"A LIVING SPEECH'? THE PRONUNCIATION OF GREEK IN EARLY MEDIEVAL IRELAND

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ABSTRACT

While the Irish knowledge of Greek in the early Middle Ages has been much debated, the evidence of Irish language texts has been largely ignored. Early Irish glossaries (O'Mulconry's Glossary, Sanas Cormaic, Dúil Dromma Cetta) cite at least 190 Greek words, and this presents an opportunity to study some sources for Greek available in Ireland. This article looks at the evidence of the glossaries for the pronunciation of Greek in particular. In doing so, it aims to clarify the extent to which Greek in Ireland was, in Zimmer's words, 'a living speech'.

1. GREEK IN EARLY MEDIEVAL IRELAND

The knowledge of Greek among the early medieval Irish, both at home and abroad, has been the subject of a long and often lively debate since Ludwig Traube published his seminal study 'O Roma nobilis' in 1891. Traube boldly asserted that 'anyone on the Continent who knew Greek during the time of Charles the Bald was either an Irishman or without question had acquired this knowledge from an Irishman, or else the report which surrounded the person with such renown was a fraud'. Bernhard Bischoff's study also placed particular emphasis on the activities of Irish peregrini.

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1 See note 22 below.


3 Cited in translation in Berschin, Greek letters, 132.


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though Mario Esposito had earlier dismissed the knowledge of Greek in Ireland before the ninth century as ‘almost non-existent’, and that of Irishmen in Carolingian circles as an ‘inaccurate and uncritical smattering’. David Howlett has more recently examined a variety of Insular sources, arriving at a more positive conclusion, while Michael Herren collected evidence for quite limited knowledge of Greek in Ireland from the *Hisperica Famina*, the Antiphonary of Bangor and some entries from Irish glossaries.

Irish language texts have generally been overlooked in the discussion, and Irish glossaries neglected almost entirely. Nonetheless, *Sanas Cormaic* (Cormac’s Glossary; Y), *O’Mulconry’s Glossary* (OM), *Dúil Dromma Ceta* (DDC) and the *Irsan* glossary between them contain 246 distinct entries citing, or claiming to cite, Greek words (many entries occurring in more than one glossary text). As Table 1 indicates, *O’Mulconry’s Glossary* contains more Greek than any other, with 209 such entries (nearly a quarter of its total of 877). However, the highest concentration is found in the short *Irsan* glossary, with 72 entries citing Greek words out

<table>
<thead>
<tr>
<th>Glossary</th>
<th>Entries citing Greek words</th>
<th>Total entries</th>
<th>Approx. %</th>
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<tbody>
<tr>
<td><em>O’Mulconry’s Glossary</em></td>
<td>209</td>
<td>877</td>
<td>24%</td>
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<tr>
<td><em>Sanas Cormaic</em> (total)</td>
<td>77</td>
<td>1300</td>
<td>6%</td>
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<td>(short recension)</td>
<td>22</td>
<td>694</td>
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<td>57</td>
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<td><em>Irsan</em></td>
<td>72</td>
<td>233</td>
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<td><em>Dúil Dromma Ceta</em></td>
<td>22</td>
<td>646</td>
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8 See, however, Anders Ahlqvist, ‘Notes on the Greek materials in the St Gall Priscian (Codex 904)’, in Herren (ed.), *Sacred nectar* [see note 2 above], 195–214. An early, apparently unfinished, survey is Tomás Ua Nualláin, ‘When Gael met Greek’, *Irish Ecclesiastical Record* 4th series, 25 (May 1909), 513–23 and 26 (August 1909), 163–71, who collected references to Greek from the *Thesaurus Palaeohibernicus*, though offered little analysis.
10 References to printed editions are given (under Sigla) at the end of this article. These texts are currently being edited by the Early Irish Glossaries Project for print publication. Manuscript transcriptions and other resources are available on the Early Irish Glossaries Database: http://www.asnc.cam.ac.uk/irishglossaries/ (accessed 6 October 2011). *Irsan* is the title (taken from the first headword) of a short glossary similar in content to OM but containing some unique material, which the project is editing as a distinct text.
11 Counting glossary entries is not so straightforward, as the divisions between entries are sometimes unclear. The numbering in editions, moreover, is often inconsistent (cf. the interpolated references 183a, 315a, 361a, 830a–k in Stokes’s edition of *O’Mulconry’s Glossary*). The totals given here are derived from the Early Irish Glossaries Database.
of a total of 233. *Sanas Cormaic* contains 77 (out of 1300), the majority of which are in sections unique to the longer recension (57 out of 606). *Duíl Dromma Cetta* contains just 22 entries (out of 646). The Greek words are not the focus of the glossary entries, but instead are cited to provide etymologies for Irish headwords. The Greek is almost invariably translated into Latin (rarely directly into Irish), and the terms marked respectively *grece* and *latine* (the latter sometimes omitted). The following examples are typical:

**OM 51** *Aprim grece aporea .i. egestas latine dommatu .i. is dometu na-dermad.* ('Aprim [alas, a pity], in Greek ἀπορία [difficulty, perplexity], i.e. *egestas* in Latin, poverty, i.e. it is a lack that it has not been done.')

**OM 88** *Anim grece animos, latine uentus uel anima.* ('Anim [soul], in Greek ἁεμος [wind], in Latin, wind or spirit. ')

**OM 222** *Cerd grece cires .i. manus, unde cernach .i. báaidh lám dicitur, ar cach dán do-ńalt lámháe is cerd do-ń-gairther i. lámdae.* ('Cerd [craft], in Greek χείζες, i.e. hands, from which *cernach* [victorious], i.e. victory of hands, is said, for every skill which hands execute is called a craft, i.e. handiwork.')

**Y 810** *Lie ab eo quod est lidos grece interpretatur lapis.* ('Lie [stone], from the word λίθος in Greek, it means stone.')

The script used for Greek words is Latin throughout, with the exception of two entries in OM:*

**OM 121** *Bláthach .i. grece playtóc grece diuitiae, uel a platea .i. latitudine.* ('Bláthach [buttermilk], i.e. πλατύς in Greek, wealth in Greek [recte Latin], or from πλατεία [broad], i.e. [from its] breadth.')

**OM 368** *Echtach quasi nechtach aidchi. Haec sunt cognomina Bachi: NÝKTHAHC, quia noctu celebrantur sacra eius . . . ('Echtach [night bird?], as if *nechtach*, of night. These are the epithets of Bacchus: *Nýktelaoς*, because his rites are celebrated by night . . . ')

Cumulatively, these entries provide a useful corpus of material with which to explore the sources for the Greek language that were available in Ireland,

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12 These totals revise upwardly the figures given in Russell, *'Graece ... latiné',* 407.
13 I use here the medieval spelling *grece* for Classical Latin *graece*. The term is invariably abbreviated in manuscripts. Unless otherwise stated, translations into English throughout this paper are my own.
14 Stokes inexplicably prints ππτην in OM 2, citing 'MS patur' in a note, even though the manuscript only has a ππ abbreviation (in Latin script). Where he uses Greek type in the text of other entries (e.g. OM 211, 221), he clarifies the manuscript readings in notes.
15 The text here corresponds partly to Πάγυτος in Greek majuscules, though with Latin letters for *pl*. The same reading occurs in the two witnesses for this part of the glossary, pointing to the occurrence of Greek script, here at least, in the archetype.
how these sources were transmitted, the accuracy of the glossary compilers’ knowledge of the language and, considering the certain authorship within Ireland of these texts, the relationship of Greek learning in Irish schools to that in schools associated with Irishmen on the Continent.16

The present article is focused on the evidence of the glossaries for the pronunciation of Greek in early medieval Ireland. Heinrich Zimmer,17 Kuno Meyer,18 Joseph Vendryes,19 W.B. Stanford,20 and Paul Russell21 all noted that the forms of Greek words in Irish glossaries exhibited features of medieval Greek pronunciation. For example, $e$ is normally written for $\alpha$, and $i$ for both $\alpha$ and $u$, all features of Byzantine pronunciation. Zimmer attributed this to the influence of Gaulish scholars who he thought migrated to Ireland in the fifth century to escape Germanic invaders, and he concluded that Greek in Ireland was therefore ‘a living speech’.22

Michael Herren has searched for ‘vulgar Greek’ in a selection of sources dated between c. 600 and 1000, drawn from Spain, Italy, Switzerland, France, England and Ireland, citing corroborative evidence for features of post-Classical Greek in those texts.23 This range of sources is disparate in terms of date and place of origin, and the volume of evidence presented is relatively small. Moreover, Herren does not cite any contrary evidence, and so we are left unsure as to how pervasive these features are.

Irish glossaries offer an opportunity to test the matter in relation to a coherent corpus of texts certainly written in Ireland. We can seek to determine, for example, whether medieval Greek pronunciation is detectable in all sounds or is restricted to a limited group (for example, vowels only); and we can explore whether it occurs consistently throughout the texts or is restricted to a limited number of entries only (perhaps derived from specific sources). Before addressing these questions, we will first survey early medieval conventions for transliterating Greek into Latin script. We will also need to assess the reliability with which Greek words can be identified in the glossaries.

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16 Some of these questions are addressed in Russell, ‘Graece...latine’ and by Pádraic Moran, ‘Greek in early medieval Ireland’, in A. Mullen and P. James (eds), Multilingualism in the Greco-Roman worlds (Cambridge, forthcoming).


18 Kuno Meyer, Learning in Ireland in the fifth century and the transmission of letters (Dublin, 1913), 26–7 (n. 35).


2. TRANSLITERATION OF GREEK

The transliteration of Greek into Latin script can reveal information about the historical phonology of Greek that is typically hidden by the conservative orthography of Greek script.

The Greek alphabet and its Classical Latin transliteration were widely known. It was frequently treated in computistical collections, which included tabulations of the numerical values of the Greek letters and the Greek names of both letters and numbers, including the otherwise redundant letters *digamma* (= 6, called ἐπίσημον 'symbol'), *koppa* (= 90) and *sampi* (= 900, called ἐνακόσιοι '900'). Dáibhé Ó Cróinín has argued that such a table of Greek letters was the 'computus' learnt by Mo Sin maccu Min, the abbot of Bangor who died in 610. However, alphabet tables were of limited use for transliteration. None that I have seen treats digraphs (e.g. ου and ει, normally transliterated *u* and *i*, respectively, and γγ, γκ, γξ, γω, transliterated *ng*, *nk*, *nx*, *nch*). The long vowels η and ο are sometimes indicated in tables with doubled *ee* and *oo*, a convention I have not seen in any transliterated Greek text. Furthermore, no such table, to my knowledge, departs from the conventions of Classical Latin transliteration to reflect later Greek pronunciation.

Passages of Priscian’s *Institutiones grammaticae* that discuss the relationship between the Greek and Latin alphabets may have supplemented alphabet tables, providing indications for transliterating digraphs, for example. Priscian, however, is strictly concerned with defining the standards of Classical Latinity, and here again no information on medieval Greek pronunciation is to be found.

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25 Written ζ, ζ, θ with variations. The first is a medieval descendant of ancient digamma (ϝ), closely resembling the medieval ligature stigma (for στ); the second is the ancestor of Latin q. The alphabet is given, for example, in a tract on finger-reckoning included in Bede’s *De temporum ratione*: Charles W. Jones (ed.), *Bedae opera de temporibus*, Mediaeval Academy of America Publications 41 (Cambridge, Mass., 1943), 181. For a clear and accessible manuscript image, see Cologne, Dombibliothek, MS 103 (795 x 819), fol. 52r, available at http://www.ceec.uni-koeln.de/ (accessed 6 October 2011).


27 Cf. GOI §27 on the convention of doubling vowels in Irish texts, however.

28 Priscian’s *Institutiones grammaticae* edited by Martin Hertz in Heinrich Keil, *Grammatici latini* (6 vols, Leipzig, 1857–80, repr. Hildesheim, 1961), vols 2–3. Priscian gives the examples ΝΕΙΑΟΣ Νίλος (II 24.16, 41.24, 44.17) and ΜΟΙΝΑ Μουσα (II 27.21–2, 44.17), but also presents other possibilities for transliterating these digraphs (e.g. ΚΑΛΛΙΟΠΕ Calliopea, II 24.17). On nasal clusters, see II 48.13–15: *Graeci tamen solent loco n ante γ vel κ vel χ positae hanc [g] ponere, ut ἄγγελος, ἀγγίνος, ἄγκιστρον. ἄγχυστης apud Latinos tamen seriuatur n, ut Longinus, Anchises. *The Greeks moreover are wont to put this [letter, sc. g] instead of n before γ or κ or χ, as in ἄγγελος, ἀγγίνος, ἄγκιστρον, ἄγχυστης; for Latin writers however, n is used, as in Longinus, Anchises*. Priscian also mentions Σφιγξ Σφιγνός Sphinx Sphingis at II 280.6.
The limitations of alphabet tables may be illustrated in the case of the *Liber Commonei*, a ninth-century manuscript of 18 folios, written in Wales, and now part of the composite manuscript Oxford, Bodleian Library, MS Auct. F. 4. 32. The manuscript contains two collections of bilingual texts: excerpts from the Minor Prophets in Greek written in Greek script with a facing Latin text (ff 24r–28v); and lessons and canticles for the Easter vigil, here with the Latin text first and a facing Greek text transliterated (ff 19 and 28v–36r). One might assume that the alphabet table preceding these texts (f. 19) was written as a guide to pronouncing the Greek in Greek script and was a key for transliterating the second Greek text into Latin script. This can hardly have been so, however. The table contains some very idiosyncratic features, such as $ee$ for $€$ (instead of $η$) and $h$ for $η$. Other apparent slips are $c$ for $χ$ and $ph$ for $ψ$. The inclusion of the redundant letters koppa, digamma (displaced to the end) and sampi point to its computistical origin. The same table cannot be the key to the transliterated Greek, which consistently reflects late pronunciation, as the opening of Genesis (f. 28v19–20) illustrates (note $i$ for $η$, $e$ for $αι$):

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en archi epoeisen otheos ton uranon ce tingin
ἐν ἀρχῇ ἐποίησεν ὁ θεός τὸν οὐρανόν καὶ τὴν γῆν
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'In the beginning God created heaven and the earth'.

I am not aware of any description or tabulation of medieval Greek pronunciation in any written sources of the period. So, how else could its knowledge have been disseminated? Ultimately, of course, any such knowledge must have derived from contact with native speakers. However, Greeks appear to have been very few and far between in the early medieval West. Bearing in mind the prestige Greek language and culture enjoyed, it seems remarkable that our sources do not record even the name of the ‘certain learned Greek’ who is said to have taught Mo Sinu. A rare example of a native Greek speaker active in the West and whose historical identity is beyond doubt is Theodore of Tarsus, abbot of Canterbury from 669. Bede, writing some 60 years later, claims that Theodore’s pupils still spoke both Greek and Latin as well as their native tongue. Even if any such fluency in

32 *Historia ecclesiastica* 4, 2.
the Greek language was not transmitted to subsequent generations, it seems likely that Theodore taught at least some Greek, and doubtless with contemporary pronunciation. He may, therefore, be the most obvious source for an Insular knowledge of Byzantine pronunciation.

3. LATIN IN GREEK SCRIPT

Irish scribes sometimes employed Greek script where Latin script was normally used (for Latin and occasionally Irish text). We can explore whether this transliteration from Latin into Greek script reveals any evidence of late pronunciation. A well-known example is the Schaffhausen manuscript of Adomnán's Vita Columbae, which contains, besides a Greek paternoster in Greek script (p. 137), the Irish words Coral Rhi written as KOPKUPETL (p. 47a) and the Latin explicit of book two written as qHVLTUp Cll KUVOUC ALI3EP (p. 103b). In the first case, the scribe Dorbène's choice of T to represent the sound [d] and E (rather than η) for long [e:] in Réti shows a letter-by-letter transliteration dependent on Irish orthography.

The Book of Armagh (TCD MS 52) contains many Latin words written in Greek script, including the entire Latin paternoster (f. 36ra):

\[\text{ΠΑτηρ νοστερ κυι \cdot εε \cdot ἵν καλείς | έκφικημυ \cdot νομεν \cdot τυμι | αδενιατ \cdot ρεγνυμ \cdot τυμι | φιατ \cdot υλυντας \cdot τυα \cdot εικυτ | ἵν καλειο \cdot ετ \cdot ἵν τερρα \cdot πανε \cdot νοιτη\mu \cdot κοτιδιανυμ | δα \cdot νοβις \cdot ηφις \cdot ετ \cdot διμυττε | νοβις \cdot δεβιτα \cdot νοστρα \cdot εικυτ | ετ \cdot νος διμεικυμε \cdot δεβιτωο |}]

Several features show that the transliteration bears little relation to Greek orthography. Greek has no digraph CE as written in XClEAlc (caells). The u in adueniat is represented by Greek u (/yl > /i/), which never corresponded to the sound of Latin consonantal u (/wl > /i/). Latin hodie has a Hellenistic spiritus asper symbol (\(\text{\textbar}\)) for the letter h. This is clearly a mechanical
transliteration based on alphabet tables or similar sources, which tells us little about how Greek text in Greek script would have been read.

4. METHODOLOGY FOR IDENTIFYING GREEK WORDS

Before beginning to analyse the Greek words in Irish glossaries, we need first to consider the quality of our evidence, and how reliably the words in question can be identified. Most, though not all, of the Greek words cited in the glossaries are marked *grece*, occasionally *[a nomine/verbo] greco*. The accompanying Latin translation generally helps us to identify the Greek word intended.

Some of these Greek words also occur as borrowings in Latin, the more common being ἀμνήστια *amnesia*, ἀντίχριστος *antichrisios*, βασιλικὴ *basilica*, γεωμετρία *geometrica* [sic, for *geometria*], γυμνασία *gymnasia*, ἐκκλησία *ecclesia*, ἑκλείψις *eclipse*, εὐφονία *eifonia*, κρίσις *crisis*, πλατεία *platea*. Nonetheless, for present purposes, I count these as Greek words because they are explicitly marked as such in the texts, which in some cases show deeper understanding of the origins of the terms, referring to Greek etymologies or original senses not found in the Latin. So, ἀντίχριστος is etymologised as contra Christum (Y 101), γεωμετρία as terrae mensura (OM 478), γυμνασία as nochtfecorthid cell 'naked exerciser' (OM 175), εὐφονία as bona uox (OM 374), while OM 182 recognises the original meaning of basilica (βασιλικὴ 'royal') in the explanation tech rig nine 'house of the king of heaven' (supplying an additional Christian association). Latin words of Greek origin that are not identified as such are not included.

The orthography of some of the Greek words cited in Irish glossaries conforms perfectly to the conventional transliteration of Greek in Classical Latin, and these Greek words are therefore clearly identifiable: e.g. ἄποδος

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40 Many identifications were first made by Stokes and Meyer in their various diplomatic editions of the glossary texts. For bibliography, see Paul Russell, 'The sounds of a silence: the growth of Cormac's glossary', *CMCS* 15 (Summer, 1988), 1–30, and the Early Irish Glossaries Database. For some exceptions, see OM 90, 175, 212.

41 The Irish headwords are often only loosely connected in sense to the words which etymologise them, to the extent that entries frequently resort to some additional explanation to concoct a semantic link between the two (see, for instance, the example of χειρες in OM 222, cited above). The headwords are therefore of limited value in establishing which Greek word is intended, in uncertain cases.

42 I will generally cite Greek words in standard Greek orthography first, followed by the glossary form. The reader may consult the list of Greek words that follows for translations, references to printed editions, variants and further notes.

43 Reflecting its derivation from γυμνὸς 'naked'. Latin *gymnasia* would refer to public schools in general. A more accurate translation of γυμνασία is found in a gloss on the same word in the St Gall Priscian: frecor celli no frithgnom religia icidorus gymnium religia in *alto* 'applying one's mind or exertion, etc.; Isidore says *gymnasium*, etc. in another [book]' (Sg. 106b12 = Hofman 106b25 x in the online edition at: www.stgallpriscian.ie (accessed 6 October 2011)). The name Isidorus is invariably abbreviated *ic* in the St Gall glosses, the substitution of the Greek letter ι (σ) for ἰ possibly reflecting the importance of that author as a source for Greek vocabulary.
apodos, βία bia, γάλα gala, γελό gleo, γῆ ge, δεξιά dexia, δέρο dero, δῆλον delon. In other cases, the identification of Greek words requires some degree of interpretation, involving the following:

1. Consistent non-Classical transliteration
2. Misreadings of Greek script
3a. Discrepancies in endings: absence of final -n or -s
3b. Discrepancies in endings: final -n added, or substituted for final -s
4. Ambiguous pairs
5. Words wrongly labelled as Greek
6. Other considerations

(1) Consistent non-Classical transliteration
Many entries depart from Classical transliteration in reasonably consistent ways. For example (as already mentioned), e is often written for αι; i for ει and t for θ; c for χ; and the initial aspirate h is always omitted. Given that these patterns are quite regular, there should be no objection to identifying words such as αίμα ‘blood’ and ὄλη ‘forest’ from glossary forms ema and ile, even if these at first sight appear strange or corrupt beside the Classical Latin transliterations haima and hylē. (These patterns are discussed in further detail below.)

(2) Misreadings of Greek script
Some departures would seem to derive from errors in reading Greek script. The letter ψ is certainly confused for φ in the case of δίψα difa ‘thirst’,45 and majuscule Greek c (σ) as Latin c in σάρος caros ‘broom’. Majuscule τ may be confused as ρ in ἀρέτη arge ‘excellence’, while the converse may help explain ἀργίσα arilloi ‘feasts’. The form ipe for πίε ‘drink’ in OM 699 very likely arose from a misreading of Greek majuscules Π as Π.46 Another cluster, ςτ, may have been misread as Μ in φαντάξω fimaζo ‘I make visible, appear’, and majuscule Δ as Μ in πεδίον foeman ‘plain’;47 θάναξ dusma ‘marvel’ may reflect a misreading of majuscule γ as c (σ).

The letter ξ (for [ks], consistent in ancient, medieval and modern Greek) is variously transliterated with χ (δεξιά dexia ‘right’), with c (ξένος cenos ‘guest’), with s (ξύλος silon ‘wood’)48 or is absent entirely (φάρσαξ faran ‘chasm’). This may be accounted for by misreadings of letter forms, particularly c (σ) for ξ, possibly influenced by confusion arising from the simplification of the consonant cluster [ks] in spoken Latin.49

46 This error must have been already present in the source for the entry, given that the Irish etymology depends on it (in this case for the headword ibas in OM 699).
48 The form fulas (φαντάξω ‘guard’?) might also be included here; see below under (4).
(3a) Discrepancies in endings: absence of final -n or -s
Discrepancies between glossary forms and expected Greek forms indicated by the Latin translations commonly occur in terminations. A final -n or -s is often absent from the glossary forms: άρεσις eresi (translated electio), βῆμα ἁνδρός hemandro (passus, sc. hominis), βιος bia (vita), δορκας dorco (videns), κάλον kalo (lignum), οίνος eno (uinum), δόλον olo (totum). Some of these might be interpreted as Greek dative (χίρέσει, βίοι, κάλο, οίνο, δόλο). However, the dative of δορκας dorco is rather δορκάδι, and βῆμα ἁνδρός hemandro 'step of a man' reflects either a scribal omission or a pseudo-dative ending. In the entry OM 402 Ena a uino eno enim grece uinum... ('Ena [vessels] from οίνος in Greek, wine...'), the apparent dative form eno (cf. οίνο, for expected οίνος corresponding to uinum) may be accounted for by a scribal omission of final -s under the influence of the preceding words ena and uino.

A genuine oblique Greek form occurs in the curious entry Irsan 628.21 Ars apothoearthes.ι. a virtuti, unde aries dicitur.ι. uirtus ('Ars [art], ἀπὸ τῆς ἀρετῆς [from the word ἀρετῆ/excellence], i.e. from goodness, from which aries is said, i.e. goodness'). Here the genitive ἀρετῆς is conditioned by the preposition ἀπὸ 'from' in the Greek etymological formula ἀπὸ τοῦ/τής 'from the [word]'. The source of this glossary entry is Isidore, Etym. 1.1.2: Ars... ἀπὸ τῆς ἀρετῆς, id est a virtute, quam scientiam vocaverunt ('And an art (ars, gen. artis)... [is derived] from the word ἀρετῆ, that is “virtue”, as they termed knowledge').

(3b) Discrepancies in endings: final -n added, or substituted for final -s
In other entries, final -n occurs where the expected Greek words would end in a vowel or -s: βασιλεὺς basilion (rex), βουλή bolin (consilium), γοργός gargon (ferox), γλυκό glicin (dulce), δίκη deitan (obseruatio Legis et utiae),

50 Two examples, κάλον kalo and δόλον olo, might be counted as evidence for loss of final -n, which is reflected in Byzantine Greek except in restricted sets of words: see Geoffrey Horrocks, Greek: a history of the language and its speakers (2nd edn, Chichester, 2010), 274–5. This does not explain the absence of final -s, however, and I regard the two phenomena as closely related.

51 The spelling of the Greek word here may also have been adapted to the glossary headword.

52 The word aries in the second part of the entry appears to be the author's attempt to infer the Greek nom. form (recie ἀρετή) from the Latin word aries 'ram', gen. arietis. Alternatively, if the Latin word aries 'ram' is meant here, its association with virtue 'goodness', a word derived from vir 'man', could be explained by reference to Isidore, Etymologies 12.1.11 (as suggested in Russell, ‘Graece ... latine’, 409–10): Aries... ἀπὸ τοῦ Ἀρεος, id est a Marte, vocatus: unde apud nos in gregibus masculi mares dicuntur ('The ram (aries) is... named after the word Ἀρες, that is after “Mars”—whence we call the males in the flock ‘males’ (mas, gen. maris')). W.M. Lindsay (ed.), Isidori Hispalensis episcopi etymologiarum sive originum libri XX (2 vols, Oxford, 1911, repr. 1971), hereafter Etym.; translated in Stephen A. Barney, W.J. Lewis, J.A. Beach and Oliver Berghof, The etymologies of Isidore of Seville (Cambridge, 2006).

53 I have counted 63 instances of the ἀπὸ τοῦ/τής formula in the Etymologies. This use of the article is paralleled in some Irish etymological formulas, e.g. Y 10 Acail.ι. a causa.ι. ón chása ('Accails [cause] from causa, i.e. from the [word] cause'). On citation formulas, see Liam Breatnach, 'On the citation of words and a use of the neuter article in Old Irish', Eria 41 (1990), 95–101.
PRONUNCIATION OF GREEK IN EARLY MEDIEVAL IRELAND 39

dramun (curre), ὑπήνος trenon (lamentatio), κλάσις clasin (dissisio).
In most of these examples, the -n ending would be compatible with an accusative form of the word; not, however, in the case of dramun (curre), if this glossary form represents the verb δράμε. In some cases, the Greek word may have been extracted from a textual source where it was originally cited in its accusative case, afterwards confused as a nominative. For example, Isidore uses the accusative of ἄνθρωπος, as the object of the verb appello (Etym. 11.1.5): Graeci autem hominem ἄνθρωπον appellaverunt (‘The Greeks called the human being ἄνθρωπος’). However, I have not found any textual sources which might have supplied the accusative forms of the words cited above. Moreover, the accusatives in question are restricted to Greek first and second declension nouns: the accusative singular -a termination for consonant stems is represented in one glossary entry only. This suggests that the the -n termination in these cases may have arisen from scribal error, possibly hypercorrection of Greek endings to supply the characteristically Greek termination -n, not found in Latin case endings.

In the cases of discrepancies outlined under (3a) and (3b) above, it would appear that either the Greek form or its Latin translation has become corrupt in the textual tradition. Given our general picture of Greek in the early medieval West, we may assume that most copyists understood far less Greek than Latin, and therefore for any Greek–Latin pair we might expect the Latin element to be the more reliable of the two.

(4) Ambiguous pairs
In other examples, discrepancies extend beyond grammatical terminations. In OM 569, for example, the Greek word cited as fūlas is translated with Latin custodia ‘guarding’. The Latin word suggests that Greek φύλαξ ‘guarding’ was intended. On the other hand, the glossary form is closer to φύλαξ ‘guard, sentry’, in which case the Latin form may be an error for custos ‘guard’. The discrepancy could have resulted from a corruption in the textual transmission of either the Greek or the Latin word, and there is little justification for preferring one over the other. Accordingly, I list such cases as an ambiguous pair (e.g. φύλαξ/φύλαξ), whose common element (φύλα- in this case) may be counted as useful evidence nonetheless.

(5) Words wrongly labelled as Greek
Some 14 words labelled as Greek are not Greek at all. A few are Latin words for which the glossary compilers were led astray by Isidore or

54 Isidore cites αἶγα ‘goat’ in its accusative case at Etym. 13.16.5:...quam Graeci αἶγα nuncupant (‘which the Greeks call αἶγα’). This is the source of OM 375, which treats the Greek word as though it were a Latin first-declension nominative singular, and gives it a hypercorrect accusative ending egam.
55 An analysis for each pair is given in the notes to the list of Greek words below.
through a misunderstanding of his text: *baia* ‘bay’ OM 116,\(^\text{56}\) *barones* ‘(strong) men’ OM 124, Y 154;\(^\text{57}\) *gauata* ‘dish’ OM 603, *Irsan* 631.211.\(^\text{58}\) Other Latin words were assumed to be Greek perhaps because they were unfamiliar to the glossary compilers or appeared to be derived from Greek words: *abgitorium* ‘alphabet’ OM 1;\(^\text{59}\) *boccones* ‘dunces’ OM 162;\(^\text{60}\) *compos* ‘in control’ OM 234; *elbum* ‘bay coloured’ OM 731;\(^\text{61}\) *erciscunda* [herciscunda] ‘division of inheritance’ OM 415;\(^\text{62}\) *lurcon* [lurcho] ‘glutton’ OM 780, *Loman* 622.32;\(^\text{63}\) *merulus* ‘blackbird’ Y 890;\(^\text{64}\) *merum* ‘pure’ OM 393.\(^\text{65}\)

Three words in Y/YAdd described as Greek are in fact Hebrew in origin.\(^\text{66}\) These words are correctly identified as Hebrew in OM, indicating that the error arose within the glossaries’ textual tradition: *cadeis* (sancum) Y 291,\(^\text{67}\) *cinod* (lamentatio) Y 232,\(^\text{68}\) *faudus* (cadens) YAdd 616.\(^\text{69}\)

\(^{56}\) The entry cites Isidore, *Etym.* 14.8.40, who says that this word has a genitive *baias* (comparing Old Latin *familia familias*), which the glossary compiler apparently took to be Greek declension.

\(^{57}\) Citing Isidore, *Etym.* 9.4.30–31, who wrongly classifies this word as Greek (deriving it from βαίας ‘heavy’).

\(^{58}\) Based on a misunderstanding of Isidore, *Etym.* 20.4.11–12: *Gauata, quia cauata, G pro C littera posta. Hinc et conca; sed illa cauata, ista concaua: sic et Graeci haec nuncupanri. (‘Gavala [i.e. gabata, a kind of dish], because it is “hollowed out” (cavare, ppl. cavatus), with g put for the letter c. Likewise also mussel-shell (conca, i.e. concha); but the former is “hollowed-out”, the latter is “hollow”: the Greeks also make this distinction.’) The final phrase (*Graeci haec nuncupanri*) was taken to mean that the Greeks coined the words *gauata* and *conca*.

\(^{59}\) Classical Latin *abecedarium* is clearly formed from the names of the first letters of the Latin alphabet. Its Hiberno-Latin derivative *abgitorium* is less transparent, however, and it may be that it was here associated with the sequence of letters at the start of the Greek alphabet: α, β, γ. (On the entry headword *abgiter*, see Brian Ó Cuív, ‘Irish words for “alphabet”’, *Eriu* 31 (1980), 100–10.)

\(^{60}\) Citing Isidore, *Etym.* 10.30, where the word is not described as Greek.

\(^{61}\) Cf. Isidore, *Etym.* 9.27.7; *elbum* is probably a late form of *helvum*. Isidore does not refer to the word as Greek.

\(^{62}\) Cf. Isidore, *Etym.* 5.25.9–10 (not referred to as Greek).

\(^{63}\) *Loman* refers to the glossary preceding *Irsan* (CIH 622.13–627.35) and textually closely related to the second half of YAdd. This entry, to my knowledge, is the only reference to Greek in the glossary.

\(^{64}\) Cf. Isidore, *Etym.* 12.7.69; a related entry in *Irsan* 633.16 makes no reference to Greek.

\(^{65}\) This word is mentioned several times in Isidore (*Etym.* 3.42.4, 5.30.15, 13.1.6, 20.3.3), who does not describe it as Greek. Bischoff noted the same error in the Munich Computus (‘Das griechische Element’, 250); see Immo Warntjes (ed.), *The Munich Computus: text and translation. Irish computistics between Isidore of Seville and the Venerable Bede and its reception in Carolingian times* (Stuttgart, 2010), VIII.27–28 (p. 24).

\(^{66}\) For discussion of Hebrew entries, see Pádraic Moran, ‘Hebrew in early Irish glossaries’, *CMCS* 60 (Winter, 2010), 1–21.

\(^{67}\) Cf. OM 193, *Loman* 619.19.

\(^{68}\) Cf. OM 238.

\(^{69}\) YAdd’s *faudus* grece cadens corresponds to the better text in OM 567 *faldas* cadens *germen* (‘faldas, a falling seed’), citing Jerome, *Hebrew names* 6.17 [Paul de Lagarde (ed.), *Onomastica Sacra* (2nd edn, Göttingen, 1887; repr. Hildesheim, 1966), 1–81]. The OM entry does not identify the language of *faldas*. Stokes in his edition of OM curiously confused *germ* as *germanice*; the same abbreviated word was confused as *greece* in YAdd.
(6) Other considerations
Other glossary forms show variance from the Greek word indicated by the Latin translation in ways not described above. Where the difference is confined to one letter or syllable, I include tentative identifications of Greek words in the list below, signalled with a question mark. The corrupt text oc (for στερρόν) in *Irson* 633.15 is hardly worth including,70 while the strange form *omoneusion* (disimilis substantiae) in *Irson* 633.252 may reflect guess-work following on from the previous two entries.71 There remain 37 distinct words cited as Greek (occurring in 48 entries) which have yet to be identified, or where textual corruption makes their identification unreliable.72

5. List of Greek words
The list below presents the Greek words identified in the glossaries, with manuscript forms, translations, translations supplied in the texts (almost all in Latin), references to printed editions and variants.73 Where an entry is substantially the same in two or more glossaries, references are separated with commas; where distinct entries are in question, references are separated with semi-colons.

For convenient reference, I cite Greek words in standard Greek orthography in addition to the glossary forms. This is not to imply that such neatly restored forms stand behind the manuscript tradition. For one thing, any contemporary Greek script would have been in majuscule letters and lacked marks of aspiration or accentuation.74 Indeed, Russell has pointed out that some of the glossary etymologies depend on Greek forms which, if emended, would obscure the sense of the entries.75

1. α'γκών andon 'elbow', cubitus OM 112
2. σιγα ega 'goat', capra OM 375, éga YAdd 542; ego YAdd 561

70 The Greek word is identifiable from the entry’s clear use of Isidore, *Etym.* 10.170.
71 The previous entries cite ὀμοούσιον omousion 'of one substance' and ὀμοούσιον omoeusion 'of similar substance'; the word expected here would be ὀμοοουσιον.
73 The entries ἕπο τῆς ἄρετης and ἕπο τοῦ κάπεσθαι are listed under ἄρετης and κάπεσθαι, respectively. Some editorial corrections are given in square brackets. A detailed textual commentary for each glossary entry is currently in preparation.
74 Walter Berschin (Greek letters, 14) has criticised the editorial practice of silently correcting Greek forms and substituting Greek for Latin script, and in the process ‘trampling the textual tradition’ and obscuring our understanding of the transmission of Greek in the West. See also Bischoff on W.M. Lindsay’s edition of Isidore’s *Etymologies* (a particularly important source in the transmission of Greek vocabulary), in Bernhard Bischoff, ‘Bannita: 1. Syllaba, 2. Littera’, in J.J. O’Meara and B. Naumann (eds), *Latin script and letters AD 400–900: Festschrift presented to Ludwig Bieler on the occasion of his 70th birthday* (Leiden, 1976), 243–7.
75 Russell, ‘Graece . . . latine’, 410
3. αἷμα ἐμα ‘blood’, sanguis OM 390, YAdd 502; YAdd 574
4. αἷρεσις eresi ‘choice’, electio OM 419
5. αἷρω ero ‘I lift’, tollo OM 412; erae OM 423
6. αἷρες eris ‘you (sing.) lift’, tollis OM 412
7. αἷρετε erate ‘you (pl.) lift’, tollite OM 412
8. αἰών eoaς ‘age’, aetas OM 28, YAdd 99
9. ἄκανθαι, βάτος cantabato ‘thorns, bramble bush’, sentes OM 203, cantabatōi Irsan 629.25
10. ἄκεσις icsēssia ‘cure’, salus OM 701, ecesia YAdd 767, ecessia DDC 615.32
11. ἄκρος? arcos ‘topmost, outstanding’, excelsus Y 65, DDC 606.6
12. ἄμματα ema ‘a tie’, iuga manum YAdd 574; iugum Irsan 630.8b
13. ἄμνηστια amnesai ‘forgetting’, oblivio peccati OM 97, amnestia, uile-diligend YAdd 34
14. ἄνάγχεσθι/ἀνάγγελον anyon ‘dining room’, dapes ‘feasts’ Y 31, aninos DDC 605.38–41
15. ἄνεμος animos ‘wind’, ventus vel anima OM 88
16. ἄνθρωπος antropus ‘man’, nomen hominis OM 86
17. ἀντί ante ‘against’, contra YAdd 101
18. ἀντίχριστος antichristos ‘Antichrist’, contra Christos YAdd 101
19. ἀνόμα anae ‘upwards’, sursum OM 86
20. ἄποδος apodos ‘give back [imperative 2 sing.],’ redde OM 49
21. ἄπολλείψις apolis ‘you (sing.) destroy’, perdis OM 90
22. ἄπορία aporea ‘difficulty’, egestas OM 51
23. ἄργια artiioi ‘holidays’, feriae OM 60
24. ἄρση? assa ‘let it please’, placeat OM 61
25. ἀρετή? arge ‘excellence’, indolis OM 53, aigne Irsan 628.23a
26. (ἀπὸ τῆς) ἀρέτης ‘(from the word) excellence [gen. sing.]’, apoteoarates, uirtus Irsan 628.21
27. ἀφορίσμος forismos ‘aphorism’, sermo breuis OM 578
28. ἀφῶ ach ‘I cry out’, doleo YAdd 95, acho, doled DDC 605.33
29. ἄχος acho ‘distress’, tristis Irsan 628.19
30. βάλανος ballanōs ‘acorn’, glandis DDC 608.14, balloinis YAdd 167, balanin, grande OM 119
31. βασιλεύς basilion ‘king’, rex OM 128
32. βασιλικὴ basilica ‘royal (house)’, eclesia . . . tech rig nime OM 182, DDC 608.27, eclesia . i. tech DDC 606.31
33. βῆμα νάνδρος ‘step of a man’ bemandro, pasus OM 140
34. βία bia ‘force’, uis OM 152
35. βιοθάνατος bidhthonatus ‘violent death’, bis mortis OM 147, bithematus YAdd 152, bithematus, bis mortuus DDC 608.9

76 These two Greek words occur as synonyms for sentes in Charisius, 33.5 [Karl Barwick (ed.), Flavii Sosipatrii Charistii aris grammaticae libri V (Leipzig, 1925, repr. 1964)].
77 Cf. the St Gall gloss i. huasal-gabriltaid; arcon enim grece excelsus diciur (Sg. 106b12 = Hofman 106b25 x).
78 These Greek forms are variants of the same word; see Russell, ‘Graece . . . latine’, 409.
36. βίος bia 'life', vita YAdd 176, Irsan 628.36
37. βολή bole 'a throw', iaculum OM 172
38. βουλή bolin 'advice', consilium YAdd 169, Irsan 629.2
39. βρατήν brathin, lamminas [lamina] OM 1269
40. βρήτω [Frētwp] briathor 'word', insce OM 16080
41. βροχυτής? botus 'narrowness', angustia YAdd 175, bothus Irsan 628.34
42. βρόγχος brancos 'throat', gutter OM 122, YAdd 177, brancus DDC 608.21–2
43. βροχέτος brectos 'rain', pluuiia OM 143
44. γάϊός gāe 'javelin', hasta OM 610
45. γάλα gala 'milk', lac Y 683
46. γάμος gamos 'wedding', mulieres Y 672
47. γέεννα gunna 'Gehenna', loca aspera sub terra OM 61681
48. γελόι aggelo 'I laugh', ridio [rideo] OM 632, ridieo Irsan 628.7
49. γενειαί genos 'beard', barba OM 645
50. γενηθητω/γίνεσθε genete 'let there be/it happened', fiat nó factum OM 65882
51. γεννώμαι gennome 'I am begotten', nascor OM 217
52. γεωμετρία geometrica [geometria] 'land-surveying, geometry', terrae mensura OM 478
53. γῆ ge 'earth', terra OM 478, YAdd 516
54. γλαυκόν? gelon 'clear', album OM 690, Irsan 631.27
55. γλυκύ glicin 'sweet', dulci [dulce] OM 691, Irsan 631.28
56. γνώσις gnosia 'knowledge', scientia OM 361, scientiae YAdd 543; fis OM 465
57. γομφων/γομφῶ? gobio 'fabricating/I fabricate', fabricans OM 665; YAdd 713; gobio, orno Irsan 631.33a83
58. γόργος gargon 'fierce', ferox OM 621, YAdd 707
59. γράφων grafini 'to write', scribere OM 624
60. Γρύνειος Grinus 'Grynius [Apollo]', Apollo OM 697
61. γυμνασία gymnasia 'exercises', battualia OM 175

79 A Greek ghost word derived from a corrupt passage of Isidore (Eryn. 16.18.2): Brattea dicitur te lluissima lamina, ἀπὸ τοῦ βραχτοῦ, qui est ὀνοματοποιία crepandi, ἀπὸ τοῦ ἑρετὶ γιατί λαμίνα ('The thinnest sheets are called gold leaf (brattea, i.e. bractea) from the term βραχτοῦ, which is onomatopoetic for “clanging”, or from βραχτιν, sheets').
80 Stokes noted ('O'Mulconry's Glossary' [see OM under Sigla below], p. 241, n. 9): 'An Aeolic *Frētwp* seems intended; cf. El[ean] Frētwp. The attested Aeolic Fṓrop 'orator' (Attic-Ionic Fṓrop) provides a closer formal match. The source here appears to be Priscian II, 18.5–7; see Moran, 'Greek in early medieval Ireland', for discussion.
81 Originally a Hebrew placename (Ge Hinnom). The glossary form may reflect its rendering into Greek or Latin, though the entry cites it explicitly as a Greek word.
82 It is not clear from the form genete whether γενηθητο or ἐγένετο (factum) was intended.
83 The form gobio occurs in all three texts, and the Irsan translation orno suggests that γομφῶ is intended; against this, OM and YAdd agree in their translation fabricans, corresponding to γομφῳ.
62. γυνή gene ‘woman’, mulier OM 638, Irsan 628.14; OM 639, Irsan 628.15; gen OM 640, gen Irsan 628.17; gen OM 720, gune YAdd 773
63. γύψος? gissum ‘gypsum’, efficisum OM 649
64. δειλίων/δειλία dilos ‘I fear/fear [noun]’, formido OM 347; Irsan 629.39
65. δεξία dextia ‘right’, dextera OM 307
66. δύλοφον dilofón ‘double-crested’, formido OM 347; Irsan 629.39
67. δορκάς dorco ‘deer’, videns OM 346, dorca Irsan 629.38
68. δέρω dero ‘I beat, flay’, cedo [caedo] OM 306; cado YAdd 467, cado Irsan 630.41b, cado DDC 613.34
69. δήλον delon ‘manifest’, manifestum OM 301
70. δίστατα deitan ‘mode of living’, observatio legis et vitae OM 297
71. δίκαιος deceos ‘just’, iustus OM 303
72. δύσα difa ‘thirst’, situs OM 310
73. δοκό docho ‘I think’, puto OM 317, YAdd 463, docha Irsan 629.35
74. δορυφόρος doriforas ‘spear-bearing, attendant’, satilitess [satellites] OM 318
75. δουλεύω duleo ‘I serve’, servio OM 324, duilio YAdd 469
76. δράμε dramun ‘run [imperative 2 sing.]’, cuivre [curre] OM 295
77. δύναμις dán annis ‘power’, uires OM 320a
78. δός dós ‘give [imperative 2 sing.]’, tinnscra OM 323, do Irsan 630.1
79. ἔθνος ethno ‘nation’, genus [gens] OM 468
80. ἐδώρ idos ‘shape, form’, forma Y 751; enos, species, OM 403
81. εἰπέ epe ‘say [imperative 2 sing.]’, dic OM 408
82. ἐκκλησία ecclesia ‘assembly, Christian church’, conuocatio OM 98, DDC 620.32–3; OM 360
83. ἐκλεψις eclipseis ‘loss’, mors OM 353, YAdd 550
84. ἐλαίον elion ‘oil’, oleum OM 378, Irsan 630.24
85. ἐλάφια elia ‘doe’, ceruina OM 385
86. ἐλεήμον elimon ‘pitiful, merciful’, misericordia OM 378
87. ἐλέος elis ‘pity, mercy’, miseria Irsan 630.18
88. ἐλών eluo ‘I roll around, wrap up’, deser o YAdd 557, Irsan 630.23, elbo OM 377
89. ἐνθύμημα entimema ‘argument, consideration’, mentis intentio OM 729, YAdd 768

84 The translation formido is ambiguously a noun or a verb; the form dilos does not correspond exactly to either Greek alternative.

85 The misinterpretation here seems based on Eriugena, Adnotationes in Marcianum, 71 [edited by Cora E. Lutz, Johannis Scotti Annotationes in Marcianum, Medieval Academy of America Publications 34 (Cambridge, Mass., 1939)].

86 The translation videns would suggest a Greek word such as δέρκομαι ‘seeing’. However, this entry seems to be based on a remark about crepae ‘wild goats’ in Isidore, Etym. 12.1.15: ...quae Graeci pro eo quod acuisissime videant, id est δέξιόντας, δόρκας appellaverunt (‘which the Greeks call δόρκας (properly in Greek, “deer”) because they can see very keenly, that is δόξιόντας (‘rather sharp-sightedly’)).

87 If this is the Greek word intended, its relevance is not clear. The glossary headword élud ‘evasion’ indicates that deser o is the verb ‘I leave, desert’ (and not the verb ‘I sow’).
90. ἐντός endaos ‘within’, intus OM 46
91. ἐπαρκής? bargos, saturitas YAdd 172, Irsan 629.10
92. ἐπί ἐπί ‘over’, super OM 407
93. ἐπίσκοπος espoc ‘overseer, bishop’, fordeicsid OM 405
94. ἔργα erga ‘works’, opera OM 413
95. ἐρίζειν erison ‘strife/to struggle’, certamen OM 419
96. ἐπιφάνεια eitera ‘courtesan’, meretrix OM 457
97. ἐρυθρός red ζιβως ‘darkness’, niger YAdd 479
98. ἐρυθρός eifonia ‘well-sounding’, bona vox OM 374
99. ἐρυθρός ephoria ‘leader’, dux OM 375
100. ἐρυθρός egemon ‘leader’, dux OM 375
101. ἐρυθρός dusma ‘marvel’, mirabilis YAdd 501
102. ἐρυθρός teomoro ‘I view’, conspicio Y 1212
103. ἐρυθρός τίτα ‘box, chest’, custodia YAdd 1266
104. ἐρυθρός τρέντον ‘lamenting’, lamentatio OM 874
105. ἐρυθρός τοῦτο ‘daughters’, filia uel uirgo Y 79
106. ἐρυθρός iachis ‘Iacchus [Dionysus], a cry to Bacchus’, clamor OM 368
107. ἐρυθρός eros ‘priest’, sacerdos OM 409
108. ἐρυθρός icessia ‘prayers’, preces OM 351
110. κάδος cados ‘pitcher’, uas uini OM 249
111. καί cae ‘and’, 7 [et/ocus] OM 213
112. καθό [ὁλον] cal tho ‘concerning [the whole]’, uniuersalis OM 210, cato YAdd 223
113. καθαρίσω cathero ‘I cleanse’, purgo OM 611, YAdd 705, DDC 615.9
114. (ἐπὶ τοῦ) κατέσθαι apatoi catesta ‘(from the word) to blaze’ OM 211
115. κακόν cacon ‘bad’, malum YAdd 357; caca OM 607
116. καλὸς cal ‘I call’, uocacio [vocatio]…uoco OM 288; uoca OM 693, kal, uoco Irsan 631.32
117. καλὸν kalōn ‘wood’, lignum OM 195; calon YAdd 344
118. καλόποδος cal poda ‘shoemaker’s lasts’, bonus pes uel pedess YAdd 354, peis Irsan 629.21
119. καλὸς kalos ‘beautiful’, bonus YAdd 354

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88 This is the only example I have found which might potentially be counted as aphaeresis (loss of unstressed initial vowels in hiatus), a feature particularly of Byzantine Greek. Assuming the identification ἐπαρκής is correct, we would still need to examine the context in the source for this word, which I have not been able to discover.
89 The noun ἐρίς would match the sense of certamen; the form erison suggests the verbal infinitive ἐρίζειν.
90 The glossary form does not correspond exactly to either alternative.
91 The Greek phrase is untranslated in this entry. The source is Isidore, Etym. 12.2.38.
92 On this mistranslation, see Russell, ‘Graece…laine’, 415.
120. κύκλος cich 'castor oil/juice', luibh asa tae't as 'a plant from which milk comes' OM 221, cichis YAdd 227, cichis DDC 610.37
121. κινδύνος cindo 'danger', periculum OM 227
122. κινείν? cilln 'to move', mouere Irsan 629.20
123. κλάσις clasin 'breaking', diuísio Irsan 629.23a, claisin YAdd 356
124. κλάρος cleros 'lot', sors OM 216, cors Irsan 629.32
125. κοινορτός coniortos 'dust', puluiss OM 240
126. κρινόμενον/κρίνον μοι crinimenon 'matter to be decided/judge me', iudiciale Irsan 629.15, crimenono, iudice YAdd 350
127. κρίσις crisis 'dispute, judgement', iudicium OM 229; OM 664, Irsan 631.37
128. κύκλος ciculos 'circle', orbis Y 264
129. κύλλος cillus 'maimed', unius manus OM 633, cillo Irsan 628.8; OM 654, YAdd 702, cillos DDC 615.6a
130. λάβε labe 'take [imperative 2 sing.]', accipe OM 633, laba, capacitas Irsan 628.8–10
131. λίθος lidos 'stone', lapis Y 810
132. λόγος logo 'speaking, discourse', sermo YAdd 561
133. λόγχη? lagon 'lance', hasta OM 781
134. μάθε matha 'learn [imperative 2 sing.]', disce OM 665
135. μήλον mellon 'apple', rotundum OM 811
136. μόνον monon 'single', unius OM 639, monoy Irsan 628.15
137. μόνος monus 'alone', unus Y 503
138. νήσος nesos 'island', insola OM 734; nesin OM 829, nessin Irsan 633.12
139. νοῶ νοω 'I perceive, think', intelligo OM 665
140. Νυκτέλος NYKTHAHC '(Bacchus) Nyctelius', Bacchus OM 368
141. νοθήκ' naus 'lazy', piger OM 827, Irsan 633.8–9.
142. ξένος cenos 'stranger, guest', hospes OM 560
143. ξύλον silon 'wood', lignum [lignum] OM 858
144. οἰκοδομή ecci dome 'house, building', aedicium OM 32, ecdoe YAdd 84, écedo DDC 605.34
145. οἶνος eno 'wine', uinum OM 402
146. ὅλον olo 'whole', totum OM 381
147. ὀμοιόστοιον omoeusion 'of similar substance', similis substantiae Irsan 633.25a
148. ὀμοιοστόιον omousion 'of same substance', unius substantiae Irsan 633.24b
149. οὐκ ac 'not', nego YAdd 96, aco Irsan 628.20
150. πατήρ pater 'father', abba ebraice . . . genitor latine OM 2
151. πεδίον foeman 'plain', campus OM 514, YAdd 632, Irsan 630.37

Russell suggested that the YAdd form crimenono and the imperative iudice suggest κρινόμενον μοι 'judge me', a phrase found in the Cyrillic glossary (‘Graece ... latine’, 412). Alternatively, the Irsan form crinimenon and translation iudiciale are closer to the rhetorical term κρινόμενον 'matter to be judged'.

152. πέδον pedon ‘ground’, breuis sit pedibus OM 154
153. πίε ipe ‘drink [imperative 2 sing.], bibe OM 699
154. πλατεα platea ‘broad’, [a] latitudine OM 121
155. πλοκη plocē ‘interwoven’, copulatio YAdd 203
156. πλοῦτος playtoς ‘wealth’, diuitiae OM 121
157. ποιω poio ‘I make, do’, facit Irsan 629.5
158. πονον/πονον prono ‘I suffer/suffering’, dolens OM 168
159. ποσ pos ‘foot’, pes OM 170
160. δήσις rissis ‘speaking’, locutio OM 626
161. δίγον/διγόν reo ‘frost/I freeze’, gelu [gelo?] Y 1083
162. σάρος caros ‘broom’, scopae OM 212
163. τοτ tot ‘of this’, huius YAdd 102
164. τέλος tiles ‘end’, finis YAdd 102
165. ύλινος yalin ‘crystal’, yalin [latine] OM 35
166. ἴδωρ idor ‘water’, liquor OM 704, YAdd 770
167. ὕληκη ilactus ‘barking’, latratus OM 711, YAdd 769, Irsan 632.16
168. ὑλη ile ‘wood, forest’, silua OM 709
169. φαγεῖν? fage ‘to eat’, comedere OM 631.5, fag OM 230
170. φαίνειν? fain ‘to appear’, apparacio [apparere?] Irsan 631.10
171. φάλος fales ‘horn (of helmet)’, ornamentum Irsan 631.3, fulus OM 602
172. φαντάζο fimazo ‘I make visible, appear’, cerno OM 538
173. φάρσες faran ‘chasm’, wallis OM 489
174. φαύλος faulos ‘bad’, malam Irsan 631.4, faolus OM 601
175. φιλεῖ filei ‘he/she/it loves’, amat OM 537, filo, [ab] amore scientiae Irsan 631.18
176. φιλόσοφος philosophus ‘learned, philosopher’, amator scientiae OM 512
177. φόβος fobis ‘fear’, timor OM 549
178. φυλακή/φυλαξ fulas ‘guarding/guard’, custodiae OM 569, fulus, costodia YAdd 615, fulus, custodia Irsan 631.15c
179. φυλή fulaæ ‘tribe’, tribus OM 592
180. φυσική uisica ‘natural’, natura OM 545
181. φῶς fos ‘light’, lux OM 548
182. χαίτη? cai ‘long hair’, coma OM 201
183. χαμαι cam ‘on the ground’, breuis OM 154; gaim OM 558
184. χάος chaos ‘chaos’ OM 253
185. χαρά cara ‘delight’, gaudium OM 627, cere Irsan 631.31
186. χείλεα cilia ‘lips’, labia YAdd 613, culæ OM 507; cile OM 634, cile Irsan 628.11
187. χειμα cheme ‘winter’, chemis i. hiems OM 615

* The translation dolens suggests a participle is intended; the form prono suggests the present indicative.

** Derived from Charisius, 36.16: σάρος scopae ‘broom’ (literally ‘twigs’). Henry George Liddell and Robert Scott (eds), A Greek–English Lexicon (9th edn, Oxford, 1940) does not list this form, but contains the lemmata σάρος and σάρος, both translated ‘broom’.
6. HISTORICAL PHONOLOGY OF GREEK

The following analysis follows historical developments in Greek phonology from around the fourth century BC, when the orthography of Greek (in the newly adopted Ionic alphabet) more or less reflected contemporary pronunciation, until the tenth century AD, the terminus ante quem for the glossary tradition. It aims to identify which developments in Greek pronunciation are represented in the glossary tradition, which are less well represented and which are not represented at all.

Two of the earliest developments regard the sounds represented in writing by the digraphs ou and ei. Allen regards these as originally representing the long mid-vowels /oː/ and /eː/, respectively, the former merging with /uː/ from the fifth century BC, the latter with /iː/ from the late fourth century. These changes had occurred before Latin conventions for Greek transliteration had become established, and are therefore already reflected in the Latin forms for Greek loanwords, e.g. Thucydides (οουκυκλικός), pīrata (πειρατής) ‘pirate’. The latter change is also reflected in Irish glossaries, where the Classical digraph ei is transliterated i in almost every case.

\[\text{/eɪl} > \text{/iːl} \ (\text{c. late 4th century BC}): \text{εἰρής, ἄπολλυσις} \text{ apoliss}, \text{γράφειν} \text{ graphein}, \text{Γρῦνεος} \text{ Grinus}, \text{δειλᾶσε} \text{ dilos}, \text{ἐίδος} \text{ idos} \ [Y 751], \text{ἐκλείσεις} \text{ eclipsis}, \text{ἐλφεία} \text{ elisia}, \text{κινεῖν} \text{ cílin}, \text{φαίνειν} \text{ faisin}, \text{χείλεα} \text{ cilia}, \text{χείρες} \text{ cires}\]

Exceptions: \text{φιλέω filei.} With e for i: \text{ἐιδος enos [OM 403], ἔπε epe, πλατέω platea, χείμα cheme.}

In the case of ou, there are few examples and they show some inconsistency (u or o).

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97 My main authority for the historical phonology of Greek is W. Sidney Alien, *Vox graeca* (3rd edn, Cambridge, 1987) [hereafter cited as VG], supplemented with R.L. Palmer, *The Greek language* (London, 1980), esp. 174–200. A short overview is provided in W.B. Stanford’s essay in *The sound of Greek: studies in the Greek theory and practice of euphony* (Berkeley, 1967), 122–39. These studies on the historical phonology of Greek are based primarily on sources from the Eastern Mediterranean region; our knowledge of how Greek was spoken in the West is much less certain given the relative dearth of sources there (as Paul Russell has pointed out to me).

98 Indeterminate: γεγείλας genos, ἐρις/ἐρίζειν erison, φαgcēv fag.

99 Indeterminate: πλωτός pluose (partly in Greek script).
ou > /uː/: δονεύω duileo; ὀμοιώσιον omoéusion; ὀμοιώσιον omoéusion

Exceptions: βολη bolin; πούς pos; φάκ ac; ἀπὸ τοῦ καίεσθαι apatoi cæstæa.

The diphthong /ai/ was present in Classical Greek and Latin, spelt æi and ae, respectively.\(^{101}\) By the early centuries of the Christian era, the sound had developed to the monophthong /e/ in both languages, written e or e.\(^{102}\) This is also the spelling found in Irish glossaries:\(^{103}\)

\[ /aɪ/ > /e/ (c. 1st century AD): \]  
\[ αἰγα ega, αῖμα ema, αἱρεις eris, αἱρεῖς eresi, αἱρεῖτα erate, αἱρω erae, αἰών goas, γεννώμαι gennome, δίγατα deîtan [dietan?], δίκρος deceos, ἐπάφα eera, καθῆρο cathero \]


The digraph oi represented Classical /oi/, which merged with /uː/ around the third century AD (earlier in the Boeotian dialect).\(^{104}\) The few examples in Irish glossaries show inconsistency in treatment (writing oi, oe, e). The spellings with e seem to reflect rather the development in Latin of /oi/ > /e/.\(^{105}\)

\[ /oɪ/ > /uː/ (3rd century AD). \]

Exceptions: οἰκοδομή ecci dome, οῖνος gno, ὀμοιώσιον omoéusion, ποῖο poio

The Greek letter υ originally stood for the rounded vowel /yl/, and this letter (in its majuscule form Y) was adopted by the Romans for a sound not native to Latin (cf. again Thucydides for Θουκυδίδης).\(^{106}\) This sound eventually lost its rounded quality, merging with /i/. The change is first noted in papyri of the second to third centuries AD, though it was not generalised until the end of the first millennium.\(^{107}\) Irish glossaries commonly write i, with a few exceptions:\(^{108}\)

\[ /y/ > /i/ (c. 2nd century AD): βρατην brathin, γλυκύ glicin, Γρύνειος Grinius, γυμνασία gimnasia, δορυφόρος doriforas, ἐνδημὴν enûmema, \]

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101 Their equivalence is deduced from the transliteration of loanwords in both directions: palaestra ‘wrestling school’ from παλαιστρα, Kaisar for Caesar.
102 The merging of the sounds represented by αι and e led Byzantine grammarians to adopt the term ἐ ψιλὸν (‘simple’ e) for the latter to avoid confusion: see VG, 79.
104 Hence ὑψιλῶν (‘simple’ υ) to distinguish the letter υ from οι: see VG, 80–1.
105 See 104 Latina, 62.
106 Early Latin borrowings and transcriptions wrote u: see VG, 67.
107 VG, 65–9.
Exceptions: γυνή gune, δύναμις dýn amnis, ἐλῦo elyo, ὑάλινος yalin,
φυλακτή/φυλαξ fulas, φυλή fulae.

Other short vowels—written α, ι, ε and ο—are generally written with their equivalent Latin letters. The long vowels represented by η and ο are written η and ο without indicators of length such as apices or doubling (e.g. ἡγεμών egemon ‘leader’). These sounds were not subject to change into the medieval period, with one important exception. The letter η originally stood for open-mid /ɛ/. Confusion between η and ι first appears in Attic inscriptions around AD 150, and the close pronunciation /i:/ gradually came to dominate. Nonetheless, in places the more open realisation survived longer, and this older value is reflected in the new alphabets based on Greek devised for Gothic (fourth century), Old Armenian (405) and Old Georgian (fifth century). In fact, the development was never fully generalised: Allen notes that ‘in modern Pontic Greek η is still represented by ε in many categories and contexts’.

The development of diphthongs /au/ > /av/ (or /aɪ/) and /eu/ > /ev/ (or /eɪ/) is not evident in the examples 

![Image](https://example.com/image.png)

*Probably influenced by the Latin borrowing hyalinus.*

*See VG, 69–75. /ɛl/ must have risen to /lɛl/ before /lɛl/ > /lɛl/, as /lɛl/ and /lɛl/ did not fall together.*


*Two entries suggest that etymologies were originally coined on older forms of the Irish words, since modernised in the extant texts: brithmor (originally bríthor?) βρήττωρ (Γρήττωρ), ιαγ (του?) ιήτη.*

*Alternatively th(e) might be interpreted as a rendition of Greek script της (assuming that the h, represented by a punctum in the manuscript, was written out in the exemplar).*
Turning to consonants, we find aspirated *h* entirely absent from glossary forms. This sound disappeared early in the Ionic dialect, and the obsolete letter *H*, which represented it, was recycled to stand for the long vowel /a/.\(^{115}\) In the Hellenistic period, when the Ionic alphabet was adopted generally, grammarians introduced the *spiritus asper* (\('\), originally \(\mid\)) in an atavistic use of part of the same letter. It was no longer pronounced by the early centuries of the Christian era, and it is not present in the glossaries:\(^{116}\)

\[\text{/h/} > [\text{O}] \text{ (before c. 2nd century): } \alpha\bar{m}a \text{ ema, } \alpha\varphi\epsilon\varsigma \text{ eresi, } \bar{z}im\varsigma \text{? ema, } \epsilon\tau\alpha\rho\alpha \text{ etera, } \hat{\eta}\gamma\epsilon\mu\omicron \text{ egemon, } \iota\epsilon\rho\epsilon\varsigma \text{ eros, } \iota\kappa\epsilon\sigma\alpha\iota \text{ icessia, } \hat{\omicron}\lambda\nu\omicron \text{ olo, } \hat{\omicron}\mu\omega\omicron\varsigma\iota\omicron \text{ omo\epsilon\omicron\sigma\ion{io}{so}, } \hat{\omicron}\mu\omega\omicron\varsigma\iota\omicron \text{ omo\epsilon\omicron\sigma\ion{io}{so}, } \hat{\alpha}\lambda\iota\nu\omicron \text{ yalin, } \ddot{\upsilon} \ddot{\upsilon} \ddot{o} \ddot{r}\text{ idor, } \ddot{\omicron}\lambda\kappa\eta\text{? } \ddot{i}lactis, \ddot{\omicron}\lambdeta \text{ ile} \]

Other consonants present a more complex situation. Historically the letters \(\phi \theta \chi\) stood for aspirated voiceless plosives /ph\ t\h ch/.\(^{117}\) Latin writers devised the digraphs ph th ch to represent these sounds, distinguishing them from Latin and Greek’s unaspirated voiceless plosives /p t k/, and in the first case (ph) from the Latin voiceless fricative /f/. In the Christian era, these sounds developed into voiceless fricatives /f \h/.\(^{118}\) The predominance of \(f\) in glossary forms reflects the late development\(^{119}\)

\[\text{/ph/} > /f/ \text{ (from c. 2nd century): } \varepsilon\phi\omicron\rho\omicron\varsigma\omicron\mu\omicron\omicron\sigma\omicron\varsigma \text{ forismos, } \gamma\nu\acute{a}\gamma\epsilon\tau\nu \text{ grafini, } \delta\iota\lambda\omicron\omicron\omicron\nu \text{ dilofon, } \delta\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron\omicron \text{ doriforos, } \iota\lambda\acute{a}\phi\epsilon\iota \text{ elisia, } \epsilon\upsilon\omega\omicron\nu\omicron\nu\omicron \text{ eisponia, } \phi\alpha\chi\acute{e}\nu? \text{ fage, } \phi\alpha\chi\acute{e}\nu? \text{ faisin, } \phi\alpha\lambda\acute{a}\kappa\rho\alpha? \text{ forco, } \phi\acute{a}l\omicron\omicron\omicron \text{ falsos, } \phi\alpha\nu\tau\acute{a} \acute{z} \acute{o}? \text{ fimazo, } \phi\acute{a}r\sigma\gamma\acute{e} \text{ faran, } \phi\acute{a}l\omicron\omicron\omicron \text{ faoulos, } \phi\omicron\omicron\omicron \text{ filei, } \phi\omicron\omicron\omicron \text{ fobis, } \phi\upsilon\alpha\kappa\eta\text{/} \phi\upsilon\lambda\acute{e} \text{ fulas, } \phi\upsilon\nu \text{ fulaee, } \phi\omicron\omicron\omicron \text{ fos} \]

As mentioned above, the letter \(\theta\) represented /th/ > /th/, both sounds transliterated \(\theta\). Neither the early nor the late Greek pronunciation was present in Latin’s phonemic inventory, and reflexes of Greek loanwords in Romance languages show that both Latin and early Romance speakers pronounced the sound as [t].\(^{120}\) The Irish glossaries present a mixture of \(t\) and \(th\) spellings, with the former predominating.\(^{121}\)

\(^{115}\) See VG, 52–6.

\(^{116}\) Likewise on initial \(\rho\): *rissis* \(\rho\rho\sigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigma\varsigm
/tʰ/ > /θ/ (from c. 2nd century):

(a) th: βιοθάνατος bidithonatus, ἡθνος ethnae, καθο δ[λον] catho [cato YAdd 223], καθίρω cathero, μάθε matha

(b) t: ἀκανθή βάτος cantabato, ἄνθρωπος antropus, ἄνθρώπη entimema, θεώμαι/θεωρά? teomoro, θήκη tiag, θρήνος trenon, ἵθυς icties, ἀπὸ τοῦ καῖεσθώ apatoi catesia

Of course, Irish speakers and speakers of Brittonic and Germanic languages would have clearly distinguished plosive /t/ from fricative /θ/, a minimal pair in all of those languages. Would this suggest that the transcriber was therefore a Romance speaker, more liable to confuse the two? There may be another explanation. Old Irish prohibited the lenition of t following n, giving rise to de-lenition in three of these examples (ἀκανθή βάτος cantabato, ἄνθρωπος antropus, ἄνθρώπη entimema), and similarly t following s (ἀπὸ τοῦ καῖεσθώ apatoi catesia). Word-initial t is not lenited in words cited in isolation (θεώμαι/θεωρά? teomoro, θήκη tiag, θρήνος trenon). Thurneysen notes both that ‘cht (gt) is sporadically written for clth’ and that ‘the sound-group cht is not infrequently represented by ct’, which may explain the form icties for ἰχθός.24

The development of χ and its treatment in Latin are similar. It stood for /kʰ/ > /χ/, ch in Classical transliteration. Neither [kʰ] nor [χ] were found in Latin, and both were pronounced [k] in loanwords from Greek. This could have given rise to confusion among Latin- or Romance-speaking scribes between the spellings ch and c. Irish scribes would be less likely to confuse the two, given that c /k/ and ch /χ/ (approximate to [χ]) are contrastive in Irish. However, here again Irish glossaries show inconsistency. Analogous with the transliteration of k as t or th, Irish phonology may have influenced the spelling of χ as c word-initially, though apparently not in the cases of χείμα cheme and χολός chulos. The reason for the confusion in other words is not obvious.126

/χ/ > /θ/ (from c. 2nd century):

(a) ch: ἀντίχριστος antichristos, ἄχος achos, βρόγχος branchos, ἱαχίσ iachis, ἀχθαχ, χάος chaos, χείμα cheme, χολός chlos

(b) c: βροχέτος breceios, ἄνθρωπα? encoire, ἵθυς icties, χαίτη? cai, χαρά cara, χείλεα cilia, χείρες cires

The other principal change in the consonant system was the development of original voiced plosives /b d g/ (written β δ γ) to voiced fricatives /v

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122 See GOI §139.
123 Given that the examples of θ as t correlate precisely with these aspects of Irish phonology, we might expect that th occurred in the glossary sources.
124 GOI §§141, 28.
125 We can probably discount antichristos and chaos because of the influence of Latin.
PRONUNCIATION OF GREEK IN EARLY MEDIEVAL IRELAND

δ γ/ in most circumstances. The chronology of this change is problematic, partly because of the absence of any orthographical convention for representing the sounds [ð] and [ɣ] in Latin writing. A terminus ante quem is the development of the Cyrillic alphabet in the ninth century, when the Greek letter β was adopted for the fricative /v/ in Slavonic.

Here again, speakers of Insular Celtic languages were familiar with, and certainly distinguished, both the earlier plosive sounds and the later fricative sounds. (Of the latter, [ð] and [ɣ] were foreign sounds for Latin and early Romance speakers.) Moreover, the same fricatives could also be represented in Old Irish orthography: writing b d g in post-vocalic position (for /v/ ð γ/). If we assume that the Irish glossary compilers were following these orthographical conventions when reading the texts, their pronunciation may sometimes have mirrored that of the Byzantine speakers. Compare the Classical and Byzantine pronunciations given for the sample of Greek words in Table 2 below.

In the first three examples, an Irish reader of the ninth century could well have pronounced λαβε labe ‘take’ like Byzantine /lave/ instead of Classical Greek /labe/; and ιδν α idor ‘water’ and ιγεμον egemon ‘leader’ with Byzantine /id/ and /ɣ/ similarly. However, in the other examples (βολη bole ‘throw’, δερο dero ‘I flay’, γελο γelo ‘I laugh’), an Irish reader would have followed the Classical pronunciation. Therefore, although the parallels are striking in some individual cases, it is impossible to say whether they are any more than coincidental.

There is some evidence for a conditioned phonological development that followed this process of spirantisation of voiced plosives. The ‘hard’ /g/ sound became the semi-consonant /j/ before front vowels (after transition through [ɣ]), and Russell has suggested that the word spelt ἀνυον, translated dapes ‘feast’, may represent Classical άνυαγιον (>ἀναγείον/)

<table>
<thead>
<tr>
<th>Greek orthography</th>
<th>Glossary form</th>
<th>Classical pronunciation</th>
<th>Byzantine pronunciation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>λαβε</td>
<td>labe</td>
<td>/labe/</td>
<td>/lave/</td>
</tr>
<tr>
<td>ιδν α</td>
<td>idor</td>
<td>/hydor/</td>
<td>/idor/</td>
</tr>
<tr>
<td>ιγεμον</td>
<td>egemon</td>
<td>/ιγεμον/</td>
<td>/ιγεμον/</td>
</tr>
<tr>
<td>βολη</td>
<td>bole</td>
<td>/bole/</td>
<td>/bole/</td>
</tr>
<tr>
<td>δερο</td>
<td>dero</td>
<td>/dero/</td>
<td>/dero/</td>
</tr>
<tr>
<td>γελο</td>
<td>gelo</td>
<td>/gelo/</td>
<td>/γελο/</td>
</tr>
</tbody>
</table>

* Before γ > /γ/.

See VG, 29–32. /v/ presumably obtained after transition through [β].

For the sake of clarity, I ignore in these transcriptions the pitch and stress accents of Classical and Byzantine Greek, respectively.

I do not mean to suggest that the correspondence is exact. For example, egemon would have been read /eiγεμον/. For the present I am interested only in the β δ γ sounds.
or ἀνάγεων 'dining room'. The same sound disappeared altogether after front vowels, and this seems reflected in ἄγαν ἁρων 'I freeze'.

Finally, we might note the treatment of [ŋ], an allophone of /n/ before velar consonants, indicated in Greek spelling by the use of γ in digraphs: γγ [ŋγ], γκ [ŋκ], γξ [ŋξ], γχ [ŋχ]. There are four instances of this sound in words identified in the glossaries. In three of them the texts are probably corrupt, but they still indicate a nasal sound in the appropriate place: ἀγκόν andon, βρόγχος branchos, φάργχξ faran. The possible exception is λαγόν λογχη.

Table 3 below summarises in rough chronological order the main phonological developments in Greek discussed above, and collates these developments with typical forms found in the Irish glossaries. (Asterisks indicate where examples are few and inconclusive.)

<table>
<thead>
<tr>
<th>Greek orthography</th>
<th>Historical development</th>
<th>Glossary forms</th>
<th>Chronology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ou</td>
<td>/uː/ &gt; /uː/</td>
<td>u, a*</td>
<td>Before fifth century BC</td>
</tr>
<tr>
<td>2. ει</td>
<td>/ei/ &gt; /iː/</td>
<td>i</td>
<td>Late fourth-third centuries BC</td>
</tr>
<tr>
<td>3. αι</td>
<td>/ai/ &gt; /iː/</td>
<td>e</td>
<td>C. AD 100</td>
</tr>
<tr>
<td>4. '</td>
<td>/h/ &gt; [θ]</td>
<td>—</td>
<td>Early centuries AD</td>
</tr>
<tr>
<td>5. φ θ χ</td>
<td>/pf tʰ kʰ/ &gt; /θ χ/</td>
<td>f, t(h), c(h)</td>
<td>Early centuries AD</td>
</tr>
<tr>
<td>6. οι</td>
<td>/oi/ &gt; /oː/</td>
<td>o, o*</td>
<td>C. third century AD</td>
</tr>
<tr>
<td>7. υ</td>
<td>/υ/ &gt; /υ/</td>
<td>i</td>
<td>Gradually from second to third centuries AD</td>
</tr>
<tr>
<td>8. η</td>
<td>/εː/ &gt; /eː/ &gt; /iː/</td>
<td>e</td>
<td>Gradually from second to third centuries AD</td>
</tr>
<tr>
<td>9. αυ, ευ</td>
<td>/au ew/ &gt; /av ev/</td>
<td>o, eu, ao*</td>
<td>Before ninth century AD</td>
</tr>
<tr>
<td>10. β δ γ</td>
<td>/b d g/ &gt; /v δ γ/</td>
<td>b, d, g</td>
<td>Before ninth century AD</td>
</tr>
</tbody>
</table>

* The asterisks indicate where examples are few or inconclusive.

It is clear from the above that the spelling of Greek in Irish glossaries consistently reflects the contemporary pronunciation by the third century AD at least (changes 1–6). Four developments were not yet generalised during the Old Irish period (7–10). The first of these (7) is certainly represented, the second and third (8–9) certainly absent, and the fourth (10) is difficult to identify due to ambiguous orthography.

We might note in passing that this radical departure from Classical Latin transliteration would have presented difficulties for anyone trying to reconcile sources for Greek in Greek script with sources transliterated. The Classical Latin transliteration hyle for ὕλη 'wood', for example, originally reflected both the spelling in Greek script and the sound of the word

130 Russell, 'Graece . . . latine', 409.
131 See Damian McManus, A guide to Ogam (Maynooth, 1991), 29–30, for the treatment of this allophone, corresponding to the Greek letter αγμα, in the ogam alphabet.
PRONUNCIATION OF GREEK IN EARLY MEDIEVAL IRELAND

([hy:lc:]) reasonably accurately (vowel length excepted). While *ile* (as in OM 709) better represented the medieval pronunciation ([ili:] > [ili:]), its form in Greek script would no longer have been predictable, and might as well have derived from ιλε, υλη, ειλαι, or any of several other possibilities.132

7. IRISH ORTHOGRAPHY

The analysis so far indicates that the spelling of Greek in Irish glossaries reflects the pronunciation of Greek as it was in the late antique period, certainly around the time O'Mulconry may have been compiled, in the seventh or eighth centuries.133 However, the discussion has assumed that the spelling of Greek words in Latin script generally conforms to the conventions of Classical or Late Latin orthography. In fact, the Greek words cited in Irish glossaries are embedded within basically Old Irish texts, composed and copied by Irish scribes. What, then, was the influence of Old Irish orthography?134

We should observe in the first place that none of the spellings shows signs of any adaptation to Classical Old Irish orthography. Tellingly, the letter c is not used to represent /g/ after vowels, nor is p for /b/ or t for /d/ in this position. Similarly, there are no instances of doubling of consonants to indicate unlenited or voiceless stops in post-vocalic position: cc tt gg bb dd mm for /k t g b d m/ (where single consonants would typically represent /g d y v ð v/). An author who wanted to represent the sound [apodos] for ἀποδός 'give back' in Classical Old Irish spelling might, for example, have written *apotos* instead of the text's *apodos*; similarly *tape* (not *tabe*) for τάπε. *Ecemon* (not *egemon*) for ἑγεμών.

On the other hand, in an earlier Old Irish orthography, post-vocalic *g b d m* could also stand for the unlenited consonants, and post-vocalic *c p t* for voiceless consonants. In fact, if we accept the early date for O'Mulconry's Glossary, this alternative usage might have been more common at the time of its composition, reflecting the system that Carney described as fighting a losing battle by the time of the Würzburg prima manus.135

The context of the citations within the glossaries might help narrow some of these ambiguities. We could expect the compilers to associate Irish

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132 Such difficulties would be compounded by the fact that medieval transliteration was not consistent, either between one manuscript and another, or often even within a single text. This is evident in perusing the shorter hermeneumata Greek–Latin glossaries published in Georg Goetz (ed.), Corpus glossariorum latinorum (7 vols, Leipzig, 1888–1923, repr. Amsterdam, 1965), vol. 3. For example, γυνή 'woman' is variously spelt γυνί (132.47), γινε (495.41), γυνε (512.17), while Leiden, Universiteitsbibliotheek, MS VLF 26 has γυνε (410.23), but in at least one other case transliterates u as u: ἤχες 'fish' ictus (415.30).


134 We saw above that the relationship between Classical Old Irish orthography and the Byzantine pronunciation of β δ γ could have been merely coincidental.

headwords with Greek words that they thought sounded similar. Given that we know the pronunciation of most of the Irish headwords with reasonable certainty (some hapax legomena aside), this should reveal something about the pronunciation of the corresponding Greek words. Table 4 below illustrates how the glossary compilers treated post-vocalic c, p, t, and m in related Irish and Greek words.

In the first example, a Greek word spelt ickena (very likely for ἀκεσίας ‘cure’) is associated with the Irish word ickle [ik']. This suggests that post-vocalic c in Greek words was pronounced as [k], not [g]. However, in the next example, an identical form ickena (here ἰκεσία ‘prayer’) is associated with Irish ıkces [eg'as], having a corresponding [g] sound. Similarly, post-vocalic t in Greek words is associated with both [t] and [d] in Irish words: the phrase catos apotoi castes (catus δῶο τοῦ καὶςθαι ‘cat from [the word] “to kindle”’) is matched with Irish cat [kat], but ἐκτύπα etera ‘companion’ is matched with Irish etred [ed'r'ad]. Post-vocalic m in Greek spellings can be matched with Irish [m] or lenited [v]: e.g. Greek ἀναμονανemos ‘wind’ with Irish anim [angm'], but ἐξείμα cheme ‘winter’ is matched with Irish gam [gav]. (I can find no instance of post-vocalic p in a Greek word paired with [p] in an Irish word, though this is not surprising given the rarity of this sound in Irish.)

The overall impression, therefore, is that the glossary compilers’ method was to make etymological connections on the basis of graphical similarities, rather than on sound correspondences.

8. CONCLUSION

The evidence of Irish glossaries indicates that the transliteration of Greek words in those texts systematically reflects the pronunciation of contemporary speakers in the seventh or eighth centuries. The most notable feature of the transliteration in the glossaries is the treatment of the long

<table>
<thead>
<tr>
<th>Entry</th>
<th>Sound value</th>
<th>Headword and Greek word in context</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM 701</td>
<td>c for /k/</td>
<td>ἱκε .i. ἱκεσία [ἀκεσίας] grece, salus interpretatur.</td>
</tr>
<tr>
<td>OM 351</td>
<td>c for /g/</td>
<td>ἐκε .i. ἐκεσία [ἀκεσία] .i. preces [ms praeceps] ...*</td>
</tr>
<tr>
<td>OM 49</td>
<td>p for /p/</td>
<td>ἡκαμ .i. ἡκαμος [ἀκαμος] .i. redde ...</td>
</tr>
<tr>
<td>OM 211</td>
<td>t for /t/</td>
<td>Cat grece catos dicult aurato cratera [ἀκό τοῦ καὶςθαι] ...</td>
</tr>
<tr>
<td>OM 457</td>
<td>t for /d/</td>
<td>ἐκε .i. ἐκεσία [ἀκεσία] .i. meretrix.</td>
</tr>
<tr>
<td>OM 88</td>
<td>m for /m/</td>
<td>ἀνιμ grece animos [ἀνημος]. latine ventus uel anima.</td>
</tr>
<tr>
<td>OM 615</td>
<td>m for /w/</td>
<td>Gaim a cheme [χείμα]. i. chemis i. hiems.</td>
</tr>
</tbody>
</table>

* Note Stokes’s correction for this entry, ‘O’Munconry’s Glossary’, 473.
vowel η, which retained a conservative pronunciation in the face of prevailing Byzantine itacism.\textsuperscript{136}

Individual readers, of course, may have pronounced these words in various ways, depending on whether they interpreted the forms according to the conventions of Classical/Late Latin, early Old Irish or Classical Old Irish orthography. Nonetheless, it is clear that the transliterations were made by scribes following either Latin or early Old Irish orthography, and the latter is not incompatible with the date of O’Mulconry’s Glossary, the most important text for this material. For the purposes of etymology, however, the pronunciation of Greek was not a significant issue for the glossary compilers, and they were content to posit Greek origins for Irish words primarily on the basis of graphical similarity.

\textbf{Sigla}

\begin{tabular}{ll}
\textit{DDC} & \textit{Dúil Dromma Cetta, CIH} 604.39–622.12 \\
\textit{Ir} & \textit{CIH} 627.36–633.33 \\
\textit{Y} & \textit{Sanas Cormaic, K. Meyer (ed.), Anecdota, vol. 4} \\
\textit{YAdd} & \textit{Sanas Cormaic} (see previous), referring to articles found only in the long recension.
\end{tabular}

\textsuperscript{136} This seems congruent with the suggestion above that Theodore of Tarsus was the most likely source of information for the sound of contemporary Greek. As a native of Cilicia in south-eastern Anatolia (relatively peripheral to the Greek heartland), his speech may have been conservative, as was the speech of Pontus to the north, which never generalised this development (see VG, 75, n. 34); see above pp 34–35.