

Nasalization after inflected nominals in the Old Irish glosses: a reassessment*

Thurneysen (1905) surveyed all instances of initial nasalization or lack thereof after inflected words in the following Old Irish texts: the Würzburg, St. Gall and Milan Glosses (up to f. 74d in the case of the latter). Forms from other texts, such as the Cambrai Homily, were occasionally compared. All instances in the Turin Glosses were in fact listed.¹

This paper attempts to reassess some principles for the presence or absence of nasalization, and relies on complete and newly gathered data from the Würzburg, St. Gall, Turin and Milan Glosses.

1. Nasalization after inflected nominals

In his grammar (GOI, 148), Thurneysen, dealing with this kind of mutation and presumably drawing on the survey in Thurneysen (1905), noted that 'the nasal is more frequently omitted in interconsonantal than in other positions. This is due to the fact that the disappearance of a nasal in the interior of certain consonant groups was regular'. This observation refers back to GOI, § 180, which states that *n* is lost between other consonants.

Concerning the syntactic contexts for nasalization after declensional forms (the focus of this paper), GOI (148) notes that nasalization after accusative singular and genitive plural of all genders and after nominative singular neuter forms

is most consistently shown after the article, adjectival pronominals and numerals. An adjective following its noun shows nasalization regularly in MI and predominantly in

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¹ Two instances listed on p. 10, Tur. 29 and 39 *tosach preceptae iohain*, do not belong here.

Wb. On the other hand, nasalization of a following dependent genitive or an adverbial is not consistently shown; it is, however, more frequent in Ml. than in Wb.

This paper will confine its analysis to nasalization occurring (or not) on words – demonstratives, adjectives, nouns and inflected or simple prepositions² – following inflected nouns and adjectives, while disregarding nasalization triggered by articles, possessives and numerals, i.e. it will focus on the cases where nasalization is more irregular (at least in spelling) and apparently unpredictable. Also not included here are: fixed or semi-petrified phrases such as *cach nae* (Wb 12c46), *nechtar náii* (Wb 25d14); phrases containing *tacair* 'meet, proper' (Wb 15c24), *fíu* 'worth' (Wb 18c11) and *toich* 'naturally right' (Wb 9a13) used as copular predicates, since no inflection is attested, despite their classification as neuter forms in Kavanagh's (2001) lexicon and the inclusion of the first two in Thurneysen's (1905) list³. Latin words, which were also taken into account by Thurneysen (1905), have been included in the survey both as forms susceptible to nasalization and as possible nasalization triggers, although the relevant instances, which will be highlighted in the footnotes, turn out to be very scanty (see, however, Section 3).

The survey was carried out relying on the text in *Thes. Pal.* for Wb, Tur and Sg, while instances in Ml were extracted from Griffith's database (2012). Instances in Wb and in Sg have been cross-checked with Kavanagh's lexicon (2001) and with Bauer's database (2015) respectively. All instances have been cross-checked with Thurneysen's (1905) list.

² Although nasalization usually concerns stressed words, there are a few cases where nasalization is shown on a proclitic preposition in Ml. These will be discussed below in Section 2.

³ Thurneysen (1905, 17) even includes the following instances, presumably considering *áil* 'desire' as a neuter adjective when used predicatively: Wb 13b3 *mad aill duib cid accaldam* and Wb 17b9 *niáil dún arcondelc friú.*

The conditions for the presence of nasalization taken into account are:

phonology: final and initial phoneme (nasalization after/on a vowel, nasalization after a final nasal⁴, nasalization between consonants, between dental consonants, between plosives, between dental plosives).

syntax: word-class of the nasalized word (agreeing noun, demonstrative, adjective, genitive noun, inflected preposition); case of the triggering word (accusative sg., genitive pl., neuter nominative sg.)

Phonology and spelling, on the one hand, and syntax, on the other, will be discussed in Sections 2 and 3 respectively. Section 4 will combine the data outlining favouring and disfavouring environments for the appearance of nasalization in the various corpora of glosses here taken into account, and will propose a diachronic interpretation of the apparently capricious presence (or absence) of nasalization.

2. Phonetic environment

It is hardly necessary to recall the fact that nasalization is shown in Old Irish spelling in the cases here under consideration only on initial voiced plosives and on vowels. Only instances where nasalization would be expected to be noted in writing, and therefore only when it would affect a word beginning with a voiced plosive or a vowel, are taken into account.

As mentioned above, Thurneysen noted that interconsonantal position disfavoured nasalization. In fact he surmised that nasalization disappeared in this environment as a result of a phonetic process

⁴ This is in fact mainly based on an orthographic principle: it includes words ending with *n* before words beginning with a vowel, *d* or *g*, and words ending with *m* before words beginning with *b*. As noted by Thurneysen (1905, 2, 7), in these cases nasalization may simply have been left out for spelling reasons. See Section 2 below for more details.

which simplified consonant clusters. How regular this development was, however, is hard to determine. Moreover, the phonetic realization of nasalization on voiced plosives in Old Irish is in dispute, as some scholars claim that it corresponded to a single nasal consonant (basically as in Modern Irish, see Ahlqvist 1994, 31, McCone 1994, 120 and *passim*), while others maintain that nasalization was realized as a sequence of two segments, i.e. it represented a phonological cluster nasal + plosive (Quin 1979, Feuth 1982, Ó Maolalaigh 1995-96). Although Thurneysen (GOI, 147) states that 'the mutations existed in the speech of the Old Irish period as in that of today', his statement here clearly applies only to unvoiced stops (whose nasalization is not regularly noted in Old Irish spelling). Thurneysen's reference (GOI, 148, quoted above) to the simplification of clusters in internal position, which leads to the dropping of the nasal consonant, as the principle for the absence of nasalization in initial position, points to a similarity of phonetic contexts which can only be envisaged if initial <mb nd ng> represent clusters word-initially, as Feuth (1982) has noted. Thurneysen's view is also clearly implied by his merging the nasalization of vowels with that of voiced plosives in the initial statement of GOI, § 236: 'In nasalization *n* is prefixed to an initial vowel or *d*, the homorganic nasal to *b* and *g*'. Ó Maolalaigh (1995-96: 162) mentions L. Breatnach's opinion, according to which these orthographic clusters were phonological clusters in all positions in Old Irish but were reduced to a single segment, possibly before the end of the Old Irish period. That this issue is still debated is reflected in a recent review article (Stifter 2015, 150). It is beyond the scope of the present paper to decide which of the two reconstructions is preferable. Nevertheless, the data that will be presented here suggest that nasalization of initial consonants hardly ever occurs in some interconsonantal positions – mainly between dental plosives – regardless of the syntactic context, while it is almost regularly shown in some other interconsonantal positions (also where the corresponding clusters tended to be lost word-internally) only in some syntactic environments – basically on agreeing nouns and adjectives, but not regularly on genitives and prepositional phrases. As will be shown, the different behaviour in different syntactic environments

and in the different corpora of glosses means that consonant dropping is unlikely to be the main principle behind the absence of nasalization. Rather, it will be argued that the absence of expected nasalization in some contexts in the Glosses should be viewed as an effect of phonetic *blocking* on the spread of nasalization as an initial mutation, i.e. the failure of nasalization is a *conservation*.

This holds whichever of the two realizations of nasalization of initial voiced plosives was the norm in contemporary Old Irish, but presupposes a time, possibly preceding our earliest documents, when clusters of dental plosive/ lateral + nasal + initial voiced plosive were avoided.

Before presenting the data, a few details on the criteria for the classification of examples must be given.

When classifying examples as "after nasal", a spelling principle has been followed: this group includes words ending with *n* before words beginning with a vowel, *d* or *g* and words ending with *<m>* before words beginning with *b*. As noted by Thurneysen (1905) for cases when *<-n> = <-nn>*, as in e.g. Sg 28b17 *innananman adiect* 'of the adjectives' (similarly 28b3 and 28b4 with a following genitive), nasalization may simply have been left out here for spelling reasons. Concerning MI 23b4, 'das man zur einen oder zur anderen Klasse rechnen kann', i.e. with or without nasalization (Thurneysen 1905, 10), Ascoli (1878) and Griffith (2012) read *nírelíc dia doib orcuin duaid* ('God did not let them slay David'), but in *Thes. Pal.* we find *orcui[n] ndauíd*.

Other instances where classification may be difficult are cases where nasalization is expected on words beginning with a vowel and usually written with an initial *h-*. This involves many instances of the demonstratives *hísín*, *hísíu*. In these cases *h-* may have been written or sometimes read by editors instead of *n-*, as for example in Wb 10d36 *dochum hirisse*, or MI 29b14, where Ascoli (1878), Thurneysen (1905, 13) and *Thes. Pal.* read *innacsín hísín*, but Griffith (2012) *innacsín nísín*, or MI 53a8 *fundul nísíu*, about which Thurneysen (1905, 13) notes 'zweifelhaft ist ob h oder n zu lesen ist' and Griffith (2012) 'the letter appears more like n'. In the St. Gall Glosses, though, there

are a few instances of nasalization spelt with *n-* before *h-* (215a2 *ni fail chumscugud nhuirdd*, 215a2 *chechtar nhái*, 51b6 *cenele nhetha*, as against 46b5, 70a1 *cenele netha* and 64a9 *cenelæ netha*).

The classification of examples "between dental consonants" lumps together all consonants, of whatever class, which do not include a labial or velar or two plosives; therefore both instances such as MI 32d15 *conneta rath ndilgudo do* and Sg 212a11 *etar fileda 7 áis ndénma sairse* belong here.

On the other hand, the environments between two plosives and between two dental plosives, exemplified by MI 31d10 *arachoat anargat nglan* and MI 61b12 *connaconbia forraithmet nde etir* respectively, have been kept separate. All remaining interconsonantal environments have been placed together under the label "between consonants".

For some clusters instances are really too scanty to be significant; however, among the clusters which Thurneysen lists as never occurring (1905, 1), i.e. *-l nd-* and *-m ng-*, nasalization in the glosses surveyed here is in fact never marked in a nasalization environment between a final *-l* and an initial *d* (29 instances, Wb 4c23, 5a14, 6b20, 11b17a, 12d1, 16a11, 16d5, 18c13, 20c21, 20d1, 20d2, 21a8, 21a10, 23a6, 23a21, 26d17, 27a15, 31c15, MI 22b1, 22d19, 49d3, 93d5, 93d6, 114b7, 124c11, 126b16, 126d11 (bis), Sg 28a15), or between a final *-m* (fricative) and an initial *g-* (only occurring in Wb 13d15 *frisechim gníme adim* and *frisechim gníme crist*; nasalization after a final *-mm* on an initial *g-* occurs in Sg 215a12, 156b6).

The data for Wb, Tur, Sg and MI are reported in Tables 1, 2, 3 and 4 respectively.

Table 1. Nasalization in Wb (phonetic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after/ on a vowel	8		4	1 ⁵	13	3	34	25 ⁶	11	83+3 (adv)
after a nasal						2	1	6		9
between consonants	5	2 ⁷			1	2	2	8		12
between dental consonants						2	2	21		55
between plosives					2	1	1	3		7
between dental plosives								4		23

The data in Table 1 show that although nasalization is mostly absent in Wb between two consonants, the hindering factor for the presence of nasalization on a genitive noun and above all on an inflected preposition is not purely phonetic, as many of the examples where no nasalization occurs contain a final or initial vowel. If one looks at the cases where nasalization would follow a vowel or occur on a vowel, 70 instances show nasalization, 115 do not. Rather, an intervocalic

⁵ 22c16 *afouere hísín*. To be sure, this is not an instance of the use of the neuter article to introduce a quotation (a usage illustrated by Breatnach 1990, where in fact this is not listed among the instances in Wb, p. 97, fn. 15), but of code-switching (see Bisagni 2014). In fact, *fouere* here does not quote of a word in the Latin text, but refers to the same cherishing to which Latin *fouet* in Eph. V, 29 refers.

⁶ One instance on a Latin word, 28b2 (*amal asnóindia omnium*) *adcobra ícc* omnium 'He desires the salvation *omnium*'. See Bisagni (2014, 43) on the exploitation of the functional equivalence between cases in Latin and Old Irish by the Würzburg glossator.

⁷ 1a4 *nifil nachdícilith airi* 'there is no concealment from him' and 33a17 *gnid cachdagním*, possibly to be read *gníd cách* (nom.) *degním* 'let everyone do good work', therefore not an accusative.

environment could be a factor favouring nasalization (4 out of 11 examples on an inflected preposition): in none of the instances where nasalization does not occur on adjectives is it left out between vowels, except in the emended text in 15b2 *annuiednissime uile*.

Table 2. Nasalization in Tur (phonetic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after/ on a vowel	2			1 ⁸			3		1	
after a nasal										
between consonants										
between dental consonants										
between plosives							1 ⁹			
between dental plosives										

⁸ There are two instances with Latin words and with *h-*: 40 *an iohannis hísín*, 58a *a confessio hísín*. Both are listed among Breatnach's (1990, 97, fn. 13) examples of quotations, but the second gloss is also listed among the glosses containing intra-clausal code-switching by Bisagni (2014, 22, fn. 55). It has therefore been tentatively included here.

⁹ On a dative noun in the fixed expression *comairbert biuth*: 108 *echtar comairbirt mbiuth pecthæ*.

Table 3. Nasalization in Sg (phonetic environments)¹⁰

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after/ on a vowel	8		7		12		27	8	14 ¹¹	15+1adv.
after a nasal	1		1		10	2	2	2	4	3
between consonants					1	1	5	4	1	2
between dental consonants					3	1	3			12
between plosives						1				
between dental plosives										

¹⁰ The classification of case/number forms differs from Bauer's (2015), in particular for the data in Table 3 and Table 7 below in the following loci: 5b9 (*fogur* acc., not nom.), 28b17 (*adiect* gen. pl., not nom. sg.), 72b1 (*ilfolod* gen. pl., not acc., as in 28b22), 118a2 (*riaguil* acc., not dat.), 179a6 (*sechmadachte* nom., not acc.), 188a13 (*folud* acc., not dat.), 198b2 (*adiecht* gen. pl., not acc. sg.), 212a11 (*áis* acc. sg., not pl.), 217b8 and 9 (*alpai* acc. sg., not pl.), 5b7 (*digaim* gen., not nom., as in 7b17), 46a4 (*digabhach* doubtfully classified as acc., rather than nom.), 189b8 (*folad* doubtfully classified as acc., rather than nom.). Sg 14a6 *hifogur digammsa* has been left out because of uncertainty as to the form *digammsa*; see note 30.

¹¹ Thurneysen (1905, 14) lists 6a3 *is bec nand*, which, however, does not belong here since *nand* is a negative copular form (*is bec nand sinunn andéde nísiu*).

Table 4. Nasalization in MI (phonetic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N ¹²	Y	N ¹³	Y	N	Y	N	Y	N
after/ on a vowel	21		18		37	2	69	13	44 ¹⁴	23
after a nasal			2		16 ¹⁵	1 ¹⁶		11 ¹⁷	1	14
between consonants	10				7	1	8	9	3	6
between dental consonants							5 ¹⁸	9 ¹⁹	4	44
between plosives					3		1 ²⁰	1 ²¹	7 ²²	3
between dental plosives							1 ²³	6	2	9

¹² Thurneysen (1905, 5) listed one example, namely 53c14 *foracab cech ansa*, which, however, he dismissed as a mistake ('als Fehler zu betrachten'). Here Griffith's (2012) reading *fortabcechansa* 'I will teach you' has been accepted (see Griffith and Stifter, 2014, 66, about this reading).

¹³ The only instance would be 88b14 *a nam hísiu*, with a quotation from the Latin text (listed among Breatnach's 1990 examples) and *h-*. This is the only instance in MI of a Latin word in the contexts surveyed here.

¹⁴ 1 on a dative adverbial, 60a9 *indoiri nathirriuch*, on which see Section 3 below.

¹⁵ All examples show nasalization on an initial vowel after a final simple *-n*; they include 8 instances of the fixed temporal expression *incéin naili* 'at another time'.

¹⁶ 46b10 *cech n deithidin domundai*, Thurneysen (1905, 8) "nur graphisch fehlt n".

¹⁷ One doubtful example, 56c4 *trifortachta[in] dé*, if the text is so to be emended and not as *tri fortacht dé*.

¹⁸ For 51b29 *cen chomair n daé*, *Thes. Pal.* and Griffith's (2012) suggestion *chomairli* (Ascoli 1878, 633 *chomairle*) has tentatively not been accepted, assuming that what would be fitting in the context is rather a synonym of *fortacht*, and therefore possibly a form of *cobair* 'help'.

¹⁹ 1 on a dative, 89b5 *cen brith doriug* [leg. *díriug*], on which see Section 3 below.

If consonant dropping in clusters is the major principle behind lesser frequency of nasalization between consonants, one may still wonder why its presence between *vowels* apparently increases in time, or at any rate differs from one corpus of glosses to another, particularly in certain syntactic environments.

The data for adjectives in Wb are scanty, but the data for genitives and prepositional phrases fairly clearly point to optionality of nasalization on genitives (after/on/between vowels) and very low frequency on prepositional phrases even when not between consonants. This picture does not contrast with the one given in GOI (148), reported above in Section 1, but on the basis of the data of the other Glosses I assume this situation reflects a stage when nasalization was expanding, at least in some varieties. This view, among other things, explains why the behaviour of clusters arising from syncope, such as those mentioned by Feuth (1982, 92), e.g. *frecdairc* vs. *frecndairc*, is different: for example, *frecndairc* and *frecndarcus*, *aisndís* and related words always have a nasal both in Wb and in MI, while *aisndís* does not show a nasal in 2 out of 9 instances in Sg; *forngaire* always has a nasal in Wb (2 examples) while in MI it has it in 2 examples, as against 4 examples without it; *túailnge* occurs once with *n* in Wb and *túailng-* in *túailngigidir*, *túailngigiud* and *túailngithe* occurs in MI 4 times with an *n* and once without it. If one does not assume that

²⁰ On a dative, 46b28 *innerbirt mbiuth*.

²¹ On a dative, 56a19 *inneirbirt biuth*.

²² 44d18 *artormuch fochraic ndo són* possibly to be added, if *fochraic* is a genitive plural and not to be emended in *fochraice*, as *Thes. Pal.* and Griffith (2012) suggest, following Ascoli (1878, 630). Among these examples, 3 show nasalization on a simple preposition (see the discussion below).

²³ 48d28 *trichumacht ndé* not included as clearly to be corrected (*chumachte*).

nasalization was expanding, or that Wb and Ml reflect the distribution of nasalization in two different varieties, the only alternatives would be to assume either that nasalization was left out in spelling in Wb, although it was realized phonetically, or that Wb reflects a variety where nasals were dropped more easily. While the former hypothesis would be surprising for initial vowels, as stated above, the latter does not seem to be supported by independent evidence, as the examples given for internal clusters show. Indeed, different spelling conventions seem to hold for nasalization on consonants after nasals (and on words spelt with initial *h-*) in the St. Gall Glosses, where nasalization tends to be spelt regularly, as opposed to both Wb and Ml (see Quin 1979, 256, 258 on the spelling of nasalization of *g-*, *b-*, *d-* after the accusative article).

The examples which represent "exceptions" to this picture, i.e. cases where nasalization fails to be noted on nouns after an adjective, on adjectives and demonstratives are listed below:

Wb 3d34 *imradud inna réte domunde* 'consideration of the mundane things'

Wb 12b5 *immefolngi incorp uile andsom* (see below on this example)

Wb 12d39 *trissinprecept bésti* 'through the moral teaching'

Wb 15b2 *isspirdide annuiedniss uile* [*Thes. Pal. leg. annuiednisse*; Thurneysen (1905, 7)

"Schreibfehler"] 'the whole New Testament is spiritualized'

Wb 21a8 *temel inna tol domunde* 'the darkness of the wordly desires'

Wb 25c19 *innáis déed* 'the lazy folk' [gl. inquietos]

Wb 26c7 *etarcne narrúun díade* 'the knowledge of the divine misteries'

Wb 27c10 *arlóg diade* 'for a divine reward'

Wb 27c24 *ipricept narrún diade doib* 'in teaching the divine misteries to them'

Wb 28c2 *aranindeb domunde* 'for the wordly gain'

Sg 28b17 *innanman adiect* 'of the adjectives' (adjective nouns)

Sg 66b18 *airnissluindi dies hic aimsir deirb* 'because *dies* does not express a specific time here'

Sg 72a1 *dofoirnde persain deirb* 'which signifies a determinate person'

Sg 192b5 *cenodfil posit gredda do* 'though there is a Greek positive to it'

Sg 200b10 *engraicigidir insin mo ainm díles*²⁴ 'that takes the place of my proper name'

MI 35c27 *amal bid innacaldim deithidnig*²⁵ 'as if it were the earnest address'

MI 44b10 *is ed tra inso alathar aill* 'this then is the other exposition'

MI 46b10 *inraba* [leg. *inrarba*] *cech n deithidin domundai huaim* 'I drove every wordly care from me'

MI 135a13 *bid suide garait nosessed* 'as if it were a short sitting that he would sit'

Only the Würzburg Glosses seem to point to interconsonantal positions as a real hindering factor, although there are three examples where nasalization does occur on adjectives between consonants. I reckon that Wb3d34 *imradud inna réte domunde* could be a slip (though see below about genitive plurals) exactly as Wb15b2 *isspirdide annuiedniss uile* [*Thes. Pal. leg. annuiednisse*], where the "Schreibfehler" noted by Thurneysen (1905, 7) presumably includes the absence of nasalization on *uile*; that Wb 12b5 *andudesta airisom .i. líi et sonirte immefolngi incorp uile andsom ón* should not be interpreted as 'that makes up the whole body therein' (sic *Thes. Pal.* and Kavanagh 2001, 535), but as 'what is lacking unto it, i.e. beauty [decus] and firmness, that the whole body (nom.) produces in it'; that all instances after a nasal, as defined above, cannot necessarily be considered instances without nasalization.

²⁴ As against Sg 26b12 *amal ndondfoirde ainmm ndiles*.

²⁵ As noted by Griffith (2012), the accusative is unexpected here. He deems that the accusative was simply taken from the Latin *sollicitam consul[t]ationem*. Another instance of non-verbal gloss where case seems to be taken from the Latin text is Sg 5b9 *emith infogur nísín* glossing *eum autem prope sonum*.

Another sort of exception concerns instances where nasalization occurs where it is more frequently omitted, notably on a genitive or a preposition between dental consonants.

Wb 7d3 *rad ndé in is amre lim rad ndé lib* (as against 4 examples of the very same phrase without nasalization and 3 instances where *rad/rath* is followed by a genitive beginning with *d-* and no nasalization). I interpret this instance as proof that nasalization was creeping in.

MI 63d14 *imrecht n dá* 'for the law of God', 46c20 *rosuidigestar l. suidigfith dia recht ndo* 'God has established or will establish a law for him' and 61b12 *connaconbia forraithmet nde etir* 'so that there will be no mention of him at all'²⁶ are the only instances of nasalization between dental plosives. As mentioned above, the Milan Glosses offer a few examples where nasalization is shown on a proclitic preposition, which is unexpected given the general rules that apply in the case of initial mutations. These are listed below:

30b10 *foaccomla dano iarum frecrae comadas ndusuidiu* 'he then afterwards subjoins a fitting answer to that'

46a1 *cid becñ diulc* 'even a little of evil'

51a5 *cid cennabec n dosíd. and* 'even without a little of peace there'

72c9 *is bec ñ di dechur fíl etarru* 'there is little difference between them'

23a5 *ní cumcat aithirgi ndodenum* 'they cannot work repentance'

110d10 *condaig loc ñ dia diaditin* (if the first *dia* is to be deleted, as all editors suggest) 'he seeks a place for his protection'

96a13 *arndermatatn arsoirad* [leg. *arndermat narsoirad*, Griffith 2012 and Griffith and Stifter 2014, 75] 'forgetting us for deliverance'

²⁶ That *de* here is a prepositional phrase is somewhat doubtful.

Thurneysen (1905, 3) found one example in the St. Gall Glosses, namely 215a2 *is dilmain ndo chechtar nhái*; however, *Thes. Pal.* interprets *do* here as an inflected preposition ('either of them is permissible for it [*hic*]' rather than 'it is permissible to either of them'). Thurneysen's classification may be right if there is no nominative subject here, i.e. 'either of them (of the two orders) is permissible'.

Disregarding 96a13, where the text is emended, the examples in the Milan Glosses listed above seem to testify that nasalization was spreading to the following syntactic contexts:

a) where *bec* was used as a quantifier and the syntactic bond with the following prepositional phrase with *de* was so strong as to form a single phonological word; note that nasalization is regularly marked on genitives after *mór* in similar contexts, i.e. when used as a quantifier, in our corpus of glosses (Wb 6c27, 13a33, 15d21, 30d22);

b) in constructions with [noun phrase *do* verbal noun], where again a tight syntactic bond between the noun and the following prepositional phrase is undeniable and the syntactic and semantic autonomy of the preposition is reduced.

30b10 *fre crae comadas ndusuidiu* rather seems to testify to an incipient evolution of the dative form of *side* towards cliticization, which turns the prepositional phrase into a single word, i.e. something similar to an inflected preposition²⁷.

3. Syntactic environment

The distribution of the main syntactic environments where nasalization occurs after inflected nominal forms has already been taken into account in the previous section. A major distinction

²⁷ Apparently, the last stage in the evolution of the paradigm of *suide/ -side*, see Griffith (2013). The evolution towards univerbation of the prepositional phrase might also be reflected in the use of a dative plural form with prepositions governing the accusative, e.g. MI 42d9 *lasuidib*.

might be drawn between nasalization on agreeing words (nouns, adjectives) and on demonstratives on the one hand, and nasalization on a different constituent (genitive and dative nouns, inflected prepositions and adverbs) on the other, whereby the spreading of nasalization might be sketched as follows:

nasalization on agreeing words and demonstratives > nasalization on nominal noun modifiers > nasalization on any modifier following a noun

Incidentally, the spreading of nasalization after inflected forms is paralleled by the spreading of nasalization as a relative marker (McCone 1980, Ó hUiginn 1986), where, however, the triggering factor seems to be the use of this consonant mutation as a relativisation marker, rather than the case of the word which precedes the verb form. Proof that syntactic linkage had become an independent triggering element for this mutation (see Comrie 2002 for a general claim about this kind of development).

However, it should be stressed that nasalization did not spread to any constituent following a nominal case-form capable of triggering nasalization: there is no evidence of nasalization, for example, on a subject following a neuter predicative adjective (or a genitive plural that belongs to the predicate)²⁸, cf. e.g. Wb 28b31 *asnuisse grad foir* 'that orders (sg.) are meet upon him', MI 146a2 *is cotarsne aicned in tened fri cassair* 'the nature of fire is contrary to hail ' (cf. Thurneysen, 1905, 6). Moreover, the likelihood of the occurrence of nasalization on prepositions seems to be

²⁸ This would also hold for a subject following an accusative noun, or an object following a nominative neuter subject, but these are very rare environments, also because subjects occurring after objects are mostly definite and therefore preceded by the article (in fact such a subject is frequently *insin*). The same holds for objects (indefinite objects tend to occur immediately after the verb).

conditioned by constituency factors, which will be briefly tackled below. Suffice here to say that the only two instances in the Milan Glosses where nasalization on a preposition does not occur between vowels are 87b18 *annurig hicumsanad 7 hisoinmigi· essib* 'when I will go out of them into rest and into prosperity' and 125a9 *dunforsailc hisoiri iarum* 'He delivered us unto freedom afterwards', where the inflected prepositions clearly do not belong with the preceding accusative noun.²⁹ In this section the case of the triggering word will also be taken into account in order to find out whether it has any bearing on the likelihood of nasalization appearing.

Examples of the different kinds of environments are given here for the sake of clarity.

Nasalization on an agreeing noun after a nom. neut. noun only occurs with two nouns in apposition, i.e. Sg 63a16 *sliab nossa* 'Mount Ossa' (Lat. *mons Ossa*).

Nasalization on an agreeing noun after an accusative singular, genitive plural and nominative neuter adjective occurs after prenominal quantifiers such as *cach/cech, nach, uile, cétnae, óen*, e.g. Ml 30c9 *nídigenamni nach ngnim*, Ml 145c4 *trichocetal inna nule ñdule*, Ml 42c12 *dusnucai cech mbétrae*. See below for rare instances of nouns in apposition to an accusative noun.

Nasalization on a demonstrative occurs on *(h)ísiu* and *(h)ísin*, e.g. Ml 77a15 *frisgair lessóm animchomarc n isiu*, Ml 93a18 *tris innimpúd nisin*, and once on *ucut*, Wb 33a4 *cenmathá integdais nucut*.

Nasalization on a genitive occurs after a nom. neut. noun, e.g. Ml 74b13 *manimsoirad cumachtae ñ dé*, after an accusative, e.g. Ml 42b27 *duadbat etarcnae ndé insin*, after a gen. pl., e.g. Ml 124c2 *in dermut gnimae ñ dæ*.

Nasalization on a preposition occurs after a nom. neut. noun, e.g. Ml 67c14 *ní bia essíd ndo*, after an accusative, e.g. Wb 16c23 *conroigset dia nairiubsi*, after a gen. pl., e.g. Ml 78b20 *ar lín doine*

²⁹ In the second example the case of *soiri* (acc. or dat.) is in fact doubtful.

nindib, after a nom. neut. adj., e.g. Wb 5b28 *is inse nduit*, after an accusative or nominative neuter noun + adjective (very rare environment), e.g. Ml 30b10 *foaccomla dano iarum frecrae comadas ndusuidiu*, Ml 40a20 *atá debe mec nand* vs. Wb 11c1 *manud fel inspirut nóib indiumsa*, Sg 198a1 *is pronomen naithfoilsigthech dóib ipse*.

For the purposes of classification, substantivized adjectives are reckoned as nouns, e.g. Wb 9c3 *atá olcc naill lib*.

A few infrequent types:

a noun follows another in apposition: Tur 26, Ml 127d8 and 127d13 *fri dia nathir* 'towards God the father', Sg 63a16 *sliab nossa* 'Mount Ossa'³⁰. These instances have been grouped with instances of nasalization on an agreeing noun after adjectives, and added in the tables to those instances after "+" in the first column (nasalization on a noun).

a noun in the dative case rather than the genitive case modifies a verbal noun (GOI, 162): Ml 46b28 *cia innerbirt mbiuth* 'to what use?', Ml 89b5 *cen brith doriug* [leg. *díriug*] 'without obtaining', Ml 56a19 *inneirbirt biuth* 'the use', Tur 108 *echtar comairbirt mbiuth pecthæ* 'outside the practice of the sins'. These instances have been grouped with instances of nasalization on a genitive noun and added in the tables after "+" in the fourth column (nasalization on a genitive noun). Where a dative noun is used adverbially (GOI, 161), however, as in Ml 60a9 *indoiri nathirriuch* 'into captivity again', Ml 107c8 *tuidechtae doib innacorp 7 imbethaid aithirriuch* 'of their coming into their body and into life again', it has been grouped with other adverbials (i.e. with nasalization on an inflected preposition).

³⁰ To these Ml 70a6 *conna epreid ainm dia ndoib* 'that he might not give them the name of gods' might be added, if *dia* is an acc. sg. rather than a gen. pl., and possibly Sg 14a6 *hifogur digamma* if *digamm* (?) is an acc. and not a gen. form.

The data for Wb, Tur, Sg and Ml are reported in Tables 5, 6, 7 and 8 respectively.

Table 5. Nasalization in Wb (syntactic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after a nom. neut. noun			2	1	5 ³¹	1 ³²	18 ³³	12	2 ³⁴	46+1adv
after an acc.	10	2	2		8	5	22	53	7	81+2adv
after a gen. pl.					3	4		2		16 ³⁵
after a nom. neut. adjective	3								2	43
after an acc. noun + adj.										2+1dem ³⁶

Among the 47 examples where a nominative neuter noun is not followed by nasalization on a preposition, the noun is a copular predicate in 26 cases. In 7 instances the gender of the noun is uncertain: in 6 cases the predicate noun is *cumme*, which according to Thurneysen (1905, 13) may not be a true neuter, since it never triggers nasalization. The two instances where a nominative neuter noun is followed by nasalization on a preposition are the following:

14c22 *isgnáth gáo et fír nand* 'false and true are usual therein'

1a5 *déde didiu nand* 'two things then are therein', where nasalization rather follows *didiu*; the example is very doubtful.

³¹ 6a1 *acumactte nangid* doubtful whether nom. or acc.

³² 15b2 *isspirdide annuiedniss uile*, *Thes. Pal. leg. annuiednisse*; see Section 2 above.

³³ 4d4 *úathad ndóine dochretim* doubtful whether nom. or acc.

³⁴ On 1a5 *déde didiu nand* see below.

³⁵ Including two examples where the preposition follows a noun phrase with gen. pl. noun + adj. (12b3 and 27c24).

³⁶ 12c31 *aní tairci inbríg móir sin dúibsi* 'what produces that great privilege to you'.

Table 6. Nasalization in Tur (syntactic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after a nom. neut. noun				1 ³⁷						
after an acc.	1+1						3+1			
after a gen. pl.									1	
after a nom. neut. adjective										
after an acc. noun + adj.										

Table 7. Nasalization in Sg (syntactic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after a nom. neut. noun	+1		4		7		19	1	5	12 ³⁸
after an acc.	4		4		16	4	18	11	12	8+1 adv
after a gen. pl.					3	1 ³⁹		2 ⁴⁰	1	2
after a nom. neut. adjective	4								1	5
after an acc. noun + adj.										4+1 nom. neut.

While in all the 11 examples where a nominative singular neuter noun is not followed by nasalization on a preposition the noun is a copular predicate, among the 5 where a nominative

³⁷ After a Latin word and with an initial *h-*, see fn. 8 above.

³⁸ 61a14 *commescatar dacenél indib* 'two genders are mixed in them', after a nom. neut. dual, has been added here.

³⁹ After a nasal (28b17 *innananman adiect*).

⁴⁰ Both after a nasal (28b3 *innañanmann etargnai* and 28b4 *do luc innananmman inchoisc ceníuil*).

neuter noun triggers nasalization, this noun is the subject, either of a passive form/ verbal of necessity (3) or of a copular predicate or substantive verb (2); in the latter cases the preposition is clearly selected by the noun. The examples are listed below:

Sg 156b6 *doberr ainm ñdoib dingnim gníte* 'a name is given to them from the deed they do'

Sg 162a7 *nicumscichther dead nindib* 'the ending in them is not changed'

Sg 6a5 *ni cumscachthi cumachtae nairi* 'the power on it [potestatem literae] should not be changed'

Sg 111a3 *mad hinonn tarmorcenn ñdóib lagrecu 7 la laitnóri* 'if their termination be the same for Greeks and Latins' [Sí eiusdem sint et apud graecos terminationis]

Sg 38a8 *atá dechor netarru* 'there is a difference between them' (cp. Sg 61b3, MI 24d25, 24d26, 56b33, 138c1 for the selection of the preposition *eter* by the noun *dechor*)

A brief comment on nasalization after Latin words in Sg. Nasalization turns out to be triggered by the Latin words *nomen*, *pronomen* and *cognomen*, that is to say Latin nom./acc. sg. forms of neuter nouns ending in a nasal, in the following instances: Sg 42a2 *is nomen nuirdd híc* 'it is here a noun of order', 61a5 *apronomen narticoldae* 'the articular pronoun', 197b17 *dianaccomaltar pronomen naill do* 'if another pronoun be joined to it', 198a1 *is pronomen naithfoilsigthech dóib ipse* 'to them *ipse* is a re-demonstrative pronoun', 198b3 *cid arna airecht pronomen naitrebthach* 'why was not a possessive pronoun invented?', 32a1 *sech a cognomen nísín* 'beyond that cognomen'. *Nomen*, *pronomen* and possibly *cognomen* could therefore be seen as borrowings in the St. Gall Glosses, both in the above instances and in 198b6 *diambe articol 7 pronomen and* 'if there be an article and a pronoun there', 50a3 *is nomen diles dosom* '...is a proper name for this' (alternating with the calque,

e.g. 26b12 *ainmm ñdiles*), with no apparent nasalization; possibly also *praenomen* in 28a15 *fri praenomen cosmail do* 'from a *praenomen* like it'.⁴¹

Table 8. Nasalization in MI (syntactic environments)

	on a noun		on a demonstrative		on an adjective		on a genitive		on an inflected preposition	
	Y	N	Y	N	Y	N	Y	N	Y	N
after a nom. neut. noun			4		10	2	12	5	9	11
after an acc.	20+2		15		35	2	55+1	43+2	34+2	64+1
after a gen. pl.	4		2		18		16 ⁴²		8	4
after a nom. neut. adjective	5								7	16
after an acc. noun + adj.									1	3

Among the 9 instances of nasalization on a preposition after a nominative singular neuter noun, 3 occur after a copular predicate, 5 after the subject noun (4 with the substantive verb, 1 with copula and verbal of necessity) and the remaining one is 72c9 *is bec ñ di dechur fil etarru*, mentioned above in Section 2. Among the corresponding 11 examples with no nasalization, 7 follow a copular predicate (2 with *cummae*), 4 the subject of a passive verb form or of a copular predicate. The distribution is therefore slightly different from what has been noted for Wb and Sg, where a neuter nominal copular predicate does not trigger nasalization on a following preposition, although copular nominal predicates are less likely to do so in MI too.

⁴¹ Admittedly, the metalinguistic nature of the St. Gall glosses sometimes makes the distinction between borrowing and code-switching consisting of a single word even more subtle than usual; see Bisagni (2014, 22, fn. 54) about the caution with which the interaction between Latin and Old Irish in these glosses should be treated.

⁴² 46c8 *fis forcell 7 dliged rechto ndé* has been included here although nasalization follows *rechto* and not the genitive plural *dliged*.

It should be noted that the examples of nasalization on genitives after accusative nouns include instances of nominal or complex prepositions, such as *dochum* 'towards', *tar ési* 'after, instead of', *i ndegaid* 'behind', and similar fixed expressions, such as *fo chosmailius* 'like', *ar chuit* 'in respect of', *for laim* 'beside'. The data, represented in Table 9, point to regular nasalization, as its absence is mostly confined to instances with initial *h-*, with a final <*m*> followed by an initial <*b*>, or to hindering phonetic environments (between dental consonants).

Table 9. Nasalization after complex prepositions

	Würzburg		Turin		St. Gall		Milan	
	Y	N	Y	N	Y	N	Y	N
<i>dochum</i>	3	1	1				2	5
<i>tar ési</i>	1	1			2	2	5 ⁴³	
<i>i ndegaid</i>			1		2			
<i>fo chosmailius</i>							3	3
<i>ar chuit</i>							1	
<i>for laim</i>							1	

There is one syntactic environment where nasalization never seems to occur, namely on a prepositional phrase with *do* expressing the first argument (mainly agent) of a verbal noun, as in the example below:

Wb 14b17 *foditiu fochide dúnni* 'our endurance of afflictions'

⁴³ All instances on the genitive *uilc*.

There are 17 examples in Wb⁴⁴ and 21 in Ml⁴⁵. However, in most of these instances nasalization is unlikely to occur also for other reasons (in Ml 18 examples are between dental consonants and 3 between consonants, while in Wb, where prepositions are anyway scarcely affected by nasalization, only 3 examples occur after a vowel), so one cannot conclude that syntax is the only hindering factor in these cases.

As regards the triggering case, while nasalization after neuter nouns seems to be predominant in Wb, except on prepositions, and nasalization after genitive plurals less regular even on adjectives, though occurrences are not abundant, in Ml nasalization appears to be most regular after genitive plural nouns.

4. Favouring and disfavouring factors. The rise and fall of nasalization

While nasalization appears quite regularly in all the glosses on nouns after *cach*, *nach*, *óen*, *cétnae*, as well as on adjectives and demonstratives after nouns, nasalization on genitives and inflected

⁴⁴ Two examples, 25a13 *praedicebamus uobis* .i. *both dún ifochith* and 26b21 *ɔammadarsa andígail forru* .i. *both doib cen biad*, have tentatively been included here because the context requires an accusative, although *both* would be usually reckoned as a nominative form of the verbal noun: could it be a neuter by-form?

⁴⁵ Ml 55c20 *doformaig cech peccad foraraile ñdo beus*, which Griffith (2012) so classifies ('every sin by him'), has not been included because I assume the preposition is in fact selected by the verb *doformaig* (as in 105a8 *dufórmastar cech fechtnaige foraraili doib iar ríchtin tire tairngeri* 'each prosperity will be added upon another to them after reaching the Land of Promise'), and the text is to be interpreted as 'he even adds every sin upon the other to him'.

Ml 35c27 *ebert dodomine and* could also be an instance if *ebert* is an accusative and not a nominative; see Section 2 and fn. 25 about the text which precedes.

prepositions is optional, and seems to be expanding. In the Milan Glosses, it looks on its way to being regularly present after some inflected forms, but some phonetic contexts (mainly between dental consonants) hindered its expansion.

The environments where nasalization can be assumed to have occurred regularly are:

- on adjectives and demonstratives and on nouns after prenominal adjectives
- between vowels
- after nominative neuter nouns (when not part of a copular predicate)

The environments where nasalization is less likely to occur are:

- on inflected prepositions (absolutely so on inflected forms of *do* expressing the subject argument of a verbal noun)
- between dental consonants
- after genitive plural nouns (in Wb)

The combination of all these three environments is rather infrequent; anyhow, there is hardly any evidence for nasalization in such a context, and it cannot therefore be assumed to have ever occurred. However, if any of the three conditions is removed, there is evidence that nasalization was noted in writing, albeit errantly, and it should therefore be assumed to have been pronounced at least at some stage in some varieties.

This allows us to hypothesize diatopic and diachronic variation in the occurrence of nasalization in the contexts examined here. Our starting point is the assumption that nasalization (and indeed initial mutations in general) spread much further than its original triggering phonetic contexts during the Old Irish period. That the seeds of analogy were already producing their effects is beyond question: nasalization after neuter *-s-* stems or after *ocht*, for example, are cases in point. Even if one speculates that in these cases a pre-apocope final nasal, rather than initial nasalization, might have been the effect of analogy, the data reported here suggest that some degree of analogical spreading of nasalization across noun phrases took place during the Old Irish period.

Although the distribution of nasalization after inflected nominals in Old Irish cannot be plotted with respect to modern Gaelic dialects, as this kind of nasalization has been lost throughout all varieties, I argue that its blocking vs. expansion may lie behind the diverging developments of nasalization in Scottish Gaelic and Irish.

Drawing on the discussion in Ó Maolalaigh (1995-96), whilst not sharing all his premises and conclusions, I suggest the following scenario. Starting from a stage when some proclitics (articles, prepositions, quantifiers, possessives) caused nasalization but the stressed inflected words following them sometimes did, and sometimes did not, depending on the following word and its initial phoneme, two main directions of development emerged: either nasalization spread to the whole phrase, affecting all words which could be felt as belonging to the same phrase, be they agreeing words or not, or nasalization continued to be hindered on some stressed words and in some phonetic contexts. The consequence of these two developments was that in some varieties nasalization became a regular effect triggered by some inflected forms, while in others it retreated. The only context where it was regular in the latter was on agreeing words and on initial and after final vowels. Thus, the main reason why the nasal segment could be reassigned in Scottish Gaelic, where only proclitic words with nasal codas nasalize, whether they originally ended in a nasal or a vowel, may be grounded on frequency of nasalization throughout the noun phrase. Otherwise the argument put forward by Ó Maolalaigh (1995-96, 165) that the spread of the prevocalic allomorph is too narrow an analogical base to explain the Scottish Gaelic distribution of nasalization could also apply to his explanation. In other words 'the use of radical /b d g/ following eclipsing particles with consonantal codas' is too narrow an analogical base to lead to 'non-eclipsis of /k t p f/ and to the loss of non-radical nasals before vocalic onsets' (*ibidem*) and also, on the other hand, to lead to nasalization after originally non-nasalizing particles such as the singular masculine article⁴⁶.

⁴⁶ In his view, this cannot be explained as a generalization of the accusative form.

Either the split between Gaelic dialects is already reflected in the different pictures offered by Wb, Sg and Ml, or Sg, and possibly Ml, simply reflect a later stage, which in some varieties may have gone even further. In either case, the roots of the dialectal split can be traced back to the Old Irish period.

Abbreviations

GOI = R. Thurneysen (1946) *A grammar of Old Irish*. Dublin: Dublin Institute for Advanced Studies.

Thes. Pal. = W. Stokes and J. Strachan (1901-03) *Thesaurus Palaeohibernicus*. II vols., Cambridge (repr. Dublin, Dublin Institute for Advanced Studies). Ml, Tur, Wb, Sg = the Milan, Turin, Würzburg and St. Gall Glosses in *Thesaurus Palaeohibernicus* (*Thes.* I: 7-483; *Thes.* I: 484-494; *Thes.* I: 499-714; *Thes.* II: 49-224).

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