RECONSTRUCTIVE PHONOLOGY AND CONTRASTIVE LEXICOLOGY: PROBLEMS WITH THE *GERLYVER KERNEWEK KEMMYN*

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INTRODUCTION

In July 1988 the Cornish Language Board adopted the orthography known as Kernewek Kemmyn. This shift in orthography brought about a need for new pedagogical materials including a new dictionary. In 1993 The Cornish Language Board published the *Gerlyver Kernewek Kemmyn*[1]. Does this dictionary really provide a suitable pedagogical basis for the revival of Cornish today? Since its publication, there has been a great deal of controversy concerning the new orthography[2]. Some people might argue that, on the one hand, Kernewek Kemmyn is to be preferred since its phonemic nature makes it pedagogically advantageous; and that, on the other hand, the reconstructed phonology on which Kernewek Kemmyn is based has a sound scholarly foundation grounded in the study of the traditional historic corpus of Cornish literature. However it is clear that neither of these claims stands up to scrutiny. Not only is George's reconstructed phonology academically unsound but the phonemic nature of Kernewek Kemmyn together with the respelling of place names according to their putative etymologies actually entails certain disadvantages. Furthermore the English translation equivalents and neologisms given in the *Gerlyver Kernewek Kemmyn* entail a contrastive lexicology that is at odds with traditional practice as attested in the historical corpus of Cornish. It is clear that the prescribed canon encoded in the *Gerlyver Kernewek Kemmyn* is linguistically naïve and is, therefore, not a suitable pedagogical basis for Revived Cornish.

STANDARDISATION

The orthography of traditional Cornish

The inconsistent orthography that is prevalent in the corpus of traditional Cornish is a common problem for the Cornish linguist; a multiplicity of spelling variants causes problems for the study of syntax or lexis. In their original form, the Cornish texts reflect the variety of orthographic styles, that were prevalent during the various chronological episodes of the period they represent. The original spelling of the texts is not consistent, even normally within a single text. For example, we find the following orthographic variants of the Cornish word for 'flesh': *chîc, cîg, cyc, gîc, gyc, gyke, kig, kìg, kîg, kyc, kych, kyek, kyg, kyk. kyke*. For the purposes of pedagogy a standardised orthography is clearly beneficial.

George, however, goes further than rejecting the traditional orthography on grounds of inconsistent spelling. George[3] offers no evidence for his assertion that Cornish scribes "learned to write and read in English, and wrote Cornish 'on the side' ". Yet George[4] maintains that, "Cornish has little or no historical spelling tradition of its own; since the fourteenth century, it has almost always been written using contemporary English orthography." This is not entirely true; like English, Cornish has enriched its vocabulary by borrowing from Latin and Norman French and where

this is the case, orthographic practice has a lot in common with Romance languages in general. Where Cornish has borrowed from English, Cornish spelling frequently resembles that found in the works of Chaucer. But there are differences between English and Cornish spelling tradition. With the exception of the *Ordinalia* (circa 1500) which uses <th>, Cornish (up to and including *Gwreans an Bys* dated 1607) uses a character resembling a long-tailed-<z>. This character has a similar form to the Old English character yogh. However it is clearly not the same character since yogh corresponds to modern-day English <g> or <y> whereas Cornish long-tailed-<z> is used to represent dental fricatives. George[5] observes that "As in MidE, <c> tended to be used before <a,o,u; l,r> and <k> otherwise". This should not be taken as evidence, however, of Cornish borrowing orthographic practice from English since this alternation of <c> and <k> is not peculiar only to English and Cornish. One finds in French, for example, 'képi', 'kyste', 'caste', 'clos', 'cristal', 'costume', 'cuisse'; and in Spanish: 'keniano', 'kilate', 'cabal', 'clamor', 'crápula', 'cosa', 'cuba'. Similarly George[6] is of the opinion that "<qu> and <wh> are English graphemes." Again, however, <qu> and <wh> are not exclusive to English. One finds in French, for example, 'quand', 'que', 'quitter' and 'quolibet'; in Spanish: 'quebrada' and 'quico'; and in Latin: 'quadra', 'quercus', 'quies', 'quo' and 'quum'. One finds in Welsh, for example, 'whado' and 'whimbil' and in Middle Welsh, 'lawhethyr' (*fetter).* One is not justified in concluding, as George does, that Cornish has borrowed its orthography from English and has no historical spelling tradition of its own.

George is not unique in naively assuming that Late Cornish is corrupted by English[7]. However Late Cornish orthography continued to evolve independently of English. A good example of this is that, in the Late Cornish period, several writers adopted diacritics so that circumflex, acute and grave accents are found over vowels. Furthermore if one compares Lhuyd's[8] phonetic transcription of lexical items with their spellings by Late Cornish writers the link between Late Cornish spelling and contemporary English orthographic practice seems to be not so strong. For example, in Late Cornish we frequently find <ea> representing /e/ or /e:/[9]. English visitors to Cornwall often erroneously pronounce the placename ST. TEATH as if it rhymes with "teeth". Similarly English visitors are usually totally at a loss as to how the placenames MENEAGE and BREAGE should be pronounced.

Need to standardise spelling

The necessity of a standardised spelling system for Cornish has been recognised since the 19th century. Williams[10] made a start on tackling the problem of variable orthography by amalgamation. Williams' reforms, which include diacritics, the adoption Lhuyd's **dh** for voiced **th**, and the substitution of **c** for the letter **k** in all cases, met with a mixed response. Stokes[11] criticises Williams dictionary, saying that "Mr. Williams has throughout his *Lexicon* been misled by Welsh analogy." In particular, Stokes[12] is critical of Williams' orthography, maintaining that analogy with Welsh misled Williams into distinguishing between **dh** and **th**. As Stokes points out, this separation is not born out by the Middle Cornish texts. Williams' dictionary was similarly criticised by Bonaparte[13] and Loth[14] and more recently Gendall[15]. Jenner based his revived Cornish on Late Cornish. In other words he chose to take up the language where it had left off. In his *A Handbook of the Cornish Language*[16], Jenner employs a regular and fairly closely phonemic orthography. Jenner's phonology is largely derived from Edward Lhuyd[17]. The shift to Middle Cornish as basis for the

revival was instigated by Robert Morton Nance and A.S.D. Smith. Their sources were mainly Robert Williams' *Lexicon Cornu-Britannicum*[18] and Henry Lewis' *Llawlyfr Cernyweg Canol*[19]. Smith in fact initially learnt his Cornish from Lewis' *Llawlyfr*. This would explain why Smith favoured Middle Cornish. Smith didn't understand that Late Cornish has its own grammar and orthography and saw any deviation from Middle Cornish as evidence of corruption and decay. Morton Nance[20] explains that he standardised the spelling to make it more consistent, "with occasionally a re-spelling to show the derivation of the word, and a desirable distinction between the sounds of *dh* and *th*, *g* and *j*, which it did not make". George's dictionary perpetuates and adds to the errors of Williams, Lewis, Smith and Nance.

Late Cornish vs. Middle Cornish

There has been some contention over whether Middle or Late Cornish provides the better basis for Revived Cornish. George[21] cites examples of Late Cornish syntax as evidence of the influence of English. However it is virtually impossible to ascertain what is normal, unmarked syntax in Middle Cornish because the corpus of Middle Cornish is virtually entirely in verse. Consider this line from the English poem, "The Charge of the Light Brigade"[22]:

> (a) "All in the valley of Death
>   Rode the six hundred."

In normal unmarked English, we would say,

> (b) "The six hundred rode all in the valley of death."

In verse, sentence constituents are moved around in order to make the verse scan and rhyme. Now sentence (a) is not ungrammatical in English; however it is stylistically marked. Contrary to George's[23] assertion, one cannot ascertain the most normal structures by looking at their frequency of occurrence in a corpus of verse. The structures which most frequently occur in verse are not the same as those which most frequently occur in prose or in conversation. The inadequacies of the Middle Cornish texts as a basis for revived Cornish are evident. The Middle Cornish texts are full of Latin, French and English loanwords. They are not grammatically accurate; Smith[24], for example, notes that one mutation is missed every 9 or 10 lines in *Beunans Meriasek*. The Middle Cornish texts are of a highly marked stylistic nature. Since they are entirely in verse it is not possible to determine from them which syntactic structures are the normal unmarked structures. We do not know who the writers of the Middle Cornish texts were and, consequently, cannot even be sure that they were mothertongue speakers of Cornish. Late Cornish, on the other hand, provides us with the only detailed description of Cornish pronunciation[25], a description of Cornish grammar[26], and a wide variety of genres. We know something about the writers of Late Cornish and we are, therefore, better able to distinguish between those who were mothertongue speakers of Cornish and those who learned Cornish as a second language.

THE PHONOLOGICAL BASIS OF KERNEWEK KEMMYN

George[27] writes, "... a proper examination of Cornish phonology was required, indeed overdue. After an appropriate period of background study in linguistics, I executed this task ...." When considering George's reconstruction of Cornish phonology, it is vital to understand the distinction between phonetics and phonology and between the

notions of phone and phoneme. A 'phone' is a the smallest unit in phonetics and refers to the smallest perceptible discrete segment of sound in a stream of speech. This contrasts with the term 'phoneme' which refers to the minimal unit in phonology, the sound system of a language. Phones are the physical realisations of phonemes. A phoneme may have several phonic variants; these are known as allophones.

In order to determine the phonological basis for Cornish the phonemes have to be distinguished. The following short extract[28] explains how this is normally accomplished.

> In order to ascertain whether sounds belong to the same phoneme, three criteria may be employed; complementary distribution, free variation and phonetic similarity.
>
> **Complementary distribution** involves the mutual exclusiveness of a pair of sounds in a given phonetic environment. For example the differing articulations of the phoneme /k/ in the English words *kit* and *cat* results from the tongue anticipating the posture required for the following vowel (Abercrombie 1967: 87). Where we find one type of /k/ in English, we do not find the other. Since they never occur in the same phonetic environment, they are mutually exclusive.
>
> **Free variation** involves substitutability of one sound for another in a given phonetic environment. If there is no change of meaning then the sounds belong to the same phoneme. For example whether the final plosive /t/, in the English word *hat*, is released or unreleased, there is no change of meaning.
>
> **Phonetic similarity** involves adequate physical semblance between sounds if they are to realise the same phoneme. For example the two allophones of /t/ described above are both voiceless alveolar plosives.
>
> Sounds are only given the same phonemic status if there is no change of meaning when they are substituted. A **minimal contrast** set is a group of words in any given language, distinguished by each having only one sound different from the others (Rockey 1973; Hyman 1975: Ch.3; Bolinger & Sears 1981: Ch.2; Ladefoged 1982: 24). The exploration of minimal sets provide a discovery procedure to determine the phonemes of a language. ..."

If one wanted, for example, to determine the vowel phonemes of English, a minimal contrast set would have to be constructed. The following set of words contrast by having only one sound different.

beat	b i : t
bit	b ɪ t
bait	b e ɪ t
bet	b ɛ t
bat	b æ t
bought	b ɔ : t
boat	b o ʊ t
boot	b u : t

butt	b ʌ t
bite	b a ɪ t
bout	b a ʊ t

This gives us most but not all of the vowel phonemes of English. Another minimal contrast set will complete the set of English vowel phonemes.

part	p ɑ ː t
pot	p ɒ t
put	p ʊ t
pert	p ɜ ː t

In order to perform this task you have to know how the words are pronounced. It is not enough to know only how they are written. Thus one can perform this task for English vowel phonemes with one's own language intuition if one is a first language speaker of English. For a language of which one is not a first language speaker it is necessary to have an informant who is a first language speaker of that language.

George's methodology

George[29] defines a phonemic orthography as "one in which each phoneme … is represented by a separate grapheme …; and each grapheme represents a separate phoneme". George[30] maintains that, "The orthography of Kernewek Kemmyn is an improvement on that of Nance, so as to fit the phonological base, at the same epoch". Kernewek Kemmyn is an attempt to create a phonemic orthography based on George's reconstruction of Cornish phonology. A thorough analysis of Cornish phonology was thus considered by George to be a prerequisite for the development of Kernewek Kemmyn.

The underlying problem with George's[31] reconstructed Cornish phonology is his methodology. George began with Jackson's[32] hypothetical reconstruction of Early Breton and Jackson's[33] equally hypothetical reconstruction of Early British. George then adopts these as a foundation on which to build a hypothetical reconstruction of Middle Cornish phonology - hypothetical because his analysis of the texts was based on Jackson's hypotheses. A further fundamental difficulty with George's phonology of Cornish is that no demonstrable connections exist between the phonology in Breton and hypothetical Early Breton, and between hypothetical Early Breton phonology and Middle Cornish, and hypothetical Early British and Middle Cornish. Since no sources exist in the long periods between these hypothetical postulations, no logical connections can be demonstrated between them.

George[34] makes much of a supposed "Great Prosodic Shift" and cites several instances of change in spelling to support this notion. However it does not logically follow that because the orthography changed, this was necessarily accompanied by a simultaneous change in pronunciation. The evidence only shows a change in orthographic practice and there is no associated evidence regarding pronunciation of Cornish.

George[35] cites one of his sources as Lhuyd but is rather dismissive of Lhuyd's work describing it as "contradictory" and opining that "There is insufficient evidence to be sure about many of the phonemes". It is a shame that George is so dismissive of

Lhuyd's work because it is the only detailed account we have of the pronunciation of Cornish. As Gendall[36] notes "the only indications that we have for the pronunciation of our living language refer to its latest, most modern stage, and any other system proposed from an earlier period must necessarily be theoretical and open to doubt."

Lhuyd was Welsh but spent some months in Cornwall in 1700 collecting Cornish. He devised his own phonetic system of transcription. His *Archaeologia Britannica* is, therefore, of great interest to anyone who is interested in how Cornish was pronounced. It is true that by today's standards his phonetic transcription is rather crude, but in its time it was revolutionary. It is important to distinguish between Lhuyd's system, which is essentially phonetic, and Kernewek Kemmyn, which is phonemic. Lhuyd recorded the sounds he heard in his visit to Cornwall; in other words, Lhuyd's symbols represent phones and should not be confused with the graphemes of other writers. Lhuyd[37] explains the phonetic basis of his system in his *Archaeologia Britannica*. Thus Lhuyd's [y] represents the sound of English <i> "in the word Hil, &c" (i.e. the English word "hill"). There remain some problems, however, in the interpretation of Lhuyd. For example, although Lhuyd writes that his symbol "y" represents the sound of the vowel in English "Hil", we do not know to which variety of English he is referring. Furthermore we need to know how that variety of English was pronounced in Lhuyd's time. So we can only speculate on the phonetic values of the phones listed in Lhuyd's phonetic inventory of Cornish. Charles Thomas, of the Institute of Cornish Studies, suggests Cornish dialect as a possible source, "... the true phonetic range is still just recoverable from an area west of an isogloss that cuts off the Land's End and part of the south side of the Lizard"[38]. It might make a very interesting study to see what minimal contrast sets can be obtained from *Archaeologia Britannica*. However Lhuyd collected his data from several sources and complementary distribution refers to distribution within a single idiolect spoken by a single individual[39]. It is, therefore, impossible to determine whether variation recorded by Lhuyd is the result of free variation, allophonic variation or idiolectal difference between Lhuyd's informants.

As we have seen, the phonology of a language can be investigated by the employment of minimal contrast sets. George does not employ this method; he has not constructed minimal contrast sets from the corpus of traditional Cornish. Indeed it is not possible to produce any real minimal contrast sets from Middle Cornish texts because one has only the written form of the language. George's study is, therefore, based on conjecture and so, despite his claims, he has not reconstructed the phonology of Cornish. It must be concluded that George's phonology of Cornish is largely invention.

Some people might argue that it is not necessary to adhere to traditional written forms simply because they are traditional and that invention is a valid procedure by which to investigate the phonology of Cornish. They might argue that one has to invent a phonology and then test this invention against the available data. If it doesn't fit very well, then one modifies the invented phonology or proposes a better one. Although it may be possible to get such a phonology to fit the facts arbitrarily well by making it sufficiently complex, one can never prove such a phonology. This sort of approach will almost certainly permit the generation of several equally plausible phonologies. A disadvantage with a phonemic spelling system is that it has to be changed every time a new phonological theory comes along. Take, for example, the phonemes /s/ and /z/;

these were not distinguished in Kernewek Kemmyn. George[40] now recognises this distinction. If one wanted to introduce this distinction into Kernewek Kemmyn now, it would entail the extremely costly and time-consuming replacement of all dictionaries, grammars and pedagogical materials. Consensus for an orthography for revived Cornish will only be reached if that orthography can be demonstrated to be academically sound. It is not for an individual to propose an orthography based on his putative reconstruction of Cornish phonology and then shift the burden of proof by requiring that others demonstrate its shortcomings.

Some problems with George's analyses

We have seen how George's methodology does not determine the phonemic inventory of Cornish. However it might be argued that it is not helpful to reject George's reconstructed Cornish phonology without indicating where George's analyses are wrong. To demonstrate individually that each of George's analyses is wrong would take a very long time, simply because there are a lot of analyses and there is very little that could be said to be right about any of them. So a few examples only will have to serve.

In his discussion of pre-occlusion, George[41] maintains that the items KANA (to sing) and KANNA (to bleach) form a minimal pair. However KANNA is not attested in the corpus of traditional Cornish. KANNA is first found in Morton Nance and Smith's[42] *An English Cornish Dictionary* as 'canna', where it is marked with an asterisk to indicate that it is a borrowing from Welsh and Breton. Any phonological distinction between KANA and KANNA is, therefore, an invention.

George frequently omits attestations from his analyses. For example, in his[43] orthographic profile of the diphthong /ɛɪ/, he acknowledges no attestations of KEYN (*back*) in Jordan's *Gwreans an Bys*. Examination of *Gwreans an Bys*, however, reveals,

   "Me a thog ran war ow **hyen**" - *I will carry some on my back* (Jordan 1385).
Similarly George[44] does not acknowledge the <ey> in SEYTH attested in *Gwreans an Bys*:

"Eve an gevyth **seyth** kemmys"	- *he shall have sevenfold*	(Jordan 1178),
"Ef astevyth **seyth** plague moy"	- *he shall sevenfold more*	(Jordan 1376),
"**Seyth** gwythe y wra acquyttya"	- *he will requite seven times*	(Jordan 1535),
"Ha **seyth** plag te hath flehys a vyth plagys"	- *and sevenfold you and your children shall be afflicted*	(Jordan 1613).

The grapheme <y> that George[45] ascribes to the attestations of TREYS (*feet*) in *Gwreans an Bys* is not attested; instead we find <ye>:

"Pyw a thysqwethas thyso tha vos noth **tryes** corf ha bregh"	*Who has shown you that you were naked, feet, body and arm?*	(Jordan 872),

"Ty a weall allow ow **thryes**"   *You will see the tracks of* (Jordan 1746), *my feet*

"Me a weall ooll **tryes** ow thas"   *I see the track of my* (Jordan 1762). *father's feet*

Such omissions and inaccuracies are typical and not the exception in George's analyses. Consequently one can have little confidence in George's conclusions.

Some people might argue that although it is not possible to ascertain the precise manner in which Cornish was pronounced at any given point in history, George's work at least gives the broad principles of Cornish phonology. However George's proposed phonology does not restrict itself to broad principles; George claims to perceive some very fine phonological distinctions such as those between /iw/, /ɛw/, /ɪw/ and /y/, which are represented in Kernewek Kemmyn as <iw>, <ew>, <yw> and <u> respectively.

Let us consider the first of these proposed diphthongs. George[46] maintains that the Kernewek Kemmyn grapheme <iw> represents a distinct phoneme in Cornish and that this is somehow supported by evidence from the medieval texts. He shows us an orthographic profile of his proposed phoneme /iw/ as attested by the lexical items DIW, *two* (f); GWIW, *fit*; LIW, *colour*; and PIW, *who*. This profile, George maintains, shows how the vowel sound in these items is variously attested in the classical texts as <u,v>, <yv>, <yw> and <ew>.

Let us deal with the first of these lexical items. According to Kernewek Kemmyn, DIW is the feminine form of DEW. However this masculine / feminine distinction is not born out by attestation. In *Pascon agan Arluth* only one form, 'dew', is attested for number 2. In *The Ordinalia* two forms are attested, 'dew' and 'dyw'. However they are not distinguished by gender. Thus we find the feminine noun 'luef', *a hand* collocating with both forms, 'dyw-luef' ("Origo Mundi" 1346) and 'dew luef' ("Origo Mundi" 1534); we find the masculine noun 'dorn', *a fist*, collocating with 'dyw' ("Resurrexio Domini" 2178) and the masculine noun 'adla', *a rogue*, collocating with 'dew' ("Resurrexio Domini" 1479). In *Gwreans an Bys,* Jordan uses three forms 'deaw', 'dew' and 'thyw'. All three are used for both masculine and feminine. Thus we find both the feminine noun 'gweth' (Jordan 966), *a garment*, and the masculine noun 'vabe' (Jordan 1054, 1232), *a son* collocating with 'deaw'; we find both the feminine noun 'wreag' (Jordan 1452), *a wife*, and the masculine noun 'ran' (Jordan 1707), *a part*, collocating with 'dew'; we find the masculine noun 'fridg' or 'freyge', *nostril*, collocating both with 'thyw' (Jordan 1854) and with 'thew' (Jordan 1933).

Let us move on to the second lexeme in George's orthographic profile. GWIW has the following attestations:

'gyw'   (*Pascon agan Arluth* 68, 129, 226),
'gwyw'   ("Origo Mundi" 2242, 2601; "Passio Domini" 284, 2358),
'gweff'   (*Pascon agan Arluth* 95),
'gwef'   (Jordan 1833),
'gweve'   (Jordan 2138),
'gweffe'   (Jordan 588).

Now in the medieval texts <u> and <v> are written the same way and are thus indistinguishable. <w> is frequently found to alternate with <f> in the texts. Considering the presence of the <f> (not noted by George) it is remarkable, to say the least, that George considers this item to exemplify his proposed phoneme /iw/.

LIW is the third item in George's orthographic profile. LIW has the following attestations:

'lyw'   (*Pascon agan Arluth* 68,226; "Passio Domini" 3083, 3123; "Resurrexio Domini" 2101),
'lew'   (Jordan 1049).

The final item in George's orthographic profile is PIW. PIW has the following attestations:

'pu'   (*Pascon agan Arluth* 69, 81, 160, 253),
'pyu'   (*Pascon agan Arluth* 190),
'pew'   (Jordan 549, 1460, 1591, 2347),
'pewa'   (Jordan 435, 1599),
'pyw'   ("Origo Mundi" 261,1368, 1874; "Passio Domini" 771, 798, 2853; "Resurrexio Domini" 106, 196, 1640, 2486; Jordan 163, 871).

It can seen that there are more spellings for the vowel in these four lexical items than the four vowel graphemes given by George. His data simply does not fit the facts. There are not four graphemes only that are attested but nine: <u,v>, <yv>, <yw>, <ew>, <eaw>, <ef>, <eff>, <eve>, <effe>. Not all four lexical items can be found with all nine of these graphemes. Nor is it true that these four lexical items share the same vowel graphemes within a single text. In *Pascon agan Arluth*, for example, we find *dew*; *gyw*, *gweff*; *lyw*; *pv*, *pyv*. It must be concluded, therefore, that there is no evidence to suppose that DIW, GWIW, LIW and PIW share the same vowel phoneme.

George[47] writes that "One of the useful features of Lhuyd's orthography was the consistent distinction between /δ/ [sic, presumably George means /ð/] and /θ/ whereas the Newlyn School tended to use the English grapheme <th> for both phonemes". However there are several examples where Lhuyd's <dh> and <th> are in variation:

Kernewek Kemmyn	Lhuyd (1707)	
DYDH	'deyth', 'dedh'	(Lhuyd 1707: 227b)
	'Dêdh'	(Lhuyd 1707: 229b, 230c)
	'Deth'	(Lhuyd 1707: 229b)
FORDH	'Fordh'	(Lhuyd 1707: 230c, 241c)
	'Forth', 'Fordh'	(Lhuyd 1707: 229b)
	'Fordh'	(Lhuyd 1707: 173b)
FYDH	'Fyth', 'Fydh'	(Lhuyd 1707: 229b)
KYNYAV	'Kidniadh'	(Lhuyd 1707: 44b)
	'Kidniath'	(Lhuyd 1707: 90a)

On the basis of Lhuyd's (1707) evidence, it would appear that the phones [ð] and [θ] are in free variation in Cornish and, therefore, share a single phoneme. This might explain why, in the Middle Cornish texts, the graphemes, long-tailed-<z>, <dh> and <th> are found in free variation. A good example of this are the attestations of

DHODHO and DHEDHA to be found in *Pascon agan Arluth:* 'dhodho', 'doʒo', 'thoʒo', 'ʒoʒo', 'thethe', 'theʒe', 'ʒethe', 'ʒeʒa', 'ʒeʒe'. The assumption made by George that [ð] and [θ] are discrete phonemes in Cornish cannot, therefore, be confirmed by the evidence.

In Kernewek Kemmyn <i> and <y> represent separate phonemes, so that GWYNN (meaning white) rhymes with standard English 'bin' and GWIN (meaning wine) rhymes with standard English 'been'. KK<i> thus has the value [iː] and KK<y> has the value [ɪ][48]. Speakers of Kernewek Kemmyn often distinguish between these phonemes when pronouncing words like GWYNN and GWIN. However the distinction between the vowel sound in TY and HWI is not so marked in the pronunciation of today's Kernewek Kemmyn speakers. It is not clear whether the vowels in TY and HWI ought really to be considered different phonemes on the basis of the historical corpus of Cornish since they are not distinguished in any minimal sets. Furthermore TY, if pronounced with short [ɪ], as in English 'bin', feels somewhat unnatural especially if followed by a vowel, as in the following phrase:

  Ty a lever gwir.

In the traditional texts we find TY spelled,

'ty'	*(Charter Endorsement)*
'te', 'se', 'ty'	*(Pascon agan Arluth)*
'ty', 'sy'	*(Ordinalia)*
'che'	(James Jenkins)
'te', 'tee', 'ty'	(William Jordan)
'che', 'chee', 'chy'	(Wella Kerew)
'ti'	(Nicholas Boson)
'ti', 'tî'	(Lhuyd 1707)
'chee'	(Borlase 1769)

The vowel in Lhuyd's phonetic transcriptions of TY is noted variously as Lh[i] and [î]. Lhuyd[49] describes the phonetic value of Lh[i] as '*Ee*', and writes[50] that the circumflex, <^>, indicates a long vowel. This together with the <ee> found in Jordan, Kerew and Borlase[51] suggests that the phonetic value of the vowel in TY might be [iː] rather than [ɪ].

In the traditional texts we find HWI spelled,

'why', 'wy'	*(Pascon agan Arluth)*
'why'	*(Ordinalia)*
'why'	(Andrew Boorde)
'why'	(William Jordan)
'why'	(Wella Kerew)
'why', 'whi', 'whey'	(Nicholas Boson)
'wei', 'whei'	(John Boson)
'huei'	(Lhuyd 1707)
'whye', 'why'	(James Jenkins)
'why'	(Borlase 1769)

The [ei] in Lhuyd's transcription of HWI suggests that the phonetic value of the vowel in HWI might be a diphthong.

The *Gerlyver Kernewek Kemmyn* gives three homonyms:

> **bys** MN: *finger, digit*;
> **bys** PP: *until*;
> **bys** MN: *world*.

They are homonyms because they are at the same time homographs (i.e. they share the same spelling) and homophones (i.e. they share the same pronunciation). Lhuyd[52] gives

> **bêz, bez, beaz**: *finger*
> **byz**: *until*
> **bêz, vez**: *world*

From this it would seem reasonable to conclude that Lhuyd's 'bêz' is a homophone that shares the English equivalents *finger* and *world*. Lhuyd's 'byz', however, does not share the same vowel phone. Thus 'bêz' and 'byz' form a minimal set as recorded by Lhuyd. From this it can be seen that the phonology represented by Kernewek Kemmyn does not concur with the sounds of Cornish as recorded by Lhuyd.

How is Kernewek Kemmyn actually pronounced by its users

Some people might argue that it is not necessary that the pedagogical basis on which Cornish is revived be true to traditional forms found in the historical corpus. They might argue that when a relatively stable pool of native speakers with a relatively stable spoken norm is established, with a literature of its own, then "Cornish" will mean the sort of Cornish spoken and written by these speakers. If the protoform of Revived Cornish as spoken by them was based upon an imperfect reconstruction, it will be of little importance, provided that their Cornish is similar enough to classical Cornish to enable them to read Classical texts and sense a linguistic continuity there. If, however, it is true that it is of little importance that the protoform for Revived Cornish may be based upon an imperfect reconstruction, then it logically follows that the switch from Unified Cornish to Kernewek Kemmyn was a complete waste of time and energy. If at some point in the future there does exist such a relatively stable pool of native speakers with a relatively stable spoken norm, then it would be possible to study and record the phonology of the variety of Cornish spoken by this pool of native speakers. And from that phonological study it would be possible to construct a phonemic orthography.

In the meantime, however, one thing that I notice when I listen to people who have adopted Kernewek Kemmyn is just how far their pronunciation is from George's recommended pronunciation. There are tendencies amongst users of Kernewek Kemmyn

- to pronounce <u> as /u/,
- to pronounce <r> as rhotic rather than trilled,
- to omit post vocalic <r>,
- not to distinguish between <iw>, <u>, <ew>,<iw>, <yw> and <yu>,
- to pronounce all unstressed vowels as schwa,
- to pronounce <ll> as <l> (i.e. as a short consonant rather than a geminate).

In fact KK speakers tend not to pronounce any double consonant graphemes as geminates. If they make a distinction at all between the single and double consonants, it is usually marked by the realisation of <mm> and <nn> as pre-occlusions. Gemination is the term usually used for syllable timed languages in which a geminate consonant is normally accompanied by an adjacent short vowel and a short consonant by an adjacent long vowel. Gemination of Kernewek Kemmyn <mm> is realised as [mm]. A geminate consonant is not quite the same as a long consonant which phoneticians usually write as [m:]. Pre-occlusion is slightly different from gemination. In pre-occlusion of nasal consonants, the stop is formed before the velum is lowered to allow egression through the nasal passage. Thus pre-occlusion of Kernewek Kemmyn <mm> is realised as [bm] and pre-occlusion of <nn> is realised as [dn]. George usually uses the term pre-occlusion where Nicholas Williams uses the term gemination. Though it should be noted that use of the term pre-occlusion is usually restricted to nasal consonants. So one cannot have pre-occlusion of, for example, <tt> or <pp>.

CONTRASTIVE LEXICOLOGY

The provision of English translation equivalents in *Gerlyver Kernewek Kemmyn* falls within the domain of contrastive lexicology, which is concerned with similarities and divergences between the lexical systems of Cornish and English. Languages structure their vocabulary differently. An individual language, such as Cornish, thus embodies a pattern of thought, an entire world-view, which is at times very different from that which English carries. This is sometimes referred to as 'linguistic determinism' or the 'Sapir-Whorf hypothesis[53]. Cornish and English provide many examples of the way that languages structure their respective vocabularies differently. A comparison of colour terms in Cornish and English serves as a good example. Cornish has one lexeme, GLAS where English has three, BLUE, GREEN and GREY. Another example are the words DORN and LEUV; Cornish has two words where English has only one word *hand*. DORN does not have an English equivalent that expresses all that is entailed by DORN, though the English *fist* might serve in some (but not all) contexts[54]. Those who maintain that Late Cornish is an Anglicised form of Cornish or that it is some way more Anglicised than Middle Cornish should take note that late Cornish clearly distinguishes between DORN and LEUV.

George[55] writes, "Nance tended to give a large number of meanings, even to words which appear only once in the texts. In **Gerlyver Kernewek Kemmyn**, the number of meanings has in general been limited to three or less." Now a 'meaning' is not the same thing as a translation equivalent, a vital distinction that George clearly does not understand. Furthermore there is no good reason why the number of English equivalents should be limited to three. The *Collins Spanish Dictionary*[56], for example, includes the following Spanish translation equivalents of the English word RUN as a noun:

> *acarraladura, asedio, carrera, carrerilla, corral, corrida, corriendo, excursión, fermata, gallinero, migración, paseo, pista, recorrido, serie, singladura, tendencia, terreno, tirada, trayecto,*

and as a verb:

> *administrar, andar, apresurarse, cazar, circular, competir, controlar, correr, correrse, dar caza, darse prisa, derretirse, desteñirse, dirigir, ejecutar, estar en marcha, fluir, gobernar, gotear, hacer, hacer funcionar, huir, introducir, ir,*

> *llevar, manejar, marchar, ofrecer, organizar, pasar, poseer, regir, seguir, supurar, tener, tomar parte, transportar, traspasar.*

As can be seen, a lexeme can have many more translation equivalents than three. Morton Nance[57] gives the following equivalents for DENYTHY: *to give birth to*, *beget*, *bring forth*, and *generate*. George[58] gives only *give birth*. George has decided to drop *beget*, *bring forth* and *generate*. Now, if we examine the medieval texts we find,

> "hag ef a wra **dynythy** vn   *and he shall* **beget** *a*   (Origo Mundi 638),
> map da hep falladow"   *goodly son undoubtedly*

and,

> "ny a **thynyth** vn flogh   *we will* **beget** *a goodly*   (Origo Mundi 664).
> da"   *child*

The one equivalent given by George is clearly not satisfactory for these examples. What George appears to have done is take the translation equivalents given by Nance and reduce the number without any recourse to historical usage.

Cornish has one word, NIJA, where English has two words, SWIM and FLY. This might appear rather poetic seeing 'swimming' as "flying in the water" or seeing 'flying' as 'swimming in air'. However I suspect this appears poetic only if you speak a first language that structures its vocabulary in the way that English does. To a first-language speaker of Cornish in the middle-ages, NIJA possibly meant something like 'move the body through a medium or substance such as air or water.' Morton Nance[59] gives,

> **swim** v. *nyja y'n dowr*

The earlier 1934[60] dictionary brackets 'y'n dowr' thus:

> **swim** v. *nyja (yn dour)*;

However the 1934 dictionary also recommends NÜFYA which it marks with an asterisk to show that it is a neologism borrowed from English, Welsh or Breton (NÜFYA is adapted from Breton NEUÑVIÑ and Welsh NOFIO). In fact it is in this 1934 dictionary that NÜFYA seems to be first attested in Cornish. Nance and Smith appear to be influenced by the lexical structure of English, Welsh and Breton. In other words, they felt uncomfortable that NIJA could translate both *fly* and *swim*. Hence their perceived need to append 'yn dour' to NIJA or use the neologism NÜFYA. Earlier lexicographic tradition gives NIJA without 'yn dour':

Lhuyd[61] gives 'nyidzha' for *to swim*.

Borlase[62] gives "Niedga (ga pron. as, ja) *to fly*; *swim*."

Pryce[63] gives "NYIDZHA, dho nyidzha, *to swim*; also, *to fly*." (Note that Pryce gives *swim* before *fly*)

Jago[64] gives "SWIM, *v*. Nyge/, nija, W.; nijay, nizhea, P.; niedza, B.; nyidzha, nyse/, W.; nys, renygia, P"swim, v nyja" (Allin-Collins 1927:62)

Lhuyd[65] and Pryce[66] also give 'tarneidzha' for *swim over*.

Another example of an unnecessary neologism has to do with language attitude. Revivalists have adopted the neologism PENNSKOL as equivalent for the English 'university'. Cornish already has the word UNIVERSITE which is attested in *Beunans Meriasek* (line 78).

MAGISTER	*MASTER*
My yu mayster a gramer	*I am a grammar-master*
gurys yn bonilapper	*made at Bonilapper,*
universite vyen	*a small university.*

The problem for the revivalists is that UNIVERSITE looks too much like its English equivalent. As George writes in his *Gerlyver Kernewek Kemmyn* "**pennskol** is more Celtic." The term used for UNIVERSITY in Breton is *skol-veur*[67] and in Welsh is *pryfysgol*[68]. George[69] maintains that the etymology of Cornish UNIVERSITE is from Middle English which in turn comes from Old French. In fact Cornish, French and English all share the Latin etymon UNIVERSITAS and, though cognate with English UNIVERSITY, the Cornish UNIVERSITE need not, therefore, have been necessarily borrowed from English at all. The adoption by George of a neologism in favour of an attested lexeme, is another example of Revived Cornish being influenced by English; the rule being, if a word closely resembles its English equivalent, replace it with neologism that appears more Celtic. The creation of unnecessary neologisms such as NEUVYA and PENNSKOL supports the arguments of those who view Revived Cornish as being a semi-artificial language.

It might be argued that the Cornish language should retain the original Cornish elements that make it Celtic and/or unique since, if revivalists do not "reincarnate" the Celtic "soul" of Cornish, the language will loose its "raison d'être". Only the Cornish language, the Celtic language of Cornwall, embodies the fullness of the Cornish world-view, and one would hope, capture the essence which was lost when the language disappeared from general use as an everyday language. This, of course, is one important reason for Cornish people to learn Cornish. This is certainly a reason for studying the medieval Cornish texts. However the case for Kernewek Kemmyn is less certain, since, sadly, the way that Kernewek Kemmyn structures its vocabulary is largely influenced by English. In order for the 'Celtic Cornish world view' to be carried over into the speaker of revived Cornish, pedagogic materials need to be more closely based on the historical texts than they appear to be at present.

RESPELLING OF PLACE NAMES

It is common practice amongst writers of the various forms of revived Cornish to respell Cornish place-names. Thus in *Gerlyver Kernewek Kemmyn*[70] we find

  Bosveneghi {1:P:0} *NP* Bodmin
   [C: BOS<abode> 2MENEGHI]

For me, there are a number of problems with this convention. First of all, it assumes that the etymology given MUST be correct. However, as with most attempts at place-name etymology, there exists a large measure of conjecture. Attested etyma for BODMIN include,

      Bodmine c.975, 1086[71]
      Botmenei c.1200[72]
      Bodmen   1253
      Bodminie 1260
      Bodman   1337
      Bodmyn   1522

I know of no etyma of BODMIN that begin BOS. The respelling of 'Bod-' as 'Bos-' takes for granted that it does indeed derive from the Cornish word for 'abode'. That the

second element '-min' derives from 'MENEGHI', the Cornish word for 'monks', is even more conjectural. It is not that I wish to contest this putative though widely accepted etymology of BODMIN. I do, however, wish to emphasise that place-name etymology is not an exact science.

A second worry that I have with this practice concerns the semantics involved. The expression BODMIN does not mean MONK'S ABODE. That might possibly be its etymology, but it is not its meaning. Consider these two sentences:

> *This morning I went to Bodmin.*
> *This morning I went to a monk's abode.*

They clearly have quite different meanings. BODMIN is a referring expression. It refers to a particular locality, a particular town. Similarly,

> *I went to Camborne yesterday*

does not mean the same as

> *I went to a crooked hill yesterday.*

CAMBORNE has deixis to a particular town, a particular geographical location. "A crooked hill" means something quite different.

The Kernewek Kemmyn respelling, "Kammbronn" is based on the assumption that CAMBORNE somehow derives from KAMM + BRONN. Whilst this is one plausible etymology of CAMBORNE, it is not the only one. The earliest known form, 'Camberon' (1182), suggests Late Cornish 'cambern', "a dog-leg". This could refer to the course of a road or stream. In 1700, a stone called 'The Camburn' stood in the churchtown. So KAMM+BRONN is not an undisputed etymology for this place name. Camborne people still make reference to the town sign, and it's one of things that they mention if you talk to people about the language. They remember two things, the controversy that raged about erection of the sign, and the fact that it looks nothing like 'Camborne'.

Etymology is not an exact science and for many, if not most, Cornish placenames, conflicting etymologies exist. This of course leads to considerable problems if one wishes to respell placenames to conform with Kernewek Kemmyn. It is quite unnecessary to respell a placename in order that some putative etymology is transparent. It is unreasonable for one group of Cornish speakers to insist that Cornish placenames are respelled according to their spelling system and their putative etymologies, and that these respellings must be accepted by the rest of the Cornish speaking community. Respelling is not even necessary; English speakers do not feel that it is necessary to respell English placenames. My own view then is that it neither necessary nor wise to go about respelling place-names in revived Cornish.

IS A PHONEMIC ORTHOGRAPHY REALLY NECESSARY?

Whilst it is recognised that a need exists to standardise the spellings of Cornish words, a phonological approach is not necessarily the best way to go about this. Some languages such as Irish, Welsh, Breton and Dutch have undergone spelling reform. However the change has not always been to make them more phonemic. Hebrew is an example of a language which has been successfully revived in this century. However Hebrew was not revived by first constructing a conjectural phonology and then deciding how that phonology should be represented orthographically. Consider the case of the English language. Spelling reform for English has been frequently

recommended. However it is not only cost that obstructs English spelling reform. Not everybody pronounces English in the same way. A decision would have to be made concerning which of many varieties of spoken English would be chosen as a basis for a phonemic English orthography. If a single country, such as Britain were to respell English, this could have disastrous consequences. Written British English might then be no longer mutually intelligible with other world varieties of English. English orthography is only very loosely phonemic. However English is the most widely spoken language in the world. Furthermore most of the English speakers in the world have learned English as a second language. There are in fact more people learning English in China than there are native speakers of English in the USA! So a closely phonemic orthography is not a prerequisite for language learning. If it were, German and Spanish would be more widely spoken than English as a second language. People will learn Cornish because they want to and not because a phonemic orthography exists for it.

Central Ladin is a minority Romance language spoken in the Dolomites. There has recently been an attempt to create a standardised Central Ladin to serve as a basis for the creation of linguistic resources for local communities and institutions. This attempt adopts the strategy of building a new communicative code from the various existing local varieties. Four criteria are used to select forms for use in the standardised variety[73]:

   a) <u>frequency</u>: preference is to be given to the most frequent forms among the varieties … ;
   b) <u>systematicity</u>: forms are given preference which enhance the regularity and coherence of the whole system … ;
   c) <u>transparency</u>: preference is given to "full" forms, more readily comprehensible than shortened ones … ;
   d) <u>typicality</u>: forms are chosen which distinguish Ladin from competing languages ….

Some people might argue that, since the spelling of Kernewek Kemmyn denotes the pronunciation of Cornish, it is easier to learn. A fairly closely phonemic spelling system might help the learner who knows both the meaning of a word and how it is spelt but has not heard it pronounced. However this is not a very usual path of lexical acquisition. If a learner encounters a new word in a written text, they will need to look it up in the dictionary anyway and, therefore, have access to the pronunciation. Language teaching methodology and materials possibly have a far greater impact on 2nd language acquisition than a phonemic orthography.

One of the problems that is associated with Kernewek Kemmyn is that it is phonemic only for those who pronounce Cornish as prescribed by George's putative phonology. There are many speakers of Cornish who prefer some other theory of Cornish phonology. However even those who have learned Kernewek Kemmyn do not usually pronounce Cornish as prescribed in George's phonology

With regard to making reading easier, it is possible that phonemic spelling has no appreciable effect. If a learner is proficient enough to read the Middle Cornish texts in a standardised spelling system such as Unys or Kemmyn, they are unlikely to have very much difficulty in reading them in their original spelling. By way of illustration, here are the opening lines of "Origo Mundi" in their original spelling in Unified[74] and in Kernewek Kemmyn[75].

Original	Unified	Kernewek Kemmyn
DEUS PATER	*DEUS PATER*	DEUS PATER
En tas a nef y'm gylwyr	*An Tas a Nef y'm gylwyr,*	An Tas a nev y'm gelwir,
formyer pup tra a vyt gurys	*Formyer pup tra a vyth gwrys.*	formyer puptra a vydh gwrys.
Onan ha try on yn guyr	*Onen ha Try on yn gwyr -*	Onan ha tri on yn hwir,
en tas ha'n map ha'n spyrys	*an Tas ha'n Map ha'n Spyrys;*	an Tas ha'n Mab ha'n Spyrys;
ha hethyu me a thesyr	*ha hedhyu my a dhesyr*	ha hedhyw my a dhesir
dre ou grath dalleth an beys	*dre ow gras dalleth an bys.*	dre ow gras dalleth an bys.
y lavaraf nef ha tyr	*Y lavaraf - nef ha tyr*	Y lavarav, nev ha tir
bethens formyys orth ou brys	*bedhens formyes orth ow brys.*	Bedhens formyes orth ow brys.
lemmen pan yu nef thyn gwrys	*Lemmyn yu nef dhym gwrys*	Lemmyn pan yw nev dhyn gwrys
ha lenwys a eleth splan	*ha lenwys a eleth splan,*	ha lenwys a eledh splann,
ny a vyn formye an bys	*ny a vyn formya an bys.*	ny a vynn formya an bys.
par del on try hag onan	*Par del on Try hag Onen -*	Par dell on Tri hag Onan,

It can be seen that if a student of Cornish can read either the Unified or the Kernewek Kemmyn transcriptions, they should be able to read the original orthography without too much difficulty. It can also be seen that the Unified transcription is a little closer to the original than the Kernewek Kemmyn transcription.

CONCLUSION

Whilst a standardised spelling system may be beneficial for the pedagogical basis of Revived Cornish, it is vital that this is based on the scholarly study of the historic Cornish texts. George's methods cannot determine the phonology of historical Cornish; they only provide a basis for speculation. Furthermore when one compares the data reported by George with the primary sources, they do not match. His results and conclusions are, therefore, spurious. George's work thus makes claims about Cornish phonology which are not really justified. Since George's investigation of Cornish phonology is badly flawed, the switch to Kernewek Kemmyn seems to have been an expensive waste of time and energy. If one is content with an orthography which is based on a broad approximation of Cornish phonology, then Unified Cornish provides this; and if one goes along with that viewpoint, then there was never any need to replace Unified with Kemmyn. People who start to learn Cornish need the assurance that the form that they are being taught is indeed Cornish and not the product of some individual's fertile imagination. Systems which respell Cornish words, such as Kernewek Kemmyn, and Unified Cornish, are liable to be criticised by some people as being artificial and not Cornish. In fact some people might go as far as to argue that Kernewek Kemmyn has more in common with fictional artificial languages like Quenya[76] and Brithenig[77] than with traditional Cornish.

We do not have an agreed phonology of Cornish; reconstructions of Cornish phonology are at best conjectural. Consequently it would seem likely that theories concerning Cornish phonology will be in a state of flux for the foreseeable future. If you want to revive a language like Cornish, it is necessary that there is consensus for a standardised form even if there are uncertainties about the phonology. The introduction of Kernewek Kemmyn caused a split in the revival movement that has resulted in three spelling systems in current use. Unified Cornish may have had shortcomings but at least everyone was using it. It is recommended that the standardisation of Cornish orthography be based on that which is verifiable rather than on some speculative phonology or putative etymology.

There are alternatives to using an invented phonemic orthography to serve the Cornish language revival. One need not presuppose that there must be a direct correlation between phonemes and graphemes. There are other issues apart from phonology to be taken in account when standardising the orthography of Cornish. Variations in spelling may contain useful clues to a word's etymology. If one wishes actually to be literate in a language, instead of merely conversational, it is not unreasonable that one understand more of words than simply their most common meaning and sound. Putative etymologies, however, should not be used as a basis for the respelling of place-names. One can standardise the spelling of Cornish by choosing one form for each lexeme from the forms attested in the texts using criteria similar to those being used for Central Ladin[78]. One then recommends a pronunciation for each word based on the best understanding that we have of Cornish phonology. Whilst it is not possible to recover the actual sounds of mediaeval Cornish, there are no significant grounds for rejecting Late Cornish as being corrupted by English and Lhuyd[79] provides us with the clearest record of how Cornish was pronounced. Lhuyd[80] should, with some caution, provide the basis for recommendations on pronunciation.

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