The computer analysis of medieval Irish English

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1. Introduction

The history of English in Ireland began in the late 12th century with the coming of Norman settlers who had English speakers (along with some Welsh and Flemish) in their retinue. The long-term effect of this initial settlement was the virtually complete Anglicisation of Ireland. However this did not involve a simple substitution of Irish by English. The fortunes of English in the beginning suffered some reverses due to the resurgence of Gaelic culture in the centuries after the coming of the original settlers. This phenomenon provides the historical justification for dividing the development of English in Ireland into two main periods. The first is that of medieval Irish English which lasted from the end of the 12th to at least the 15th century and the second is the modern period which began in the early 17th century with the demise of the Gaelic social and political order as a consequence of military defeat by the English. One of the immediate effects of the latter was the spread of new varieties of English, particularly with the settlement of relatively large numbers of ‘planters’ as of the mid 17th century.

At the time of the first English incursions in the latter half of the 12th century the linguistic situation in Ireland was quite homogeneous. It is true that in the 9th century Ireland was ravaged by Scandinavians just like the rest of Britain but these had settled down in the following three centuries and become assimilated with the native Irish population much as they did in other countries, such as England and France. For the period of the initial invasions from England one can assume, in contradistinction to various older authors such as Curtis (1919: 234), that the heterogeneity which existed was more demographic than linguistic.

What is difficult to reconstruct for this early phase of settlement from England is the qualitative relationship of the English to the Anglo-Normans or indeed to what extent they were entirely different. Certainly the military leaders were unequivocally Anglo-Norman and there are many records of their not being able to speak English. Anglo-Norman seems to have been maintained well into the 14th century as the famous Statutes of Kilkenny of 1366 (Lydon 1973: 94ff.) testify; these were composed in Anglo-Norman and admonished both the native Irish population and the descendants of the original invaders to speak English. The large number of Anglo-Norman loanwords in Irish (Risk 1971: 586ff.) which entered the language in the period after the initial invasion testifies to the existence of Anglo-Norman on Irish soil from the mid 12th century to at least the 14th century.

English would appear to have established itself in Ireland above all in the towns after the 12th century. The English settlers were on a level below the Norman military aristocracy and were typically traders and craftsmen. They settled in the east and south...
east of Ireland and introduced their language into such towns as Waterford and Wexford in the south-east corner of the country and of course into the capital Dublin. In these areas English was never to die out despite the resurgence of the Irish which set in quite soon after the invasions by the Anglo-Normans. There are obvious reasons for this Gaelicisation of the invaders. Their numbers were small compared to the native Irish and they showed the same willingness to adopt the language of their host country as their Scandinavian predecessors had done in northern France a few centuries previously. And of course the Anglo-Normans were interested in establishing a base in Ireland quite separate from England and espousing the Irish language was just one way of reinforcing this.

2. Documents of medieval Irish English

Irish English of the late Middle Ages is recorded in two main sources. The first is the Kildare Poems and the second the so-called Loscombe Manuscript. The term Kildare Poems is used as a cover term for 17 poems which are scattered among Latin and Old French\textsuperscript{1} items of poetry in the Harley 913 manuscript of the British Museum.\textsuperscript{2} Their Irish source is evident both from their theme and their language. The term ‘Kildare’ may in fact not be appropriate, there are suggestions that the verse was produced in Waterford; the case for Kildare is based on the explicit mention of one Michael of Kildare as author of a poem. The series was (first) critically edited by Wilhelm Heuser in 1904 in the Bonner Beiträge zur Anglistik. [A new edition is presently being prepared by Angela Lucas in Dublin.] There are a few fragments contained in an addendum by Heuser (1907) not included in the original edition.

The Loscombe Manuscript contains two poems („On blood-letting“ and „The virtue of herbs“) which according to the analyses of Heuser (1904: 71-75), Irwin (1933) and Zettersten (1967) are to considered without a doubt as Irish.

Irish English of the 14th century is recorded briefly in a couple of other sources. In an account book of the Priory of Holy Trinity Chapel in Dublin the play „Pride of Life“ was discovered (Davis 1970). The manuscript was prepared around 1340 (Heuser 1904: 66). Another source is the Acts and Statutes of the City of Waterford from 1365. There is also a poem „Treatise on Gardening“ which is considered of Irish origin (Bliss 1984:32f.). Although there is no critical edition of these, there are remarks on their language in Henry (1958: 66). There are a few further manuscripts which are either positively Irish or which can be assumed with reasonable certainty to be so. These are listed in McIntosh and Samuels (1968).

One should perhaps mention the set of tablets known as the Slates of Smarmore, found near Ardee in Co.Louth (north central Ireland) and which consist of medieval inscriptions of a largely medical nature (see Britton and Fletcher 1991 and Bliss 1965 for analyses).

3. A description of the Kildare Poems

It is difficult to say to what extent the Kildare Poems can be viewed as a true representation of Irish English in the 14th century. They appear to be fairly close to the orthographic practices of Middle English of the time. Nonetheless one can refer to the recurring deviations from mainland Middle English and can evaluate them on the one hand in the light of dialects of west and south-west England, which formed the initial
input of English in Ireland, and on the other in respect of contact Irish English today with a view to reconstructing a reasonably reliable picture of medieval Irish English. A third factor should be considered if one were dealing with the morphology. This is the extent to which the forms found in medieval Irish English might have been hybrid compromise forms preferred in a community whose speakers had heterogenous dialectal backgrounds on mainland Britain (a view proposed by Samuels (1972: 108) and echoed by later scholars such as Bliss).

Before analysing the language of the *Kildare Poems* it is necessary to bear some general facts concerning the environment in which we can assume the poems to have been composed. The first point to note is that there is very little material in English from the medieval period. This may of course be a matter of survival: we are safe in assuming that not everything which was written has been handed down to us. The fairly consistent orthography of the *Kildare Poems* would imply that a degree of agreement had been reached on the spelling of Irish English through a body of writing greater than what is now extant. Nonetheless the conclusion to be drawn from the paucity of attested documents is that there were relatively few speakers, and hence much fewer writers, of English in 14th century Ireland. Furthermore they must have been under the strong influence of Irish speakers who surrounded them. The language of the *Kildare Poems* exhibits two features which betray this. Firstly the language is fairly standard, as one would expect from writers for whom English was very likely a second language or at least as a language which was maintained consciously through literacy. Secondly, those non-standard features which are to be found in the poems stem by and large from the Irish background against which composition in English took place in medieval Ireland. It is remarkable that many authors fail to realise this. Thus Kallen in his overview of Irish English (1994: 171) lists nine features of early Irish English, eight of which have a demonstrably Irish source, without indicating this. The remaining source of special features of the *Kildare Poems* is the dialect mixture, referred to above, which resulted from the diverse English backgrounds of the original settlers in Ireland.

4. Analysis of the *Kildare Poems*

In the context of the present volume the main question for which an answer is sought is to what extent the processing of a text collection such as the *Kildare Poems* on a computer can be of assistance to the linguist. Computer analysis of text has been used in the past with reasonable success for authorship decisions. For the matter at hand, however, there is no possibility of gaining information about the author or authors of the *Kildare Poems*. Decision-making procedures concerning authorship can only be applied where one has on the one hand one or more texts which are unequivocally by a certain author and on the other hand a disputed text or texts. Here comparisons of style and of linguistic habits can offer insight into possible authorship as has been done for plays which have been attributed to Shakespeare (Hope 1994).

Nonetheless there are matters which can be clarified, if not decided with certainty, by means of processing of the *Kildare Poems* on computer. As an example I have chosen a matter which has been the object of controversy and alternative analyses in recent years. Before proceeding with this a few words on the technique used here are called for.
4.1 The Kildare Poems and the Corpus of Irish English

For the present investigation the Kildare Poems were examined in an electronic form. The files which contain them are part of the Corpus of Irish English which is currently being compiled by the present author and which is nearing completion. There are several works gathered in the medieval section of the corpus, for instance the Loscombe Manuscript, fragments of lyrics from the period, an extract from the morality play Pride of Life and of course the Kildare Poems themselves. The forms listed below have been taken from this edition; the numbers refer to the line numbers of the main file containing the poems, KILDARE.CIE. Where there are more than four occurrences of an item this number is given and not the lines on which they occur. The text was processed using the corpus processing system Lexa by the present author (Hickey 1992, 1994), specifically the retrieval programmes Lexa Pat and Lexa Context (Hickey 1992: 187-208, 215-219; 1994: 91-97, 83-89).

Before reporting on the analysis of the Kildare Poems it should be mentioned that for such Middle English texts as these the variations in spelling can prove a considerable hindrance to processing on a computer above all to the many types of retrieval tasks one may wish to perform. One solution to this quandary is to normalise the texts involved. By this is meant that the characters not present in present-day English orthography could be substituted by digraphs, eg Δ ‘yogh’ by gh, so that they could be integrated into information retrieval tasks without impinging on the textual integrity of the original. However in the present instance this normalisation was not in fact necessary as the Lexa suite of programmes provides the option of treating any character or set of characters as equivalent to any other character or set of characters. By means of what is termed a ‘correspondence and equivalence file’ it is possible to specify in advance that, for instance, ñ ‘yogh’ is equivalent to gh, p ‘thorn’ and ñ ‘eth’ to th, etc. The effect of this is that, when entering a search string with ñ ‘yogh’, a more or less modern spelling can be used, e.g. typing thruh will find both thruh and thruñ, assuming that these forms are present in the text examined.

4.2 Open syllable lengthening in medieval Irish English

The term ‘open syllable lengthening’ has been used since the end of the last century when Karl Luick devised the term for a lengthening of vowels in the early Middle English period in which inherited short vowels which occurred in open syllable position were lengthened, this accounting for the long vowels in words like nose and meat in Modern English.

The original analysis whereby the open nature of the stressed syllable was responsible for the lengthening has been questioned in the last decade or so. The current discussion was triggered by Donka Minkova’s 1982 analysis of the phenomenon in which she saw the loss of post-stress short /-ð/ as being the trigger for the lengthening of the stressed vowel, i.e. the change was a kind of quantity adjustment on the loss of the short final vowel. More recent analyses, such as that of Nikolaus Ritt, see the lengthening as deriving from a variety of contributing factors. Ritt notes that the high vowels /i/ and /u/ do not undergo lengthening, or hardly at all, so that words like pity and city retain a short stressed vowel although they match the structural description for the lengthening rule. Contrariwise he notes that words with the low vowel /a/ always partake in the
lengthening process, i.e. there would appear to be no words of the *tale* type which do not experience lengthening of their stressed vowel. The reason Ritt puts forward is that low vowels have greater sonority (openness, lack of constriction in the supra-glottal tract) than high vowels and this favours the application of a tendency to lengthening such as was present when the phenomenon known as ‘open syllable lengthening’ was active. Evidence from other languages supports the contention that low vowels tend to lengthen more than high ones, for instance in Modern Irish there is a lengthening of short /a/ to [a:] but not of /i/ or /u/ (Hickey 1986).

Bearing the above situation in mind one can now turn to the *Kildare Poems* to see whether they offer unambiguous evidence either for or against open syllable lengthening seeing as how they fall broadly into the period when this phenomenon was taking place in mainland Britain.

### 4.2.1 Consonant doubling

Among the peculiarities of the *Kildare Poems* and the *Loscombe Manuscript* is the doubling of consonants in a word-internal position. This doubling is assumed in the relevant literature to be a sign of vowel shortness (Zettersten 1967: 15f.; Heuser 1904: 34; Henry 1958: 65).

\begin{align*}
\text{(1)} & \quad \begin{array}{ll}
\text{a} & \text{hoppe} (= \text{hope}) \\
\text{b} & \text{nosse} (= \text{nose}) \\
\text{c} & \text{botte} (= \text{but}) \\
\text{d} & \text{bidde} (= \text{bid}) \\
\text{e} & \text{didde} (= \text{did})
\end{array} \quad \begin{array}{ll}
\text{65, 2022} \\
\text{268} \\
\text{2129} \\
\text{1758, 1973} \\
\text{1593, 1603, 1664, 1760}
\end{array}
\end{align*}

The doubling appears in words which have a short vowel in Middle English in general (last three instances above). However in forms such as the first two above this consonant doubling might suggest that, in the language of the *Kildare Poems* and the *Loscombe Manuscript*, there was probably no lengthening of vowels in open syllables. However the matter is not as simple as this; there are several factors which need to be taken into account and these are the subject of the discussion below.

### 4.2.2 Differential lengthening

There may well be a case for a differential application of open syllable lengthening such that primarily the low vowel /a/ was lengthened if one is correct in assuming that a single consonant after a stressed vowel indicates that the latter was long, cf. forms of the verb *make* such as *makid* ‘made’. Two difficulties arise here, however. The first is that the assumption that single consonants indicate preceding long stressed vowels implies a very consistent use of orthography which simply may not have held. This is particularly true if one bears in mind that it is not certain whether the *Kildare Poems* were composed by a one or more authors. The second difficulty concerns the nature of the phenomenon which is termed ‘open syllable lengthening’ in the traditional literature. If it is the case, as Minkova (1982) has demonstrated with considerable conviction, that the vowel lengthening was due to loss of the schwa in forms analogous to those in (1a+b) above then a form like *makid* should at best only show lengthening by analogy with the uninflected form of the infinitive as there is no alteration in the quantity of the preterite form until the internal /k/ is deleted.
Of assistance in deciding on the present matter may be variant spellings in the *Kildare Poems*. One of these, ‘Pers of Birmingham’, has monosyllabic words with reflexes of Old English /a/ (or /a/ from Scandinavian) and a final -e, e.g. *make, take*. If Minkova’s thesis that the loss of schwa led to vowel lengthening as a kind of quantity compensation is valid then one can assume a long /a:/ in *nam* ‘name’ and indeed in *make* as this has the variant *mak*. Consider that with the 26 instances of the verb *take* and the 34 of *make* all have the spelling -ak(-), i.e. there is no indication of a short vowel before the final consonant. In fact of all the 11 instances of -kk- none occur in words with long vowels in later standard English, cf. the etymologically short vowels as in *sakke, blakke, lakke*, etc. These spellings would furthermore show that the final -e is not phonetic.

For the verbs *make* and *take* the short forms, i.e. imperative and infinitive, have the following distribution in the *Kildare Poems*.

<table>
<thead>
<tr>
<th>Verb</th>
<th>Frequency</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>make</em></td>
<td>7 instances</td>
<td><em>mak</em> (3 instances)</td>
</tr>
<tr>
<td><em>take</em></td>
<td>5 instances</td>
<td><em>tak</em> (11 instances)</td>
</tr>
</tbody>
</table>

If the -e in the above forms was phonetic then it is most unlikely to be dropped in repeated occurrences of the same word in the same short text. Furthermore the form *mak* rhymes with the form *sake* in ‘Pers of Birmingham’ which is another indication of a purely orthographic -e. If the rhyming evidence holds then one can safely assume general lengthening of the low vowel /a/ as *nam(e)* rhymes with *game* and *mak(e)* with *take*.

A further question which arises with the orthography above is whether there was a phonetic basis for this doubling, ie whether geminates still existed in this variety of Middle English. It is safe to assume that at this period consonant quantity differences had already been lost (Jespersen 1909: 146; Jordan/Crook 1974: 152; Kurath 1956: 441). But in Irish the phonological distinction between long and short consonants in this position still existed at this time and indeed is retained in Donegal Irish (Wagner 1979: 16; Ó Baoill 1979: 88). While the possibility that the length difference was maintained in this variety of English because of preservative interference from Irish cannot be dismissed entirely, the orthographic evidence suggests that the consonant doubling had the purpose of indicating vowel shortness because the forms which exhibit such doubling do not necessarily have to be reflexes of older forms with geminates in Old English. In the non-literary texts of Irish English in the 14th and above all in the 15th century such consonant doubling is frequent with words where the only interpretation is as an indicator of vowel shortness.

<table>
<thead>
<tr>
<th>Letter</th>
<th>Example</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td><em>lyff</em></td>
<td>(= <em>life</em>)</td>
</tr>
<tr>
<td>b</td>
<td><em>wrytt</em></td>
<td>(= <em>write</em>)</td>
</tr>
<tr>
<td>c</td>
<td><em>gottes</em></td>
<td>(= <em>goats</em>)</td>
</tr>
<tr>
<td>d</td>
<td><em>strettes</em></td>
<td>(= <em>streets</em>)</td>
</tr>
</tbody>
</table>

(3)  

4.2.3. Final unstressed schwa

Especially in view of Minkova’s thesis that the loss of final schwa played a decisive role in quantity adjustments in Middle English the question as to whether this schwa existed in medieval Irish English is central to the present discussion.

The final *e*, which according to many linguists (Jespersen 1909: 186f.; Prins 1974: 176) was pronounced until the 14th century, was apparently silent in the language of the *Kildare Poems*. Evidence for this is to be seen in spellings without the final *e*, see
the occurrence of forms both with and without -e given for make and take above. But the clinching evidence comes from cases of reverse spellings in which a non-etymological -e appears finally.

(4)  

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>dwelle</td>
<td>(318, 395, 871, 935)</td>
</tr>
<tr>
<td>b</td>
<td>welle</td>
<td>(8 instances)</td>
</tr>
<tr>
<td>c</td>
<td>helle</td>
<td>(32 instances)</td>
</tr>
</tbody>
</table>

These spellings are just as firm evidence as are late Middle English written forms with igh for /iː/ in forms without an etymological /x/, this then showing the loss of the /x/ sound as in wright for write (Wyld 1936: 305).

The conclusion to be drawn here is that a final schwa did not exist in the variety of medieval Irish English embodied in the Kildare Poems. It is however doubtful whether the loss of quantity caused by the deletion of this element is the sole criterion for the occurrence of open syllable lengthening. At least one further feature must be taken into account.

4.2.4. Length and number of syllables

In the discussion of Middle English open syllable lengthening the question of syllable number in a word is increasingly seen to be of relevance. A general truism of phonetics is that words of one syllable have a longer vowel phonetically than those with more than one vowel which is the same phonologically. Hence the vowel in mad is longer than that in madder in Modern English. Applying this knowledge to Middle English would lead one to expect a similar distribution of phonetic vowel quality.

The Kildare Poems offer evidence of just such a distribution. If one considers the forms of the verb have in this collection then one sees that there are 9 instances of habb(e) with double consonant spelling but only 1 instance of habi. The bare form of the verb, infinitive or imperative, is always written hab (31 instances). Remarkably there is no instance of habb(e), i.e. with the exception of the one form habi there is a complementary distribution between the double spelling in words of two syllables and the single spelling in monosyllables. If one interprets the double consonants as an indication of shortness of the preceding vowel then one has for the Kildare Poems a distribution of vowel length in forms of the verb have such that a long vowel occurs in monosyllabic and a short vowel in disyllabic forms. The reading of double consonants as indicators of vowel shortness is again supported in the Kildare Poems by such verbs as libbe (= live) of which there are 6 instances and only one instance of lib with a single consonant.

Of the various vowel types above the high vowels are not subject at all to lengthening. There are no instances of high back vowels which are lengthened and lowered in the Kildare Poems. The two occurrences of wode are not from Old English wudu ‘wood’ but the word for ‘mad’ (lines 649 + 1147). Old English duru ‘door’ which would provide a possible case of lengthening is not attested and as Wehna (1978:81) points out there are no other clear cases of lengthening of late Old English /u/ in open syllables.
Open syllable lengthening in the *Kildare Poems*

<table>
<thead>
<tr>
<th>High vowels</th>
<th>Monosyllabic forms</th>
<th>Disyllabic forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>back /u/</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>front /i/</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mid vowels</th>
<th>Monosyllabic forms</th>
<th>Disyllabic forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>back /o/</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>front /e/</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low vowel /a/</th>
<th>Monosyllabic forms</th>
<th>Disyllabic forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>yes/no</td>
<td></td>
</tr>
</tbody>
</table>

Front high vowels are not subject to lengthening either. Original short high front vowels are retained, again going on the interpretation of double consonants assumed in the present paper. The verb *witān* appears with the expected short vowel as in *ye witte* (= *you know*) (2238). The adjectival form derived from this is also attested with a short vowel: *witi* (913,914).

There is an important issue of chronology which should be addressed here. It is generally assumed that the *Kildare Poems* were composed in the first quarter of the 14th century. Now open syllable lengthening is taken to have first affected the mid and low vowels /e, o, a/ and later the high vowels /i,u/, starting in the north of England in the latter half of the 13th century and spreading southwards in the course of the 14th century. This could well have meant that the lack of lengthening for high vowels in the *Kildare Poems* could be due to the separation of speakers of English in Ireland from mainland Britain before the change had been generalised throughout England. But even if this were the case it does not invalidate the linguistic suggestion that the high vowels did not lengthen in medieval Irish English because of their slight sonority compared with lower vowels. If open syllable lengthening was present for low and some mid vowels then forces of analogy could have been enough to act towards lengthening of high vowels. That this did not take place can be attributed after all to the low sonority and close articulation of high vowels.

5. Conclusion

The examination presented here is of general relevance to the phonology of Middle English and the quantitative analysis of the attestations of medieval Irish English lends credibility to the view that open syllable lengthening did not apply across the board but was sensitive to at least three factors: 1) loss of final schwa which apparently had occurred in Irish English before the *Kildare Poems* were composed, 2) relative height of the vowels which represented possible input to the change, where the high vowels were least likely to undergo the shift and low vowels the most likely and 3) the number of syllables in a word, as least in the case of the verb *have*, would seem to have played a role with monosyllables being most likely to experience vowel lengthening.
Notes

1. The two main items in Old French are „The song of Dermot and the earl“ (Long 1975) and „The Walling of New Ross“ (Shields 1975-6); for brief remarks see Bliss and Long (1987:710).

2. See Kosok (1990:22) for general remarks on the quality of Heuser’s editorship; Lucas and Lucas (1990) give a detailed account of the problems of reconstructing the manuscript.

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