

Long o-type vowels in Cornish

by

Dr Ken George
Cornish Language Board
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ABSTRACT

In Middle Cornish there were two long o-type vowels: /ɔ:/ from Old Cornish /ɔ:/, and /o:/ from the monophthongization of Old Cornish /ui/. A recent suggestion by Williams, that these two long vowels fell together, is refuted.

1 INTRODUCTION

Apart from in a few disyllabic words which had final stress, long vowels in Cornish occurred in stressed monosyllables. Old Cornish had only one long mid-back (rounded) vowel, represented here by /ɔ/, and spelled <o>. In Middle Cornish, in addition to the reflex of Old Cornish /ɔ/, there was a second long mid-back rounded vowel, denoted here by /o/. As shown by the present author, (George, 1984), this arose when the reflex of the Old Cornish diphthong /ui/ became a monophthong. The difference between the two vowels was phonemic; thus the word for ‘noise’ and the word for ‘foot’ were not homophones in Middle Cornish, but a minimal pair. The difference persisted into Late Cornish.

It was considered desirable to reflect the phonemic differences between the two long mid-back vowels in the revived Cornish spoken at the present time, and this was achieved when the revision known as *Kernewek Kemmyn* was introduced. The grapheme <o> was retained for /ɔ/, and <oe> was introduced for /o/ (George, 1986). Previously, in the orthography known as Unified Cornish (Nance, 1929), the words for ‘noise’ and ‘foot’ were spelled identically, as *tros*. In *Kernewek Kemmyn*, they are distinguished as *tros* and *troes* respectively.

These views have been challenged by Dr Nicholas Williams (1995, 1996); he argued that the reflex of Old Cornish /ui/, when monophthongized, fell together with the reflex of Old Cornish /ɔ/, i.e. he maintained that there was only one long mid-back vowel in Middle Cornish, and that in consequence there is no need to have two different graphemes in the revived language.

In this paper, the question is examined in detail. Firstly, the sources of the long mid-back vowels are investigated. Then evidence is presented from traditional orthography, from rhyme-schemes and from place-names to show that there were in fact two distinct long mid-back vowels, and not one as claimed by Dr Williams.

2 SOURCES OF MIDDLE CORNISH /ɔ/

Middle Cornish /ɔ/ came from Old Cornish /ɔ/, which had two main sources:

- (a) Primitive Cornish /ɔ/ < Late British *o*, itself from:
 - (i) British *o*, e.g. *mor* ‘sea’ (cf. Breton *mor*, Welsh *mor*);
 - (ii) British Latin *o*, e.g. *porth* ‘harbour’ (cf. Breton *porzh*, Welsh *porth*);
- (b) Primitive Cornish /u/ < Late British *u*, itself from:
 - (i) British *u*, e.g. *frot* ‘stream’ (cf. Breton *froud*, Welsh *ffrwd*)
 - (ii) British Latin *u*, e.g. *forn* ‘oven’ (cf. Breton *forn*, Welsh *ffwrn*).

When stressed, the reflex of Primitive Cornish /u/ was lowered, and it fell together with that of Primitive Cornish /ɔ/. In addition, Middle Cornish had a number of loan-words containing Middle English /ɔ:/, e.g. *rol* ‘list’.

Table 1 shows the commonest examples of words containing the reflex of Primitive Cornish /ɔ/ and /u/ when long in stressed closed monosyllables; the words in the table occur at least 20 times in the corpus.

Group 1a		<i>Table 1</i>		
<u>COMMON SPELLINGS OF WORDS CONTAINING MIDDLE CORNISH /ɔ:/</u>				
KERNEWEK KEMMYN	ENGLISH MEANING	OLD CORNISH	MIDDLE CORNISH	LATE CORNISH
<i>bos</i>	to be	-----	<i>bos, boys</i>	<i>bos, bose, boz, bēz</i>
<i>bodh</i>	will	-----	<i>both</i>	<i>both, bothe</i>
<i>dos</i>	to come	-----	<i>dos, doys</i>	<i>doaz, dose, dēz</i>
<i>drog</i>	evil	<i>drog</i>	<i>drok, drog</i>	<i>drog, drôg, droag</i>
<i>flogh</i>	child	<i>floh</i>	<i>flogh</i>	<i>floghe, flô</i>
<i>koth</i>	old	<i>coth</i>	<i>coth</i>	<i>coth, côth</i>
<i>mor</i>	sea	<i>mor</i>	<i>mor, more</i>	<i>mor, môr</i>
<i>nos</i>	night	<i>nos</i>	<i>nos</i>	<i>noz, nôz, noos</i>
<i>plos</i>	dirty	-----	<i>plos</i>	<i>plos, ploos</i>

N.B. The grapheme <oy> for this sound is found almost exclusively in *Beunans Meriasek*.

3 THE DEVELOPMENT OF PRIMITIVE CORNISH /oi/ AND /ui/

These two diphthongs, represented by <oe> and <wy> respectively in Modern Welsh, fell together partially in Breton, and completely in Cornish; see Jackson (1953, §§27-28). According to Jackson (1967, §254n), this fusion occurred before the earliest known written sources, but apparently after the loss of /ɣ/ c.850: otherwise Primitive Cornish /trɔɣed/ ‘foot’ would have become OldC *troet instead of truit (VC...95). Subsequent development of the combined diphthong depended upon its phonetic environment.

3.1 Development when stressed before a consonant

This is illustrated in Table 2 (reproduced from George, 1984). Words in class A and class C developed normally in Welsh and Breton, but words in class B changed their path from the /ui/ to the /oi/ phoneme in Breton (Jackson 1967, §258). All of the words in the table were spelled with <ui> in *Vocabularium Cornicum*, and with <û> by Lhuyd.

<i>TREATMENTS OF /oi/ AND /ui/ IN BRITTONIC</i>					<i>Table 2</i>
CLASS	ENGLISH	MODERN WELSH	MODERN BRETON	OLD CORNISH	LATE CORNISH
A	food	<i>bwyd</i>	<i>boued</i>	<i>buit</i>	<i>bûz</i>
A	grey	<i>llwyd</i>	<i>loued</i>	* <i>luit</i>	<i>lûdzh</i>
A	weight	<i>pwys</i>	<i>pouez</i>	* <i>puid</i>	<i>pûz</i>
A	net	<i>rhwyd</i>	<i>roued</i>	<i>ruid</i>	<i>rûz</i>
B	goose	<i>gŵydd</i>	<i>goaz</i>	<i>guit</i>	<i>gûdh</i>
B	shoulder	<i>ysgwydd</i>	<i>skoz</i>	<i>scuid</i>	<i>skûdh</i>
C	wood	<i>coed</i>	<i>koad</i>	<i>cuit</i>	<i>kûz</i>
C	Moon	<i>lloer</i>	<i>loar</i>	<i>luir</i>	<i>lûr</i>
C	age	<i>oed</i>	<i>oad</i>	<i>huis</i>	<i>ûz</i>
C	foot	<i>troed</i>	<i>troad</i>	<i>truit</i>	<i>trûz</i>

Tables 3a and 3b are more complete, in that they give all stressed monosyllables which contain the reflex of Old Cornish /ui/ and are found in the extant traditional Cornish literature. Three further words appear as elements in place-names (Padel, 1985): *moel* ‘bald’, *moen* ‘ore’ (only in compounds), and *poeth* ‘scorching’. From the line:

OM.2789 *ha poynyn gans mur a grys* ‘and let us run with much energy’
 we may surmise the existence of *poen* ‘runs with effort’.

*Table 3a****STRESSED MONOSYLLABLES CONTAINING <oe> IN KERNEWEK KEMMYN***

KERNEWEK KEMMYN	ENGLISH MEANING	OLD CORNISH	MIDDLE CORNISH	LATE CORNISH
Group 2a	<i>before consonants other than nasals and liquids, historically</i>			
<i>bloedh</i>	year of age	----	----	<i>blooth, bloath</i>
<i>boes</i>	food	<i>buit</i>	<i>bos, boys, bous</i>	<i>bûz, booz</i>
<i>froeth</i>	fruit	<i>fruit</i>	----	----
<i>gloes</i>	pang	----	<i>glos, gloys, glous</i>	----
<i>goedh</i>	goose	<i>guit</i>	<i>goth, goyth</i>	----
<i>goedh</i>	wild	<i>guit</i>	----	----
<i>goes</i>	blood	<i>guit</i>	<i>gos, goys, gois</i>	<i>gûdzh</i>
<i>goeth</i>	pride	<i>goth</i>	<i>goth</i>	<i>goth</i>
<i>goeth</i>	stream	<i>guid</i>	<i>goth</i>	----
<i>koedh</i>	falls, behoves	----	<i>coth, coyth, couth</i>	----
<i>kloes</i>	hurdle	<i>cluit</i>	<i>clos, cloys</i>	<i>close</i>
<i>koeg</i>	empty	<i>cuic</i>	<i>cok</i>	----
<i>koes</i>	wood	<i>cuit</i>	<i>cos, coys</i>	<i>kûz, cooz</i>
<i>loes</i>	grey	<i>-luit</i>	<i>los, loys</i>	<i>lûdzh</i>
<i>loeth</i>	tribe	<i>luid</i>	----	----
<i>moes</i>	table	<i>muis</i>	<i>mos</i>	----
<i>noeth</i>	naked	----	<i>noth, noyth</i>	<i>nooth, noath</i>
<i>oes</i>	age	<i>huis</i>	<i>os, oys, ois</i>	<i>ûz</i>
<i>poes</i>	heavy	----	<i>pos, poys</i>	<i>pûz, pooz</i>
<i>roes</i>	net	<i>ruid</i>	<i>ros, roois</i>	<i>rûz, rooz</i>
<i>sloedh</i>	shoulder	<i>scuid</i>	<i>scoth, scouth</i>	<i>skooth, skodh</i>
<i>scoes</i>	shield	----	<i>scos</i>	----
<i>soedh</i>	office	----	<i>soth</i>	----
<i>soev</i>	suet	<i>suif</i>	----	----
<i>troes</i>	foot	<i>truit</i>	<i>tros, troys, trous</i>	<i>trûz, trooz</i>
<i>troes</i>	starling	<i>troet</i>	----	----

The graphemes <û> and <oo> in Table 3a show that the vowel developed to [u:] in Late Cornish. The occasional use of <ou> in Middle Cornish also suggests a more close realization. Discussion of the words in Table 3b is deferred until section 4.3.

<oe> IN <i>KERNEWEK KEMMYN</i> (continued)				<i>Table 3b</i>
KERNEWEK KEMMYN	ENGLISH MEANING	OLD CORNISH	MIDDLE CORNISH	LATE CORNISH
Group 2b <i>before nasals and liquids, historically</i>				
<i>doen</i>	to carry	-----	<i>don, doyn, done</i>	<i>dûn, doone, dên</i>
<i>goel</i>	feast	<i>guill-</i>	<i>gol</i>	<i>goil</i>
<i>goel</i>	sail	<i>guil</i>	<i>gol, goyl</i>	<i>gôl</i>
<i>goen</i>	sheath	<i>guein</i>	<i>gon, goyn</i>	<i>gûn</i>
<i>goen</i>	downland	<i>guen</i>	<i>gon</i>	<i>gûn, goon</i>
<i>goer</i>	knows	-----	<i>gor, gore, gour</i>	<i>gor</i>
<i>hwoer</i>	sister	<i>puir</i>	<i>wor, hore</i>	<i>hôr, hôar, hoer</i>
<i>koen</i>	dinner	-----	<i>con</i>	<i>kôn</i>
<i>koer</i>	wax	<i>coir</i>	<i>cor</i>	<i>kor</i>
<i>loer</i>	Moon	<i>luir</i>	<i>lor, loer</i>	<i>lûr, loer</i>
<i>moen</i>	thin	<i>muin</i>	<i>mon</i>	-----
<i>oel</i>	weeps	-----	<i>ol</i>	<i>oole</i>
<i>oen</i>	lamb	<i>oin</i>	<i>on, oan, oyen</i>	<i>ôan, oan, oane</i>
<i>oer</i>	cold	<i>oir</i>	-----	-----
<i>soen</i>	bless-	----	<i>son</i>	<i>sone</i>
<i>Stoel</i>	Epiphany	-----	-----	<i>stûl</i>
<i>troen</i>	nose	<i>trein</i>	-----	<i>tron</i>

3.2 Development of Primitive Cornish /oia/ and /uia/

The presence of /a/ after Primitive Cornish /oi/ and /ui/ caused the fused diphthong to evolve differently from the cases just discussed. As shown in Table 4, the grapheme <oe> was used in *Vocabularium Cornicum* instead of <ui>. The orthographic profile of the words in the table suggests that the reflex of Primitive Cornish /oia/ and /uia/ fell together with Middle Cornish /ɔ/.

<i>THE REFLEXES OF PRIMITIVE CORNISH /ui/ AND /oi/</i>					<i>Table 4</i>
Group 1b		<i>before /a/ or finally, historically</i>			
KERNEWEK KEMMYN	ENGLISH MEANING	OLD CORNISH	MIDDLE CORNISH	LATE CORNISH	
<i>boel</i>	axe	----	<i>bool</i>	<i>bûl, boell</i>	
<i>dor</i>	ground	<i>doer</i>	<i>dor, doyr, dore</i>	<i>daôr</i>	
<i>horn</i>	iron	<i>-hoern</i>	<i>horn</i>	<i>hôarn</i>	
<i>hos</i>	duck	<i>hoet</i>	<i>hos</i>	<i>hæz</i>	
<i>klor</i>	mild	----	<i>clor, clour</i>	<i>cloer</i>	
<i>lo</i>	spoon	<i>loe</i>	<i>lo</i>	<i>lo, loe</i>	
<i>molgh</i>	thrush	<i>moelh</i>	----	<i>mola</i>	
<i>mor</i>	blackberries	<i>moyr-</i>	----	-----	
<i>nor</i>	world	----	<i>nor, nore</i>	<i>noer, aor</i>	
<i>o</i>	was	----	<i>o</i>	<i>o</i>	

4 THE SPELLING OF /ɔ:/ AND /o:/ IN MIDDLE AND LATE CORNISH

4.1 Statistical tests on the graphemes

Rather than just examining a few words representing each phoneme, an analysis was made of every case of /ɔ:/ and /o:/ in the entire corpus of traditional Cornish, text by text. The plethora of graphemes used to represent the two phonemes was divided into two types, called X and Y for convenience:

Type X: <o, o-e, ô, ô-e, ôr, oa, oa-e>

Type Y: <oy, oye, oi, oo, ooe, ooi, oo-e, oe, oe-e, ou, ou-e, ov, û, u, ue>

In almost every text, words containing /ɔ:/ and words containing /o:/ were both spelled with a mixture of Type X and Type Y graphemes. This might lead one to suppose, like Dr Williams, that the two phonemes had fallen together, were it not for the different proportions of Type X and Type Y graphemes used in denoting the two phonemes.

If the two phonemes had fallen together, then we would expect the same proportions of Type X and Type Y graphemes for words containing /ɔ:/ as for words containing /o:/. This was not found. In every text except one, in both Middle and Late Cornish, the proportion of Type Y spellings for words containing /o:/ was greater than for words containing /ɔ:/. Now the Type Y graphemes, especially <oo, ooe, oo-e, oe, oe-e, ou, ou-e, û> suggest a closer realization than the Type X graphemes, especially <o-e, ô, ô-e, oa, oa-e>. The evidence therefore points to /o:/ having a closer realization than /ɔ:/. The exceptional text is *Beunans Meriasek*, which is dealt with below.

Statistical tests were applied to determine whether or not the differences in the Type Y/Type X ratio for the two phonemes are significant. The problem is similar to the well-known “dud light-bulb problem”. There are two methods of solution:

- (a) If, in a given text,
P = total number of words containing either /ɔ:/ or /o:/,
p = total number of words containing /o:/,
D = total number of words containing a Type Y spelling,
d = number of words containing /o:/ spelled with a Type Y spelling.
 then the probability π that the subset of size *p* contains *d* Type-Y spellings is given by:

$$\pi = \frac{\frac{D!}{d!(D-d)!} \times \frac{(P-D)!}{(p-d)!(P-D-p+d)!}}{\frac{P!}{p!(P-p)!}}$$

The probability that the two phonemes /ɔ:/ and /o:/ had fallen together is approximated by the probability Π that the subset of size *p* contains at least *d* Type Y spellings: this is found by integrating the above formula.

- (b) or one can apply a χ^2 test.

The results of the tests are shown in Table 5. In some cases, only the upper limit of the probability Π could be calculated, because of the limits of the χ^2 tables available; in others, the note “too large” indicates that the samples were too large for the available computing power. The probabilities are all very small, which demonstrates conclusively that the spellings of /ɔ:/ and /o:/ in stressed closed monosyllables were significantly different, in both Middle Cornish and Late Cornish. From this, it is reasonable to suppose that their pronunciations were different, i.e. that they had not fallen together. The tests do not tell us what the pronunciations were, nor do they indicate whether all words containing the reflex of a particular phoneme behaved similarly (see section 4.3). The analysis did, however, suggest that the word for ‘speed’ should be spelled in *Kernewek Kemmyn* with <oe>, i.e. *toeth*, rather than with <o> (cf. Breton *tizh* ‘speed’, Welsh *taith* ‘journey’).

An interesting parallel is afforded by the representation of /ð/ and /θ/ finally in stressed monosyllables. In the Ordinalia, both phonemes were almost invariably (i.e. in over 99% of cases) spelled <th>. Nance used the same spelling convention in Unified Cornish, thus making no distinction in writing between *lath* /lað/ ‘kills’ and *lath* /laθ/ ‘wand’. Williams (1995, §17.12) argued that, because they were pronounced differently, they should be spelled differently in the revived language; following scholars from Lhuyd onwards, he uses <th> for /θ/ and <dh> for /ð/. By far the commonest spelling in the Ordinalia, for both /ɔ:/ and /o:/, was <o>, and this was the grapheme used by Nance in Unified Cornish. Now that we know that there were two sounds involved, it again makes sense to spell them differently. Yet Dr Williams refuses to apply the same principle to /ɔ:/ and /o:/ as to /ð/ and /θ/.

<i>ANALYSIS OF SPELLINGS IN CORNISH TEXTS</i>					<i>Table 5</i>	
Type	Words with /ɔ:/		Words with /o:/		Probability Π	
	X	Y	X	Y		
MC.	127	7	12	32	(a) < 0.001 (b) 8.88 x 10 ⁻¹⁸	
OM.	291	3	39	10	(a) < 0.01 (b) 3.08 x 10 ⁻⁷	
PC.	362	3	76	15	(a) < 0.001 (b) 5.67 x 10 ⁻⁹	
RD.	313	2	43	6	(a) < 0.05 (b) 1.02 x 10 ⁻⁴	
BM.	273	179	61	66	(a) ~ 0.015 (b) too large	
TH.	366	23	80	57	(a) < 0.001 (b) too large	
SA.	41	4	13	35	(a) < 0.001 (b) 1.21 x 10 ⁻¹⁰	
CW.	233	42	29	23	(a) < 0.001 (b) 9.05 x 10 ⁻⁶	
17th cent.	97	7	16	15	(a) < 0.001 (b) 6.40 x 10 ⁻⁷	
18th cent.	67	1	0	16	(a) < 0.001 (b) 2.82 x 10 ⁻¹⁶	

4.2 /ɔ:/ and /o:/ in *Beunans Meriasek*

Williams gave examples of rhymes and spellings in *Beunans Meriasek*, remarking that “*Kernewek Kemmyn* is based on BM”. This remark is incorrect. *Kernewek Kemmyn* is based on **all** texts in traditional Cornish. He wrote (1996, §A2.3) “Let us assume that the two vowels /o:/ and /ɔ:/ are separate phonemes. We would then expect the two phonemes to be spelt differently.” He then gave a number of examples which showed that in *Beunans Meriasek*, both /ɔ:/ and /o:/ were frequently spelled as <o> and as <oy>, concluding that: “It is evident from the orthography of BM. there was no longer any distinction between the two vowels /o:/ and /ɔ:/”.

If the data from *Beunans Meriasek* are examined in detail, it is observed that the calculated chance that /o:/ and /ɔ:/ had fused, although still small, appears greater than in the other texts. This is because it was more important to the author, Radulphus Ton, to mark the quantity of vowels than their quality. For instance, he used <ey> to denote [ɛ:], [ɪ:], and [i:] as well as [ei]. For the long mid-back vowels, he used <oy> to denote both [ɔɪ] and [o:]. This apparently misled Williams into thinking that the two sounds had fallen together.

<u>ANALYSIS OF SPELLINGS IN BEUNANS MERIASEK</u>					<u>Table 6</u>	
Type	Words with /ɔ:/		Words with /o:/		Probability Π	
	X	Y	X	Y		
<i>BM.</i> <i>1st day</i>	150	82	34	46	(a) < 0.001 (b) 4.43 x 10 ⁻⁴	
<i>BM.</i> <i>2nd day</i>	123	97	27	20	(a) > 0.05 (b) 0.64	
<i>BM</i> <i>first 10 pp.</i>	23	1	3	6	(a) < 0.015 (b) 4.84 x 10 ⁻⁴	

Beunans Meriasek was written for performance over two days, and thus falls into two parts. Table 6 shows that there is more apparent confusion between /ɔ:/ and /o:/ in Part 2 than in Part 1. It is also known that the first ten pages of the play were written in a different hand, apparently later than the remainder. If these ten pages are analysed separately, they show that /ɔ:/ and /o:/ were more clearly distinguished than in Part 2. If, as Dr Williams suggests, the two phonemes were falling together, then we would expect them to be less clearly distinguished in the revised portion, not more.

4.3 The reflex of Old Cornish /ui/ before liquids and nasals

Williams (1996, §A2.0) pointed out that the Late Cornish forms of the words for ‘lamb’, ‘supper’, ‘wax’, ‘sister’, ‘to carry’ and ‘knows’ do not fit the development Middle Cornish /o:/ > Late Cornish [u:], and suggested that they developed as [ɔ:]. It is evident that all of these words end in a nasal or a liquid consonant. One might be tempted to postulate that, before a nasal or liquid, Middle Cornish /o:/ became [ɔ:], were it not for the fact that some other words do not follow the same pattern. A full list of words containing the reflex of Old Cornish /ui/ before a nasal or liquid consonant is given in Table 3b.

Not all words in Table 3b behaved as suggested by Dr Williams. The word for ‘Moon’ was recorded by Lhuyd as *lûr*, which suggests that it behaved like the words in Group 2a, i.e. regularly. The vowel in the word for ‘downland’, although not arising from Old Cornish /ui/ (cf. Breton *geun*, Welsh *gwaun*) fell together with Middle Cornish /o:/, as is shown by the 14th century spelling *Goyn*-> 15th century *Goun*- (Padel, 1985), and became *goon* in Late Cornish, i.e. the regular development. Lhuyd wrote *stûl* for ‘Epiphany’ and *gûn* for ‘sheath’, which are regular. In field-names, *moen* ‘ore’ appears as *Moon*, which supports /o:/. The spelling of the word *poynyn* ‘let us run’, referred to above, is also significant. The grapheme <oy> in *Origo Mundi* was used almost exclusively for two phonemes: 58 examples of /ɔɪ/, and 8 examples of /o/, of which *poynyn* is one. The single exception is *coyth* (*OM*..855) for *coth* ‘old’.

If there is overwhelming evidence that a word has developed contrary to the perceived rules of phonetic evolution, then the exceptional development ought to be taken into account in the spelling of the word in *Kernewek Kemmyn*. This has been done in the case of the word for ‘axe’; etymologically, the word contained Primitive Cornish /uia/ (cf. Welsh *bwyall*), and regular development would have been /ɔ:/:; however, the spellings *bool* at *OM*.1001 (cf. *ov toon* ‘carrying’ at *OM*.2820), *boell* at *CW*.2283 and Lhuyd’s *bûl* indicate the closer vowel /o:/. Williams (1996, §A2.4) thought that *bool* “almost certainly means /bɔ:l/”, and was then obliged to reject Lhuyd’s *bûl* as “apparently a western form”. The evidence of place-names (section 6 below) shows that western forms are a fiction. The development may be explained by supposing that the word suffered a metathesis similar to Breton *boualc’h* > *bouc’hal*, and change of vowel to the /o:/: phoneme with the loss of the spirant.

On the other hand, the case that the vowel in some of the words in Table 3b might have changed to /ɔ:/: was not considered sufficiently strong to warrant changing the etymological spellings with <oe> in *Kernewek Kemmyn*.

5 THE EVIDENCE OF RHYME-SCHEMES

Williams (1995 §3.11, 1996 §§2.1, 2.2) argued that the fact that words containing /ɔ:/: were rhymed with words containing /o:/:, especially in works later than *Pascon agan Arluth*, showed that the two phonemes had fallen together. To pursue this argument shows a misunderstanding of the nature of rhyme-schemes in Cornish. The number of available rhyming words containing mid-back vowels was far less than that containing mid-front vowels. When using mid-back vowels, poets were forced to be less particular about the perfection of their rhymes. From time to time, they would rhyme /ɔC/ with /oC/ (C stands for a consonant or cluster of consonants), just as they would rhyme either with a different set of sounds altogether (see Table 7).

Even so, if /o/ and /ɔ/ were separate, we would expect there to be more true rhymes (i.e. of the types /oC/ - /oC/ and /ɔC/ - /ɔC/) than untrue rhymes. It is also to be noted that, because it was customary to ignore stress in mediaeval Cornish poetry, the statistics of rhymes in Table 7 contain both stressed and unstressed words. The table shows that, in all texts, the number of true rhymes (sum of first two columns) exceeds the number of untrue rhymes (sum of last three columns). This adds weight to the argument that /o/ and /ɔ/ were separate phonemes.

<u>NUMBERS OF RHYMES IN VARIOUS TEXTS</u>						<u>Table 7</u>
	/ɔC/ -- /ɔC/	/oC/ -- /oC/	/ɔC/ -- /oC/	/ɔC/ -- other	/oC/ -- other	
<i>MC.</i>	18	20	0	0	0	
<i>OM.</i>	4	14	0	0	1	
<i>PC.</i>	18	18	4	3	8	
<i>RD.</i>	19	16	5	0	2	
<i>BM1</i>	22	10	7	1	3	
<i>BM2</i>	14	3	10	2	0	
<i>CW.</i>	13	6	2	5	0	

Here C means /s/ or /ð/, and “other” means a rhyme with a vowel other than /ɔ/ or /o/.

The real reason, then, for the approximate rhymes /o/ - /ɔ/ was not that the sounds had fallen together, but that the authors of the texts were obliged to use such rhymes, for lack of true ones. Dr Williams mentions that *coth* ‘behoves’ /ko:ð/ at *PC.2488* was rhymed with *both* ‘wish’ /bo:ð/ at *2485*. It is quite understandable that the author of *Passio Christi* might wish to use the word ***bodh***, but its only true rhymes are ***godh***, ***kodh*** and ***podh***. The story is fixed and well-known, and it is hardly likely that the authors could have introduced references to moles, pods and sheep-rot into the Passion of Christ, even if they had wanted to !

6 THE EVIDENCE OF PLACE-NAMES

Williams' hypothesis that /o:/ and /ɔ:/ had fallen together "before the time of P[*ascon agan*] A[*rluth*]" (i.e. in the 14th century) leads to the difficulty of explaining the incontrovertible fact that, before [z] and [ð], Middle Cornish /o:/ developed to [u:] and /ɔ:/ did not. Williams overcame this by invoking a hypothetical dialectal difference between "western Cornish", in which the development to [u:] took place, and "eastern Cornish", in which /o:/ and /u:/ are supposed to have coalesced, even when followed by [z] or [ð]. The boundary between the two alleged dialect areas is supposed to pass through the vicinity of Camborne (Williams, 1996, §10.5). If this hypothesis were correct, then we would expect to observe a difference between the reflexes of Middle Cornish /ɔ:/ and /o:/ in the western zone, and no difference in the eastern zone.

To check this, two lists of place-names were prepared:

- (i) those names containing the element *koes* 'wood', stressed finally; i.e. as C2, using the notation of Padel (1985); this element represents Middle Cornish /o:/;
- (ii) those names containing the elements *fos* 'wall', *gov* 'smith' and *ros* 'spur' or 'moorland' these elements represent Middle Cornish /ɔ:/.

If /ɔ:/ and /o:/ had fallen together, then one might expect to find the same vowel in the modern forms of these elements, at least in the area covered by Williams' putative "eastern dialect". The actual distributions of the modern forms (taken from Ordnance Survey maps) are shown in Maps 1 and 2.

On Map 1, the reflexes of Old Cornish *cuit* may be divided into two types:

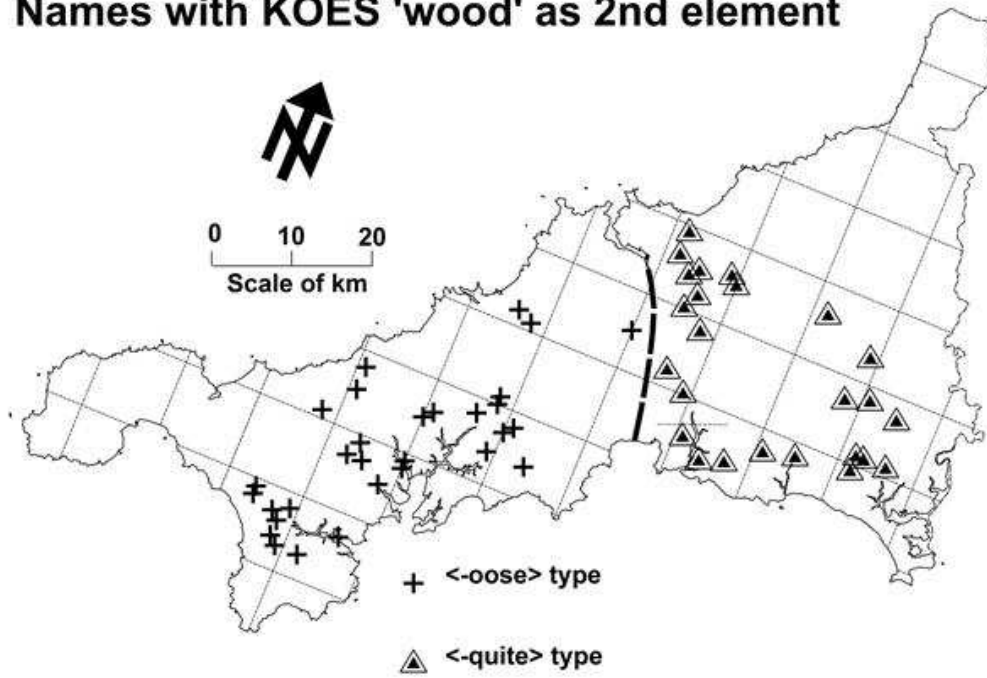
- (a) the <-oose> type includes *-coose* and *-goose* as the modern form;
- (b) the <-quite> type includes *-quite* as the modern form.

The geographical distribution of the two types is very clear; the <-oose> type is found west of a line from Fowey to Port Isaac (line FP), and the <-quite> type is found east of it. Thus the place-name meaning 'end of a wood', spelled *Pennkoes* in *Kernewek Kemmyn*, typically appears on modern maps as Penquite in the eastern zone, and Pencoose in the western zone. The reason for the zonation is not dialectal difference, but a reflection of the displacement of Cornish by English, earlier in the east than the west:

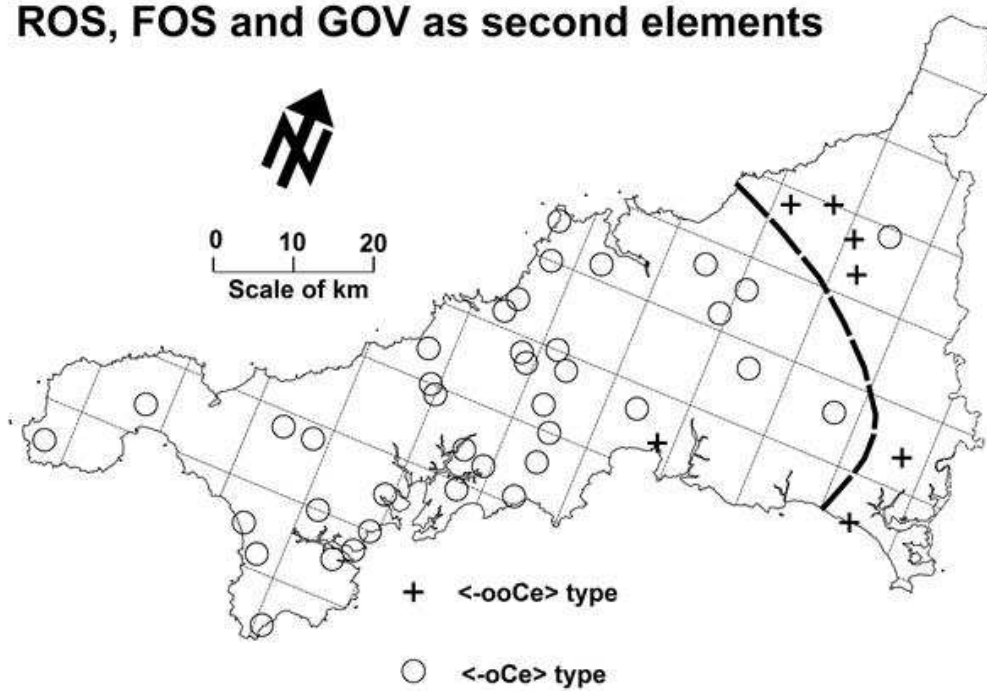
The interpretation of Map 1 is as follows:

- (a) West of line FP, the reflex of Old Cornish /koid/ became Middle Cornish /ko:z/ and Late Cornish /ku:z/; when taken into English, the vowel was identified with the reflex of Middle English /o:/.
- (b) East of line PW, the reflex of Old Cornish /koid/ was taken into English when the vocoid was still a diphthong; the falling diphthong was replaced by a rising diphthong: Old Cornish /koid/ > /kuid/ > Middle English /kwi:t/ > /kwalt/

Names with KOES 'wood' as 2nd element



ROS, FOS and GOV as second elements



An examination of the historical forms of the names shows that the change /-d/ > /-z/ occurred *c.*1275, and the line FP represents the advance of English at this date, rather than the abandonment of Cornish; for elements other than *koes*, examples of *s* < *t* are found to the east of this line, which show that Cornish was still spoken *c.*1275 at least as far east as line ST on Map 2.

On Map 2, the reflexes of Old Cornish /-ɔC/ may also be divided into two types:

- (a) the <-oCe> type (where C represents a consonant);
- (b) the <-ooCe> type.

Again, there is a clear geographical distribution of the two types; the <-oCe> type is found west of a line from Seaton through Pensilva to Tintagel (line ST), and the <-ooCe> type is found east of it. In each geographical zone, there is an outlier which needs to be considered. In Rosegooth (parish of Tywardreath), the element *gov* in *Rosgof* 1390 was replaced by the element *goedh* 'goose', perhaps under the influence of the name Polgooth, a few miles to the west. The <o> in Penrose (North Petherwin) is pronounced [u:], so this outlier is not an exception.

The interpretation of Map 2 is as follows:

- (a) West of the line ST, the reflex of Old Cornish /ɔ:/ continued in Cornish for as long as Cornish was alive at a given place. When taken into English, it was identified with the reflex of Middle English /ɔ:/, and thus became [o:]; later, in standard English it became [əʊ].
- (b) East of the line ST, the sound was taken into English at an early date, and identified with Middle English /o:/; it took part in the Great Vowel Shift, and became [u:].

It is clear from these maps that there was a difference between the reflexes of Middle Cornish /ɔ:/ and /o:/, not only in the west of Cornwall, but everywhere in Cornwall. The putative “eastern dialect”, in which there is no difference between the reflexes of Middle Cornish /ɔ:/ and /o:/ does not exist. *Ipsa facto*, the “western dialect” does not exist either. The difference between the two groups of names was preserved throughout the history of Cornish. It is effectively still preserved in the modern forms of the names, as is shown by the contrast between *Penrose* and *Pencoose*. Nowhere do we find forms like **Pencose*; only in the far east are forms in *-roose* found, and even then, as noted above, [pen'ru:z] in North Petherwin is actually spelled *Penrose*, since **Penroose* is felt to be alien.

The maps are totally incompatible with Dr Williams' dialectal hypothesis, for which there is no evidence whatsoever. It is false.

7 CONCLUSIONS

A statistical analysis of spellings, an examination of the frequency of rhymes, and the geographical distribution of place-names all confirm the conclusion of George (1984), that the reflex of Old Cornish /ui/, when monophthongized in stressed monosyllables, became a long mid-back vowel distinct from the reflex of Old Cornish /ɔ:/. The two vowels remained distinct, except possibly in a few words ending in nasal and liquid consonants. A recent attempt by Williams to explain the evidence in terms of dialectal variation is without foundation.

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