Wilcoxon rank test, we arrive at the following results:

between au-group and u-group: $W = 106.5$, p-value $= 1.627 \cdot 10^{-9}$;
between au-group and o-group: $W = 34$, p-value $= 1.855 \cdot 10^{-7}$;
between u-group and o-group: $W = 4662.5$, p-value $= 2.192 \cdot 10^{-5}$.

1979: 48–52), and with the dates of *Críth Gablach* (early 8th century, Binchy 1941: xiv) and *Baile Chuinn* (c. 720, Bhreathnach 2005: 61). The St. Gall Priscian glosses, in which four other au-forms are found, were likely written between 850 and 851 (Ó Néill 2000). This date coincides with the peak period for the o-forms and approaches the latest attestation of the au-forms in AU. The Old Irish glosses in St. Gall Priscian were, however, at least partly copied from earlier exemplars (Hofman 1996: 18) and may contain strata from different sources (Strachan 1903; Lambert 1996), but the part that contains the forms of *aue* (pp. 28–30) have not been regarded by scholars as linguistically older.

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All p's are less than 0.05 and thus H_0 should be rejected, which means that the difference in the distribution of the types is statistically significant and cannot be attributed to sampling error or random distribution. The different groups are probably not selected from populations having the same distribution or from the same population. Therefore the variation in the fully spelled forms of *aue* is not likely to be attributed to the wholesale redaction by late medieval scribes.

That being said, it cannot be denied that some of the forms may have been introduced or reworked by later scribes. For example, AU: 743.5 reads: *Bellum iter Auu Maine & Ua Fiachrach Aidhne* 'A battle between Uí Maine and Uí Fhiachrach of Aidne'. Two forms of the same case (acc.pl.) appear in the same sentence in apposition, namely *auu* and *ua*. It is difficult to imagine, even at a transitional stage where the au- and u-forms may be more or less interchangeable in the community, that an individual annalist would have written them side by side in the same sentence. It is far more likely that the second *ua* was expanded from an earlier abbreviation *.h.* at a later date when *ua* was the norm. Even so, the quantitative study of the data shows significant differences in distribution that cannot be easily offset by these individual cases.

Do the three orthographic variant groups of *aue* in AU: 431–1131 reflect a three-fold phonological distinction (see p. 350 above)? Or are au-, u- and o-forms of *aue* no more than idiosyncratic spellings representing the same vowel, as is the case in *naue* (Sg.: 217 marg.inf.) and *nue* (Sg.: 131b1) 'new'?[34]

Unfortunately I cannot find rhyming examples of *aue*. The vowel represented by ⟨au⟩ in *aue* also occurs in other similarly structured words, as cited in category 2, but in those words, it is not written as ⟨o⟩ except in some later forms of the nom.sg. where ⟨ai⟩ and ⟨oi⟩ are both employed to represent /ai̯/ (< *$a^u\mu$'). This suggests that ⟨au⟩ and ⟨o⟩ are not merely orthographic variants.

The question whether ⟨au⟩ is merely an orthographic variant of ⟨u⟩ for /u/ is further complicated by two factors. Firstly, as pointed out on p. 345, Old Irish ⟨au⟩ can stand for different sounds resulting from diverse phonological processes. Secondly, some of these sounds represented by ⟨au⟩ did develop into /u/ later on. Strong evidence, such as *naue* 'new', which contains an etymological /u/ that does not result from /a^u/ or the like, can be regarded as proof that ⟨au⟩ was indeed used as an orthographic variant of /u/. I have again resorted to the dataset of AU, this time however limited to AU: 554–950 as this subset (27706 tokens strong) is tagged with etymologies. There are 50 Irish tokens in the dataset spelled with ⟨au⟩, excluding forms of *aue*. Of these 50 tokens, some are of obscure etymology (such

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34 Since *a^u arising from u-infection later became /u/ (see category 3), hypercorrection sometimes results in etymological /u/ being written ⟨au⟩; in this case, *nue* < *$no\mu i\underline{i}o/\bar{a}$- is written *naue*.

as *Auis* in the place-name *Clúain Auis* 'Clones'), but all others fall in the categories 1–5. It cannot be ruled out, therefore, that the au-forms in AU: 431–1131, or at least some of them, employ ⟨au⟩ to write the sound /u/, but I think the evidence is very slim for such a usage.

There are 27 Irish tokens spelled with ⟨oa⟩, excluding forms of *aue*, in AU: 554–950. In all but one[35] of these 27 tokens, ⟨oa⟩ stands for /o.ə/ or /oə/, not for /uə/ or /aᵘə/, e.g. *loarnn* 'fox, PN' 765.7, *doaibh* 'to them' 798.2, *doroachtadur* 'they have reached' 852.3, *Boainn* 'River Boyne' 922.1. There are 539 Irish tokens spelled with ⟨ua⟩, and 5 tokens with ⟨ue⟩, excluding forms of *aue*. Of these, only two compound names show fluctuation between ⟨o⟩ and ⟨u⟩ spellings: *Flaithroe* (*Flaithroa* 837.1, *Flathrụe* 744.6, *Flathrui* 777.5, *Flaithrụe* 779.2, *Flathrụe* 914.3) and *Cathroe* (*Cathrue* 786.7), consisting of the same element *roe* 'battlefield' which, however, shows no such variation (*roi* 711.2, 797.2, 843.4, 871.6, *roa* 927.5). This fluctuation must be due to the fact that the original /o/ now lies in an unstressed position and is only kept in spelling because of the awareness of the name's etymology (cf. *Flaithri* 792.4). The variation therefore does not challenge the observation that tokens spelled with ⟨ua⟩ and ⟨ue⟩ do not stand for /o.ə/ or /oə/ in AU.

Searches for ⟨oi⟩ and ⟨ui⟩ are more difficult to conduct since these involve the letter ⟨i⟩ used to indicate the quality of the following consonant. But I think these simple word-counts should suffice to show that ⟨au⟩, ⟨o⟩ and ⟨u⟩ in a stressed position consistently represent different sounds in AU.

Judging from these considerations, ⟨au⟩, ⟨o⟩ and ⟨u⟩ spellings of *aue* in AU: 431–1131 probably do reflect three different vowels: /aᵘ/, /o/ and /u/. It is time we revisit the hypotheses raised on p. 350, and use our data to test them.

4 Hypothesis testing with AU data

The first hypothesis by Ó Máille (1910: 51–52) suggests that different stress patterns gave rise to the o- and u-forms. According to Ó Máille, when *aue* is used as a patronymic and becomes proclitic, the accentuation shifts to the second syllable and eventually changes the word into u-forms. Otherwise, the word stays as an ordinary noun with normal accentuation and takes on o-forms. However, Ó Máille offers no explanation for how to identify the stress patterns independent of the word-form. In fact, there is no easy way to ascertain whether in "*X ua Y*" the *Y* is actually the grandfather of *X* or a more remote ancestor, and whether that *ua Y* is

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35 This is gen.sg. *Eoa* 'of Iona' (AU: 716.4), the usual spelling of which in AU is *Iae*.

fixed as a patronymic and used by *X*'s progeny as a surname, unless one searches for the individual lineage of *X* and *Y*.[36]

One would expect, however, that in an ethnonym the stress pattern should be similar to that of a patronymic, i.e. the *aue* should become "proclitic" there. Unfortunately, that presumption does not seem to fit the data, for one does find a number of o-forms used together with well-established dynastic or tribal names, e.g. dat.pl. *nOaib Ailello* 790.3, gen.pl. *Oa Meith* 832.2, *Oa Neill* 860.1, *Oa Fidhgenti* 860.2. One cannot be sure whether Canannán was indeed the grandfather of Níall "*Oa Canannan*" (950.5), apparently kinsman of Rúadri "*Ua Canannan*" (950.5), a powerful king of the Uí Chonaill who raged war against the Vikings,[37] but here both u- and o-forms are used in the same context; moreover, references to this clan in the plural in 945.7 *hOi Chanannan* and 965.2 *nOib Canannan* suggest that this appellation had already become a fixed dynastic name or even a surname, but the o-forms are used. On the other hand, the phrase *Diarmait m. Conaing & Conaing m. Dunghaile, da ua Conaing* 'Díarmait son of Conaing and Conaing son of Dúngal, two descendants of Conaing' (781.4) shows a clear non-patronymic use of *ua*, as both fathers, Conaing and Dúngal, were sons of Amalgaid (diedAU: 718.3), who in turn was the true grandson of Conaing (diedAU: 662.2) from whom the Uí Chonaing got their name.[38]

In short, the AU data does not support a correlation between the u- and o-forms and the ethnonymic/patronymic usage of *aue*. Ó Máille's hypothesis cannot be upheld.[39]

Cowgill and Greene suggest that the variation between the o- and u-forms is a diachronic phonological development. According to Cowgill and Greene, Old Irish *au* from *u̯*-infection first becomes *o* and then becomes *u*. Cowgill adds the condition

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36 For a useful discussion of the distinction between a surname, a patronymic and a "papponymic," see Byrne 1987: xxxi–xliii.

37 Canannán appears in the genealogy of the Uí Chonaill in CGH: LL 338b6 as the great-great-grandson of the early 8th-century high king Flaithbertach mac Loingsig.

38 See Jaski 2000: 201 and the genealogical map on p. 307, as well as CGH: 144a54 (esp. the reading of BB). Charles-Edwards (2006: 246) translates this phrase as 'Diarmait son of Conaing and Conaing son of Dúngal, two of the Uí Chonaing', but this cannot be correct, for the immediately following phrase, which parallels it, reads *Mael Duin m. Fergusa & Fogertach m. Cumascaigh, duo nepotes Cernaigh* 'Máel Dúin son of Fergus and Fogertach son of Cummuscach, two descendants of Cernach', where the Latin shows that *ua* must also be acc.du.

39 In Early Modern Irish there may have been a distinction based on stress between two nom.sg. forms: *Ó* which is mostly used in surnames, and *ua* which is mostly used as a generic noun. See the examples of the generic noun in the Irish Grammatical Tract (Bergin 1926: 136), and the reference to *Ó, an tshloinnti* 'Ó used in surnames' in the same tract (Mac Cárthaigh 2014: 130). However, this may represent a later split of the paradigm and cannot be used to explain the origin of the o-forms.

that *o* becomes *u* when "it does not contract with a following vowel," presumably exempting only *ó* < /oə/ < /o.ə/ < /o.e/ or /o.u/ attested in nom./acc./dat.sg. This assumption is probably based on the fact that in modern Irish, declension of the surname element does display nom./acc./dat.sg. *Ó* against gen.sg. and plural *Uí* or *Í.*

However, there are several objections to this proposed route of development. The first one is that the change from /aᵘ/ to /o/ is unparalleled among similarly structured words discussed in category 2. If this is a purely phonological process, the same change should have affected all /aᵘ/ < *a|u̯V, producing **Doach* 'PN', ***oath* 'of poetic inspiration' etc. regularly, but that is not the case. So the o-forms should have arisen via some other means, whereas the u-forms are the direct and regular successor of the au-forms.

Another formal objection to taking the o- and u-variation as a diachronic one is that one lacks good examples of a phonological change from stressed /o/ to /u/ before a hiatus, and such a proposed change is irreconcilable with the fact that *oäc* 'young', *coäir* 'proper, just', 3sg.pres.prot. *·roïg* 'he arrives' (*ro·saig*) do not change into ***uac*, ***cuair* and ***·ruïg*.⁴⁰ Conversely, there is no proof for the lowering of /u/ to /o/ before hiatus: *bruïd* 'breaking' does not become ***broud*, gen.sg. *druäd* 'druid' does not become ***droad*.

Turning to the AU data, Figure 2 is drawn to visualise the percentage of tokens of o-forms in all forms of *aue* between AU: 731–1131.⁴¹

It is clear from Figure 2 that from 731–780, the u-forms are actually more frequent than the o-forms; more precisely, only in the period of 831–855 did the percentage of o-forms rise above 50% for the first time. This result speaks against the theory that /aᵘ/ first developed into /o/ and then to /u/.⁴² This ratio rather indicates that /aᵘ/ first evolved into /u/, much as in the other words with similar structure listed in category 2, and then the o-forms emerged after the second quarter of the 8ᵗʰ century and came into fashion in the mid-9ᵗʰ century.

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40 See GOI: §113–114. GOI: §79 argues that "there are also instances of stressed *o* becoming *u* in hiatus" and provides some examples. Of these examples, the verbal noun *fuar* and pref. *fo·ruar* of *fo·fera* 'causes' are ambiguous because the verbal root can well be *u̯ir-ā-* rather than *u̯er-ā-* and in the former case the raising is unproblematic. Similarly, *do·ruïch* < *to-ro-u̯i-u̯ik-* does not require a special pre-hiatus raising. Already in early Old Irish /o/ and /u/ are free variants in pretonic position, see Eska 2007: 200 and Stifter 2014. The Welsh raising of /o/ > /u/ before hiatus probably occurred in the seventh century, see Schrijver 1998.

41 As can be seen in Table 1, only since the period of 731–755 have the numbers of o- and u-forms become sufficient for a meaningful calculation.

42 Indirectly, this also disproves Schrijver's (1995) proposal of Celtic *āu̯i̯o- 'grandson' (see p. 1 above) since that would regularly yield Old Irish *áue* and late Old Irish *óe* (see category 5 above).
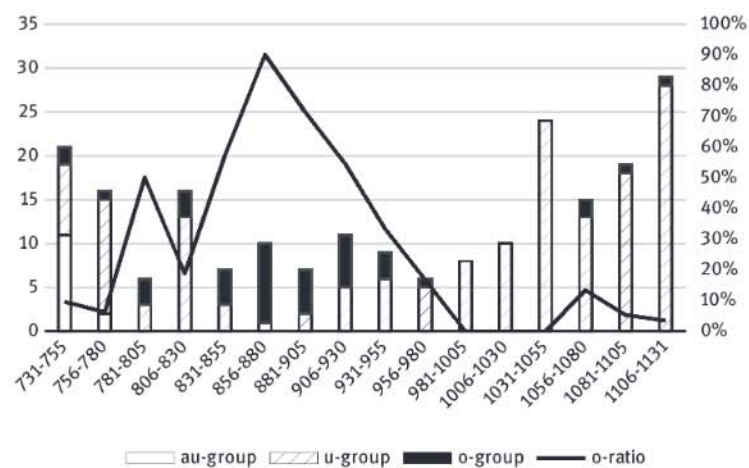
Fig. 2: The ratio of tokens of o-forms in AU: 731–1131

However, the o-forms did not completely replace the u-forms thereafter, but "failed" rapidly after 880, and the u-forms regained dominance afterwards.[43] In other words, the diffusion of o-forms suffered a reverse after c. 880, forming an "inverted S-curve" (Nevalainen 2015). The data suggest, nonetheless, that the o-forms had not been completely abandoned, but remained in very low frequency after the 9th century. Instead of saying *o* "develops on to *u*" (Cowgill 1967: 130), it would be fairer to describe the phenomenon as the competition between u-forms derived from regular phonological process and o-forms from another source, in which the diffusion of o-forms reached its maximum range in the mid-9th century but lost ground to u-forms starting in the late 9th century.

In comparison to the inverted S-curve shown in Figure 2, Figure 3 illustrates the proportion of o- and u-forms together in all attested forms of *aue* in AU: 731–1131. Even with the small sample pool, the ratio line in Figure 3 approximates a logistic S-curve widely found in the diffusion of linguistic changes (Nevalainen 2015). This means that the behaviour of o- and u-forms taken together fits the model of progressive linguistic changes, in which o- and u-forms are the progressive variants and the au-form the conservative one.

The AU data, therefore, does not support the hypothesis of a linear development $/a^u/ > /o/ > /u/$. Rather it shows that $/a^u/$ became $/u/$, much as in the similarly structured words in category 2. However, for *aue* in the course of c. 780–880, an o-variant arose to compete with the u-forms but the change was never complete.

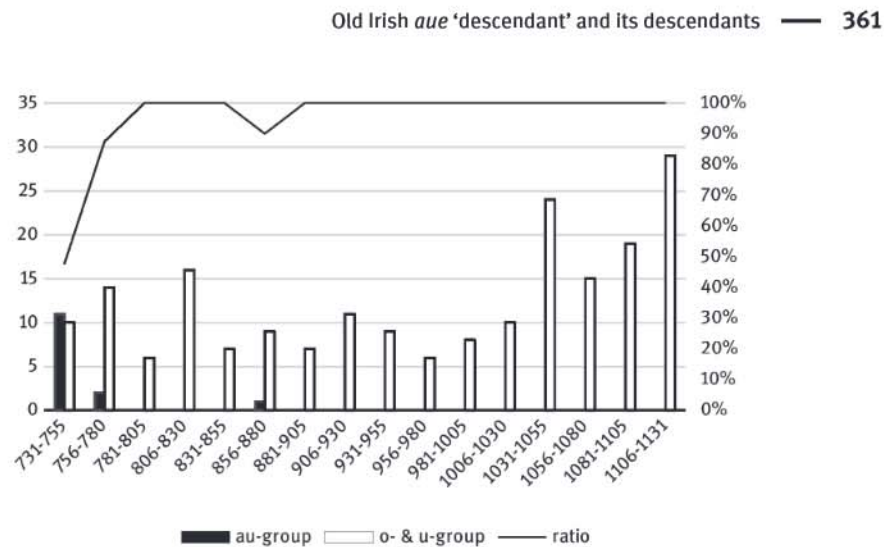**43** On the mathematical and sociolinguistic nature of the "failed changes" see Postma 2010.

Fig. 3: The ratio of tokens of o- and u-forms in all attested forms of *aue*

The question is, how did this o-variant come into being? I am going to propose an alternative solution, namely, by intra-paradigmatic analogy and homonymy.

5 A new hypothesis of the origin of o-forms of *aue*

Pre-Old Irish intervocalic **s* was lenited to **h*. This **h* seems to have still been retained at the time of apocope, though it may have already been realised differently in various contexts: probably as a hiatus in most cases, as a yod in **ihV* (McCone 1996: 111), and I suspect that it became a **u̯* following a **u̯* (see below), e.g. nom./acc.pl. **tegesā* > **teɣiha* > **tiɣei̯a* > *tige* 'houses' (instead of contracted ***tiɣē* > ***tig*). After apocope, any remaining **h* between unstressed vowels must have disappeared before syncope, causing the flanking vowels to contract, e.g. 3pl. preterite conjunct ·*féotar* 'they spent the night' < **u̯eu̯odar* < **u̯eu̯ohoddor* < **u̯eu̯osontor* (instead of uncontracted **u̯eu̯ohodor* > ***u̯eu̯adar* > ***fiätar*);[44] 1pl.pres.subj.absolute *bermai* 'we should carry' ≪ **berāμī* < **berahoμoh-X*[45] < **berasomos-X*. Hiatus

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44 3sg.pret.absolute of *foäid* is attested as *fíu* (< **u̯eu̯ose*), but this may be remodelled on the basis of the 3pl. form (DKP: 705–706), and the conjunct form *forsa·roae* 'upon which you have spent the night' in the "Monastery of Tallaght" (E. J. Gwynn & Purton 1911: 155) indicates a disyllabic 2sg.pret.conjunct **·fiä* < **u̯eu̯ah* < **u̯eu̯osas*.

45 The -X here stands for the "Wackernagel particle." For a useful summary and review of the scholarly opinions on this particle in Celtic see Eska 2012.

derived from an intervocalic *h after a stressed vowel, on the other hand, was preserved into the Old Irish period, e.g. *$\bar{\imath}sarno$- > *$\bar{\imath}harno$- > *$\bar{\imath}.arna$- > *iärn* 'iron'.

In *s*-stem nouns that had the pre-Old Irish root *$(C)au̯s$-, *$(C)au̯sV$- changed into *$(C)au̯hV$- when a vowel followed as part of the desinence. This then became, in my opinion, *$(C)au̯u̯V$- and merged with *$(C)au̯V$-, and the *a was affected by *$u̯$ as in category 2. After the *$u̯$ was lost, the result would have been *$(C)a^u.V$, identical to the structure of the inflected forms of *aue*. The only exception is the nom.acc.sg., where the original /u̯/ is not lost in this context, because after apocope it is not in an intervocalic position (Uhlich 1995: 34–36), and the whole sequence *$a^uu̯$# fell together with *$a^u:u̯$# and *$ou̯$# (see category 5) and became Classical Old Irish *ó* (/ɔː/).

The abovementioned developments are illustrated by the following paradigm:

nom.acc.sg.: *$(C)au̯sos$ > *$(C)au̯hah$ > *$(C)a^uu̯ah$ > *$(C)a^uu̯$ > (C)ó;

gen.sg.: *$(C)au̯sesos$ > *$(C)au̯hihah$ > *$(C)a^uu̯ei̯ah$ > *$(C)a^uu̯e$ > $(C)a^u.e$;

dat.sg.: *$(C)au̯sesi$ > *$(C)au̯hih$ > *$(C)a^uu̯ih$ > *$(C)a^uu̯$' > $(C)a^ui̯$;

nom.acc.pl.: *$(C)au̯sesā$ > *$(C)au̯hiha$ > *$(C)a^uu̯ei̯ah$ > *$(C)a^uu̯e$ > $(C)a^u.e$;

gen.pl.: *$(C)au̯sesom$ > *$(C)au̯hihan$ > *$(C)a^uu̯ei̯an$ > *$(C)a^uu̯e$ > $(C)a^u.e$;

dat.pl.: *$(C)au̯sesobis$ > *$(C)au̯hihaβih$ > *$(C)a^uu̯ei̯aβih$ > *$(C)a^uu̯ei̯aβ$' > *$(C)a^uu̯aβ$' > $(C)a^u.av$'.

The only Old Irish noun known to me that has the root *$(C)au̯s$- is *au*, *ó* 'ear' (< *$au̯$-*sos*, NIL: 339–343).[46] The adjective *tó* 'silent' (< *$tau̯so/\bar{a}$-) has a similar structure,[47] although it is sometimes difficult to distinguish it from the abstract noun *taue* 'silence' (< *$tau̯sii̯\bar{a}$-).[48] What is special about *ó* and *tó* is that, like *aue*, they also show au-, o- and u-variants in spelling. However, unlike *aue*, all three spelling variants can be explained in terms of historical phonological developments. The au-forms of *ó* and *tó* belong to the earlier stratum, representing both /a^uu̯#/ when

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46 It also forms a compound *arae* 'temple (of the head)' < *$are-au̯sii̯o$- 'in front of the ear' (cf. Gaulish *Arausio*), see eDIL: s.v. 2 *ara* and DLG²: 51. The word *snó* (eDIL: s.v. 1 *snó, snau, snú*) may have the root *$snau̯s$-, but this is far from sure, and the meaning of the word is not well understood.

47 I.e. nom.sg.masc. *$tau̯sos$ > *$ta^uu̯ah$ > *$ta^uu̯$ > *tau̯*, *tó*, gen.sg.fem. *$tau̯sii̯\bar{a}s$ > *$ta^uu̯ei̯ah$ > *$ta^uu̯e$ > $ta^u.e$, dat.sg.fem. *$tau̯sai$ > *$ta^uu̯\bar{\imath}$ > $ta^ui̯$, dat.pl. *$tau̯sobis$ > *$ta^uu̯av$' > $ta^u.av$', etc.

48 See Uhlich 1995: 35–36. The root is doubtless *$tau̯s$- (LEIA: T, 91, cf. Welsh *taw* 'be silent'). Notice that eDIL has quite confused the two and gives 1 *tóe* (noun, *ā*-stem fem.) and 2 *tóe* (adj., *i̯o-/i̯ā*-stem), but adjectival nom.sg. *tó* can only be an *o-/ā*-stem. It seems more likely to me that there are an *o-/ā*-stem adjective, often used substantively, and a *i̯ā*-stem abstract noun. The former would have *tau*, *tó* in nom.acc.dat.sg.masc./neut. and gen.pl., *taui* in nom.pl.masc., gen.sg.masc./neut. and acc.dat.sg.fem., *tau.u* in acc.pl.masc., *taue* in gen.sg.fem., *taua* in nom.acc.pl.fem., *tauaib* in dat.pl. The latter would have *taue* in nom.gen.sg., *taui* in acc.dat.sg. Every /a^u/ would have changed into /u/ later.

the original desinence was lost in apocope, and /a^u/ when it was not. The sequence /a^{u}ṷ#/ developed into /ɔ:/, whereas /a^u/ evolved into /u/, except when the original *ṷ was palatalised by the loss of a front vowel in apocope, where /a^{u}i̯/ evolved to /ai̯/.[49] The following attestations are selected from eDIL: s.vv. 3 *ó*, 1 *tóe* and 2 *tóe* as examples. Note that most of them are attested in Old Irish texts recorded in manuscripts of later periods, and some are from Middle Irish texts:

ó 'ear':

> nom.acc.sg. *ó* (CormY: 44), in compounds: *au-nasc* (CormY: 54), *au-derga* (CIH: 1664.17), *o-derga* (CIH: 881.8);
> nom.acc.du. *ó* (CormY: 1509), *óó*,[50] *ao*;[51]
> dat.sg. *auí* (CormY: 44), *huí*;[52]
> gen.sg. *aue* (CormY: 54, 149);
> acc.pl. *aua*;[53]
> gen.pl. *n-úae*;[54]
> dat.pl. *auaib*,[55] *uíb*;[56]

tó 'silent', mostly substantivised:

> nom.sg. *thō* (Meyer 1906: 306, §10), *tó*,[57] fem. *(reic) thó* (CormY: 1204), masc. *thó*;[58]
> acc.sg. *(bat tó fri) tó*,[59] *(tech teinmech) tó*;[60]
> dat.sg. *táu* (CormY: 1204), *táu*;[61]
> gen.sg. fem. *(Temrach) tuä*;[62]
> gen.du. *(Mac Da) Thó*;[63]

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49 This last change, though supported by *aí* 'poetic inspiration' and *Daí* 'PN', is not directly attested in *ó* (i.e. no instance of **aí* 'to/for the ear'. The existence of the o-forms must have obscured the picture, since /oi̯/ and /ai̯/ merged in late Old Irish, e.g. dat.pl. *aib* (LU: 8347, *Fled Bricrenn*) probably derived from earlier *oíb*.

50 *Aidhed Meic Dichoíme ocus Cuislinn Brigdi*, edited in Meyer 1903: 46. The double vowel is an orthographic representation of a long vowel.

51 *Togail Bruidne Da Derga*, edited in Knott 1936: 25, l. 842.

52 *Togail Bruidne Da Derga*, edited in Knott 1936: 28, l. 923.

53 *Togail Bruidne Da Derga*, edited in Knott 1936: 58, l. 909.

54 *Togail Bruidne Da Derga*, edited in Knott 1936: 26, l. 881.

55 *Táin Bó Froích*, edited in LL: 33170 = Meid 1974: 4.

56 *Síaburcharpat Con Culann*, edited in LU: 9346.

57 "Tract on the eight deadly sins", edited in Meyer 1901: 25, §10.

58 *Tecosca Cormaic*, edited in LL: 45899 = Meyer 1909: 16.

59 *Senbriathra Fithail*, edited in LL: 46394.

60 A poem by Cináed úa hArtacáin, edited in LL: 29511 = L. Gwynn 1914: 222, §25.

61 *Senchus Dáil Fíatach* in the Laud 610 Genealogies, edited in Meyer 1912: 329, l. 26.

62 Rhyming with *nuä*, Bernard & Atkinson 1898: 100, l. 20.

63 Name of the protagonist in the story *Scéla Muicce Maic Da Thó*, passim in Thurneysen 1935.

taue 'silence':

nom.sg. *tuäe* (Meyer 1906: 314, §29), *tuä*;[64]
acc.sg. *(in) tuai* (Ml.: 58c5), *(lasin) túi*;[65]
dat.sg. *(hon dedárn) tui* (Ml.: 48a11), *co túi*;[66]
acc.pl. *(inna) tuai* (Ml.: 112b3).

Thus /ɔː/ in some forms of *ó* and *tó* alternates with the vocalism of other cases, in which the affected /aᵘ/ developed to /u/. The dichotomy between *ó* and *uV* in the paradigm led to the creation of *oV* variants on the model of *ā*-stem nouns, especially *gáu, gó* 'falsehood' and *náu, nó* 'boat'. The *ó* before a hiatus is probably shortened, but it is difficult to tell due to the scarcity of rhyming pairs between a hiatus word and a non-hiatus one (GOI: §47).

This gives rise to a wide array of o-forms, as demonstrated by the citations in eDIL: s.vv. 3 *ó*, 1 *tóe* and 2 *tóe*. Some of these show further change in hiatus loss, after which either /oe/ merged with /oi̯/ and both are spelled ⟨oi⟩ (e.g. nom.pl. *oi* [CormY: 414], acc.pl. *oi*[67]), or /o.e/ had already become /o.ə/ and > /oə/ > /oː/ (e.g. nom.pl. *oa*,[68] dat.sg. *ó*[69]). The relative chronology of the sound changes involved awaits further study, but o-forms in cases that originally had /aᵘ/ or /u/ are well attested for *ó* and *tó*. Table 3 shows this intra-paradigmatic analogy.

Table 3: Suggested origin of o-forms of *ó* 'ear'

	ó earlier forms	o-variants
nom.sg.	*ó*	*ó*
gen.sg.	*aue > u(a)e*	» *oe*
dat.sg.	*aui > ui/aí*	» *oi*
acc.sg	*ó*	*ó*
nom.pl.	*aue > u(a)e*	» *oe*
gen.pl.	*aue > u(a)e*	» *oe*
dat.pl.	*auaib > u(a)ib*	» *o(a)ib*
acc.pl.	*aue > u(a)e*	» *oe*

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64 *Ríagul Cormaic maic Cuilennáin*, edited in Strachan 1905: 64, §4.

65 *Scéla Chonchobuir*, edited in LL: 12557 = Stokes 1910: 30, §21.

66 Monosyllabic, rhyming with *imchrúi*, MD: 3, 286, l. 9.

67 *Longes Chonaill Chuirc*, LL: 37003. Hull in his edition of this text (1941) translates *co-naccaiside oi dia brutt* as 'he beheld a lap of his mantle' (p. 943), but more literally it should be 'he saw the ears (i.e. corners) from his cloak'.

68 *Táin Bó Froích*, edited in LL: 33116 = Meid 1974: 1.

69 *Táin Bó Cúailnge*, edited in LL: 12381 = O'Rahilly 1967: 135.

The concurrence of u- and o-forms in 'ear' and 'silent' further spread to other contexts, giving rise to variation between *(C)uV* and *(C)oV* forms in a handful of words in the late Old Irish period, regardless of their etymologies: *ó* 'ear', *tó* 'silent' have *ó* in the nom.acc.sg., and both *(C)uV* and *(C)oV* in other cases; *gáu* 'falsehood' had *(C)óV* forms but then also developed *(C)uV* forms;[70] *aue* 'descendant' and *taue* 'silence' had *(C)uV* forms but then acquired *(C)oV* variants. For these last two, *taue* could have acquired such forms by means of confusion with *tó*, while the regular descendant forms of early Old Irish *aue* 'descendant', namely *uë*, *uï*, etc. would be homonyms or homographs of *uë*, *uí*, etc. of the oblique cases of 'ear', and therefore became "contaminated" and started to produce o-forms in its inflection.

The o-forms of *aue* thereby produced, as we have seen, are already found in AU in the mid-8th century[71] but did not become significant until the mid-9th century. However, the variation between u- and o-forms seems to have affected only a few words that have the shape of *(C)uV*# and *(C)oV*# and never established itself as a regular phonological process in Irish. The increase of o-forms of *aue* in distribution, as attested by AU, was probably hindered after the mid-9th century when most of these words fell into disuse: *ó* 'ear' was gradually replaced by *clúas* 'ear', and *tó* and *taue* by *tost/tostach* 'silence/silent'. The o-forms thus fell out of favour rapidly after 880, and survived in the language only as marginal variants (perhaps dialectally) after 950, except in the nom.acc.sg. where *Ó* became fossilised in surnames.

To further clarify the complex development argued above, one has to collect instances *ó*, *tó* and *taue* attested in datable sources. It would favour the hypothesis raised here if the analogical o-forms in those three words also cluster in or before the mid-9th century. However, at the moment the ChronHib corpus contains very few instances of these words and the desired dataset is not available yet. My hypothesis will for the moment remain unproven quantitatively, but qualitatively it may still be a valid explanation.

6 Conclusion

To sum up, ⟨au⟩ in the earlier forms of *aue* is the result of infection by an inter-vocalic *$*u$ which later disappeared, and the bigram stands for a vowel described

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70 E.g. for *gáu* 'falsehood': gen.sg. *gue* (Ml.: 31b12), acc.pl. *gua* (Stokes 1905: Epilogue 167). There is no u-form of *nó* 'boat' quoted in eDIL.

71 It is noteworthy that AU: 749 and AT: 749 share the same reading of *oa*, in AU gen.pl., in AT wrongly nom.sg., indicating that this reading existed in the common ancestor of AU and AT before the two traditions separated in the early 10th century.

as /aᵘ/ in this paper. This vowel later changed to /u/ in a regular phonological development that affected every /aᵘ/ except for those immediately before /ṷ/ and /i̯/ in auslaut. Data from the *Annals of Ulster* 431–1131 reflect this change, but also show a number of forms that are written with initial ⟨o⟩, which probably reflects /o/ in pronunciation but cannot be explained by the phonological process described above. These o-forms are especially prominent in the period c. 830–930. Several previous hypotheses have been examined regarding the origin of the o-forms, but none of these is supported by the AU data. I propose a new theory of the origin of the o-forms, namely that the o-variants firstly appeared in words that show intra-paradigmatic variation between o-forms on the one hand, au- and u-forms on the other, especially *ó* 'ear' and *tó* 'silent'. In these words the o-forms had been formed analogically in cases which should only have au- or u-forms. And by means of homonymy and analogy, the o-forms spread to *aue* 'descendant, grandson', though such forms were only in fashion for about 100 years and became marginalised after 950, surviving today only as part of a split paradigm in surname formations.

Appendix: fully spelled out forms of *aue* in AU: 431–1131

form	case	year.section	form	case	year.section
oa	gen.pl.	498.02	*nUib*	dat.pl.	563.01
oea	gen.du.	572.00	*hUí*	acc.pl.	577.04
Uu	acc.pl.	590.03	*Ua*	gen.pl.	645.01
aue	nom.sg.	647.02	*hUę*	gen.pl.	647.03
huae	gen.pl.	649.04	*hU*	acc.pl.	667.02
hui	gen.sg.	670.06	*hUi*	gen.sg.	675.02
hoi	gen.sg.	676.00	*auę*	nom.sg.	701.02
aui	gen.sg.	707.07	*aui*	gen.sg.	732.01
Uibh	dat.pl.	732.07	*hui*	gen.sg.	734.03
hU	gen.pl.	737.11	*aui*	gen.sg.	738.04
aui	gen.sg.	738.04	*aui*	nom.sg.	738.04

form	case	year.section	form	case	year.section
aui	gen.sg.	738.08	*Oa*	gen.pl.	741.09
Ua	acc.pl.	743.05	*Auu*	acc.pl.	743.05
Uu	acc.pl.	743.06	*U*	acc.pl.	744.03
Uib	dat.pl.	744.04	*auę*	nom.du.	744.06
aua	nom.sg.	745.03	*aui*	gen.sg.	748.08
Oa	gen.pl.	749.05	*aui*	gen.sg.	750.07
Auibh	dat.pl.	750.09	*Uu*	acc.pl.	752.15
Auib	dat.pl.	757.03	*oa*	nom.sg.	763.02
aua	nom.sg.	764.08	*huę*	nom.sg.	768.03
huę	nom.sg.	769.04	*hUi*	nom.pl.	770.08
hU	acc.pl.	770.10	*hui*	gen.sg.	770.15
hui	gen.sg.	771.01	*huę*	nom.sg.	771.09
hUe	gen.pl.	772.09	*huęrmono*	nom.sg.	773.05
U	acc.pl.	776.11	*ua*	acc.du.	777.02
hU	acc.pl.	777.07	*hua*	nom.sg.	779.02
hue	nom.sg.	781.03	*ua*	nom.du.	781.04
nOaib	dat.pl.	790.03	*hU*	acc.pl.	793.04
Oa	gen.pl.	795.02	*hoa*	nom.sg.	796.05
U	acc.pl.	809.02	*U*	dat.pl.	811.02
hU	acc.pl.	812.09	*hUa*	acc.pl.	812.10
hU	acc.pl.	813.08	*Uu*	acc.pl.	814.06
hU	acc.pl.	816.08	*hui*	gen.sg.	817.01
hUa	gen.pl.	818.02	*huę*	acc.du.	818.06
nOib	dat.pl.	820.02	*nOib*	dat.pl.	820.02
hUi	nom.pl.	822.03	*nOaib*	dat.pl.	822.10
huę	nom.sg.	825.02	*hU*	acc.pl.	827.04
hUę	gen.pl.	830.06	*Oa*	gen.pl.	832.02
hU	acc.pl.	837.04	*Oi*	nom.pl.	841.04
hU	acc.pl.	842.12	*Ou*	acc.pl.	850.03
Oa	gen.pl.	852.06	*óa*	nom.sg.	859.01
Oa	gen.pl.	860.01	*Oa*	gen.pl.	860.02
oa	nom.sg.	862.07	*Oa*	gen.pl.	868.04
Ou	acc.pl.	868.04	*Oa*	gen.pl.	869.05
Oa	gen.pl.	869.07	*Auib*	dat.pl.	878.03
Oa	gen.pl.	879.08	*Oa*	gen.pl.	881.04
Oa	gen.pl.	881.05	*Oa*	gen.pl.	882.03
hU	acc.pl.	889.01	*Oa*	gen.pl.	891.02
oa	nom.sg.	896.01	*ua*	nom.sg.	904.04

form	case	year.section	form	case	year.section
oa	dat.sg.	913.04	*Ou*	acc.pl.	913.06
hUib	dat.pl.	914.02	*hUib*	dat.pl.	915.06
hu	dat.sg.	917.03	*ua*	acc.sg.	918.04
oa	nom.sg.	919.02	*ua*	nom.sg.	920.05
oa	dat.sg.	921.08	*Oa*	gen.pl.	924.04
Oa	gen.pl.	924.05	*hU*	gen.pl.	938.07
hU	acc.pl.	941.03	*nUib*	dat.pl.	942.03
hOi	gen.pl.	945.07	*oa*	acc.sg.	949.01
Uib	dat.pl.	950.04	*Ua*	nom.sg.	950.05
oa	nom.sg.	950.05	*U*	dat.sg.	953.03
Ui	gen.sg.	955.03	*Uib*	dat.pl.	962.02
Oib	dat.pl.	965.02	*Ú*	dat.sg.	965.06
Uib	dat.pl.	974.04	*Ua*	gen.pl.	979.03
hUib	dat.pl.	984.04	*hUib*	dat.pl.	988.01
Ua	nom.du.	993.03	*Ua*	nom.sg.	993.05
hUibh	dat.pl.	997.01	*hU*	dat.sg.	999.06
ua	nom.du.	1004.08	*hua*	acc.sg.	1004.08
hu	acc.pl.	1005.06	*nUa*	dat.sg.	1012.09
hUibh	dat.pl.	1019.09	*Uib*	dat.pl.	1021.03
nUib	dat.pl.	1021.03	*nUib*	dat.pl.	1021.03
hUib	dat.pl.	1024.01	*U*	acc.sg.	1024.02
hUib	dat.pl.	1024.05	*Uib*	dat.pl.	1029.05
hUib	dat.pl.	1031.05	*Uib*	acc.pl.	1032.07
Uib	acc.pl.	1032.07	*hUib*	dat.pl.	1037.03
huibh	dat.pl.	1037.05	*hUi*	nom.pl.	1037.06
hUibh	acc.pl.	1038.05	*hUi*	dat.sg.	1039.01
hUibh	dat.pl.	1039.04	*hUi*	dat.sg.	1041.04
hUibh	dat.pl.	1041.06	*hUi*	dat.sg.	1043.03
hUib	dat.pl.	1044.01	*hUi*	dat.sg.	1044.03
hui	dat.sg.	1044.03	*hUib*	dat.pl.	1044.04
hU	dat.sg.	1045.05	*hUa*	nom.sg.	1050.03
hUib	dat.pl.	1051.01	*hUa*	nom.sg.	1053.02
U	dat.sg.	1053.04	*U*	dat.sg.	1054.03
Uib	dat.pl.	1054.04	*nUib*	dat.pl.	1054.04
Uib	dat.pl.	1056.04	*Uib*	dat.pl.	1057.05
Ui	gen.sg.	1063.04	*Ou*	gen.pl.	1063.04
Uib	dat.pl.	1064.03	*hUib*	dat.pl.	1065.07
hUa	nom.sg.	1069.03	*hOa*	nom.sg.	1070.03

form	case	year.section	form	case	year.section
hUa	nom.sg.	1071.01	*Uib*	dat.pl.	1076.02
Ui	gen.sg.	1076.07	*nUib*	dat.pl.	1077.01
Uib	acc.pl.	1078.06	*nUibh*	dat.pl.	1078.07
hUi	gen.sg.	1078.07	*hUibh*	dat.pl.	1080.01
hUa	nom.sg.	1080.02	*Uib*	acc.pl.	1086.06
Ua	acc.sg.	1086.07	*nUib*	dat.pl.	1088.04
hUib	acc.pl.	1089.05	*Uib*	dat.pl.	1092.05
Ú	dat.sg.	1096.04	*Ui*	dat.pl.	1097.07
ua	nom.sg.	1098.03	*oa*	nom.sg.	1098.80
Uibh	acc.pl.	1099.09	*ui*	gen.sg.	1100.06
Uib	dat.pl.	1102.1	*Ui*	gen.sg.	1102.1
Ua	nom.sg.	1103.02	*nUib*	dat.pl.	1103.05
ua	acc.du.	1103.05	*hU*	acc.sg.	1103.05
nUi[b]	dat.pl.	1107.04	*Uí[b]*	acc.pl.	1107.04
Uib	dat.pl.	1107.05	*U*	dat.sg.	1108.06
U	dat.sg.	1108.06	*Uib*	dat.pl.	1109.04
hUi[b]	acc.pl.	1109.08	*hUibh*	acc.pl.	1109.08
hOe	nom.pl.	1110.10	*Uibh*	dat.pl.	1111.09
hU	gen.sg.	1113.03	*hUi*	nom.pl.	1113.07
Uí	gen.sg.	1116.03	*Ui[b]*	dat.pl.	1117.03
Uibh	dat.pl.	1118.01	*Uibh*	acc.pl.	1118.08
Ib	dat.pl.	1119.07	*Uib*	acc.pl.	1120.02
Ib	dat.pl.	1120.03	*Uibh*	dat.pl.	1121.02
Ib	dat.pl.	1124.06	*hUibh*	acc.pl.	1127.06
Uib	dat.pl.	1128.02	*U*	gen.sg.	1128.04
hUi[b]	dat.pl.	1128.05	*nUi[b]*	dat.pl.	1128.07
Ui[b]	acc.pl.	1128.07	*Uib*	dat.pl.	1128.07
hUi	acc.pl.	1131.01			

Abbreviations

AT   Whitley Stokes (1895–1897). "Annals of Tigernach". Part 1. In: *Revue Celtique* 16, 374–419. Part 2. In: *Revue Celtique* 17, 6–33, 116–263, 337–420. Part 3. In: *Revue Celtique* 18, 9–59, 150–303.

AU   Seán Mac Airt & Gearóid Mac Niocaill, eds. (1983). *The Annals of Ulster (to A.D. 1131)*. Vol. 1: *Text and Translation*. Baile Átha Cliath: Dublin Institute for Advanced Studies.

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CGH	Michael A. O'Brien, ed. (1962). *Corpus Genealogiarum Hiberniae*. Vol. 1. With an intro. by J. V. Kelleher. Baile Átha Cliath: Dublin Institute for Advanced Studies.
ChronHib	*Chronologicon Hibernicum* (2015–). Maynooth University, Ireland. URL: http://chronhib.maynoothuniversity.ie/.
CIH	Daniel A. Binchy, ed. (1978). *Corpus Iuris Hibernici*. Bhaile Átha Cliathe: Instituid Ard-Léinn.
CormY	Kuno Meyer, ed. (1994). *Sanas Cormaic. An Old-Irish Glossary*. Felinfach: Llanerch. Repr. from *Anecdota from Irish Manuscripts* 4, 1–128.
DKP	Stefan Schumacher (2004). *Die keltischen Primärverben. Ein vergleichendes, etymologisches und morphologisches Lexikon*. Unter Mitarbeit von Britta Schulze-Thulin und Caroline aan de Wiel. Innsbruck: Institut für Sprachen und Literaturen.
DLG²	Xavier Delamarre (2003). *Dictionnaire de la langue gauloise. Une approche linguistique du vieux-celtique continental*. 2nd ed. Paris: Errance.
EDHIL	Alwin Kloekhorst (2008). *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden & Boston: Brill.
eDIL	Gregory Toner, ed. (2013). *Electronic Dictionary of the Irish Language*. Revised edition 2013. Queen's University Belfast. URL: http://edil.qub.ac.uk/.
EDPC	Ranko Matasović (2009). *Etymological Dictionary of Proto-Celtic*. Leiden & Boston: Brill.
ÈSSJa	Oleg N. Trubačev & Anatoly F. Zhuravlev, eds. (1974–2014). Этимологический словарь славянских языков. *Etymological Dictionary of Slavic Languages*. 39 vols. Москва: Nauka.
GOI	Rudolf Thurneysen (1946). *A Grammar of Old Irish*. Trans. by Daniel A. Binchy & Osborn Bergin. Revised and enlarged edition with supplement. Baile Átha Cliath: Dublin Institute for Advanced Studies.
IEW	Julius Pokorny (1959). *Indogermanisches etymologisches Wörterbuch*. 2 vols. München: Francke.
LEIA	Joseph Vendryes & Pierre-Yves Lambert (1959–). *Lexique étymologique de l'irlandais ancien. Lettres A, B, C, D, M N O P, R, S, T, U*. Paris & Baile Átha Cliath: Centre National de la Recherche Scientifique & Dublin Institute for Advanced Studies.
LL	Richard I. Best, Anne O'Sullivan & Michael A. O'Brien, eds. (1954). *Lebor Laignech. The Book of Leinster, Formerly Lebar na Núachongbála*. TCD MS 1339. Vol. 1. Baile Átha Cliath: Dublin Institute for Advanced Studies.
LU	Osborn Bergin & Richard I. Best, eds. (1929). *Lebor na hUidre. Book of the Dun Cow*. RIA MS 23 E 25. Baile Átha Cliath: Dublin Institute for Advanced Studies.
MD	Edward J. Gwynn, ed. (1935). *The Metrical Dindshenchas*. 5 vols. Baile Átha Cliath: Dublin Institute for Advanced Studies.
Ml.	"The Milan glosses on the psalms in the Milan Codex Ambrosianus C301 inf." (1901a). In: *Thesaurus Palaeohibernicus. A Collection of Old Irish Glosses, Scholia, Prose and Verse*. With supplement by Whitley Stokes. Ed. by Whitley Stokes & John Strachan. Vol. 1. Cambridge & Baile Átha Cliath: Cambridge University Press & Dublin Institute for Advanced Studies, 7–483. Repub. in Aaron Griffith & David Stifter, eds. *A Dictionary of the*

Old-Irish Glosses in the Milan Codex Ambrosianus C301 inf. 2013. URL: http://www.univie.ac.at/indogermanistik/milan_glosses.htm. Institut für Sprachwissenschaft, Universität Wien.

NIL Dagmar S. Wodtko, Britta Irslinger & Carolin Schneider (2008). *Nomina im indogermanischen Lexikon*. Heidelberg: Winter.

Sg. "Old Irish glosses on Priscian's grammar in the St. Gall Stiftsbibliothek Codex 904 and other manuscripts" (1903). In: *Thesaurus Palaeohibernicus. A Collection of Old Irish Glosses, Scholia, Prose and Verse*. With supplement by Whitley Stokes. Ed. by Whitley Stokes & John Strachan. Vol. 2. Cambridge & Baile Átha Cliath: Cambridge University Press & Dublin Institute for Advanced Studies, 49–224. Repub. in Bernhard Bauer, ed. *A Dictionary of the Old Irish Priscian Glosses*. 2015. URL: http://www.univie.ac.at/indogermanistik/priscian.

Thes. Whitley Stokes & John Strachan, eds. (1901–1903). *Thesaurus Palaeohibernicus. A Collection of Old Irish Glosses, Scholia, Prose and Verse*. With supplement by Whitley Stokes. 2 vols. Cambridge & Baile Átha Cliath: Cambridge University Press & Dublin Institute for Advanced Studies. Repr. in 1987.

Wb. "The Würzburg glosses on the Pauline epistles" (1901b). In: *Thesaurus Palaeohibernicus. A Collection of Old Irish Glosses, Scholia, Prose and Verse*. With supplement by Whitley Stokes. Ed. by Whitley Stokes & John Strachan. Vol. 1. Cambridge & Baile Átha Cliath: Cambridge University Press & Dublin Institute for Advanced Studies, 499–712.

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