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”Alternate History Languages”, ”Lost Languages” and their approaches to simulating diachronic change: Comparing Brithenig, Cumbraek and Modern Gaulish.

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Abstract

This paper discusses the different strategies for simulating diachronic change in planned languages comparing the approaches of Brithenig (Smith, 2007a), Cumbraek (Whalley, 2022) and Modern Gaulish (“Modern Gaulish”, 2023).

The status of these languages as each reaching from level 5 to 7 in the taxonomy devised by Blanke (2006), being well-developed and well-documented but lacking a significant community of practice, allows the intentions and perhaps motivations of the language inventor to be assessed more clearly, as their language plans remains strictly controlled by their creators.

These languages, which can all be be classified as *a posteriori* languages (Couturat & Leau, 1903), will be compared on the phonological, morphological and syntactic changes they stipulate occurring between their source language(s) and the published language plan.

Additionally, the languages shall be analysed according to the taxonomy of planned languages laid out by Gobbo (2017), as the intended audience of each language may have informed the approach the inventor took when planning.

Through comparison with historical processes attested in natural languages, the extent to which the simulated development implemented in each plan resembles that of natural language, in one of the discussed languages the ’diachronic’ change mimics that of historical changes completely.

The analysis concludes with an assessment of future work to come to a greater understanding of how language inventors use simulated ’diachronic’ language change as a tool to create more naturalistic language plans or to mimic the *phonoaesthetics* of a natural language (Pesek & Reiterer, 2019).

Contents

1 Planning Languages Diachronically	3
1.1 Brithenig	3
1.2 Cumbraek	5
1.3 Modern Gaulish	6
1.4 Comparison of Vocabulary	8
2 Taxonomy of Simulated Diachrony	8
3 Motivations for a Diachronic Approach	9
3.1 Phonoaesthetic Reasons	9
3.2 Generating Naturalistic Irregularity	9
4 Conclusion	10

1 Planning Languages Diachronically

1.1 Brithenig

Brithenig is an 'alternative history' *a posteriori* planned language derived from Proto-Romance (PR), the common ancestor of the modern Romance languages, heavily influenced by the historical development of the Welsh language.

Brithenig follows the same historical sound changes as Welsh went through historically, an effective albeit improbable method of recreating the phonoaesthetics of another language. However the lexicon of Brithenig is derived through regular sound change rather than the 'cymricisation' of PR lexemes, as phonological contrasts present in PR but not in Welsh have reflex in Brithenig. One example of this is the phonological palatalised series in PR being reflected in Brithenig's contrast between /k/ & /tʃ/, a contrast that is not present in native Welsh words.

While the proposed phonological development of Brithenig is very similar to Welsh (Smith, 2007a). The syntax and inflectional morphology of the language resemble the other Romance languages much more closely, in contrast to the VSO order of Welsh, Brithenig matches the SVO order of most Romance languages. In Welsh the progressive aspect is distinguished by context (King, 2015), whereas in Brithenig it is distinguished by an auxiliary and participle:

Table 1: Present progressive in Brithenig

yst-ar	dorfi-n
stand-INF	sleep-PTCP
'To be sleeping'	

Verb conjugations retrieved from: (Smith, 2007b).

This is similar to the way in which the present progressive is expressed in other Romance languages such as Spanish (Moreno-Fernández et al., 2019).

Table 2: Present progressive in Spanish

estar	dorm-iendo
to be	sleep-PTCP

Despite Brithenig's syntax generally being more similar to Romance languages, there are some ways in which it takes after that of Welsh, for example demonstrative adjectives are not used alongside nouns as they are in most Romance languages. Instead the adverbs *ci* - 'here' and *llâ* - 'there' are added to the verb phrase.

Table 3: Demonstratives in Brithenig

ill	of	ci
DEF	man	here
	'This man'	
ill	hof	llâ
DEF	man	there
	'That man'	

This behaviour is almost identical to that seen in Colloquial Welsh, although the 'h-prothesis' seen in the Brithenig example does not occur in the Welsh case *yma* - 'here' and *yna* - 'there'.

The system of initial consonant mutation found in Brithenig is superficially almost identical to that of the Welsh system. The two systems differ in that the spirant mutation affects a larger set of consonants in Brithenig than it does in Welsh.

Table 4: Brithenig Mutation System

Radical	Soft	Spirant	Nasal
<i>p</i>	<i>b</i>	<i>ph</i>	<i>mh</i>
<i>t</i>	<i>d</i>	<i>th</i>	<i>nh</i>
<i>c</i>	<i>g</i>	<i>ch</i>	<i>ngh</i>
<i>b</i>	<i>f</i>	<i>f</i>	<i>m</i>
<i>d</i>	<i>dd</i>	<i>dd</i>	<i>n</i>
<i>g</i>	\emptyset	\emptyset	<i>ng</i>
<i>m</i>	<i>f</i>	<i>f</i>	
<i>ll</i>	<i>l</i>	<i>l</i>	
<i>rh</i>	<i>r</i>	<i>r</i>	

Celtic consonant mutations originate from sound changes conditioned by a preceding consonant on the end of words that have since been lost. As a result of starting from two different parent languages, Proto-Romance for Brithenig and Common Brythonic for Welsh, the circumstances in which the consonant mutations in the descendant language occur will necessarily be different.

In general, the spirant mutation is much more prevalent in Brithenig than it is in Welsh, being associated with more prepositions and grammatical circumstances such as marking plurality on nouns, adjectives and verbs. Adjectives agree with the head noun (unlike most adjectives in Welsh) not only for number and gender but also for the consonant mutation applied to the noun.

Table 5: Welsh Mutation System

Radical	Soft	Spirant	Nasal
<i>p</i>	<i>b</i>	<i>ph</i>	<i>mh</i>
<i>t</i>	<i>d</i>	<i>th</i>	<i>nh</i>
<i>c</i>	<i>g</i>	<i>ch</i>	<i>ngh</i>
<i>b</i>	<i>f</i>		<i>m</i>
<i>d</i>	<i>dd</i>		<i>n</i>
<i>g</i>	\emptyset		<i>ng</i>
<i>m</i>	<i>f</i>		
<i>ll</i>	<i>l</i>		
<i>rh</i>	<i>r</i>		

Table 6: Examples of mutation causing words in Brithenig & Welsh

Prepositions	Welsh	W. Mutation	Brithenig	Br. Mutation
to	<i>i</i>	Soft	<i>a</i>	Spirant
from	<i>o</i>	Soft	<i>di</i>	Soft
with	<i>gyda/efo</i>	Spirant	<i>cu</i>	Nasal
in	<i>yn</i>	Nasal	<i>i</i>	Nasal
but	<i>ond</i>	N/A	<i>mai</i>	Spirant

1.2 Cumbraek

Cumbraek started as an attempt to reconstruct *Cumbric*, a Celtic language that went extinct in the 12th century. Working solely from the few number of attestations of the extinct language proved stifling for the language inventor however, and Whalley moved to the less focused but more artistically satisfying goal of creating a modern 'descendant' of Cumbric.

Cumbraek's approach to sound change takes inspiration from innovations exhibited in the modern Celtic languages, such as the word final devoicing that occurs in Breton and Cornish and can be seen in the name of the language project 'Cumbraek' (cf. Welsh: 'Cymraeg').

Another approach to creating a modern 'descendant' language that Cumbraek employs is not simply to make changes from the source language, but also to be conservative. This conservation of features that other descendant languages have since changed can also be seen in the language project's name, the nasal-stop cluster /mb/ has been retained in Cumbraek instead of being assimilated into /m/ as in Welsh.

Aside from following the trend of other Celtic languages and conserving features that related languages have lost Cumbraek also builds the internal history of the language by postulating changes that did not occur in any of the sister languages such as the simplification of triphthongs, diphthongs and vowel sequences.

Cumbraek sticks closely to the morphology and syntax of an archetypal

Brythonic language, but also makes some innovations. Like Literary Welsh and Breton, but unlike Modern Welsh and Cornish, Cumbraek does not use a large degree of periphrasis. In Cumbraek the present continuous is distinguished by using a periphrastic construction analogous to the simple present tense used in Modern Welsh, the simple present is expressed using an inflected non-past verb form similar to the way in which the present tense was expressed in Literary Welsh (King, 2015).

The inflectional morphology of Cumbraek additionally diverges from that of its source languages by reducing the number of different pluralisation suffixes inherited from Common Brythonic along with the analogising of vowel alternation across plural nouns.

One of the more interesting morphological innovations present in Cumbraek is the development of an adjectival suffix expressing an exclamation -*het*, this works in a similar way to the Welsh construction *am* followed by a noun or adjective, with the meaning 'So *adjective!*' or 'What a *noun!*'. This feature is not conjured from nowhere, as Whalley (2022) emulates the process of grammaticalisation, wherein grammatical markers change in meaning over time, being interpreted in slightly different ways with successive generations. The exclamative adjectival form derives from the Common Brittonic equative ('As *adjective*') degree of adjective comparison *-*et* (Willis, 2009), a reflex of this affix is extant in formal Modern Welsh -*ed*. Longer adjectives use an alternate method of forming the exclamative, using the word *mor*, an analogous construction to the Modern Welsh informal equative.

As the former equative degree has been grammaticalised as an exclamative adjectival suffix, a new method of expressing the equative has been developed using the word *cen* (In Literary Welsh *cyn* precedes the equative) before the positive adjective causing the initial consonant to undergo lenition.

1.3 Modern Gaulish

Modern Gaulish (MG) or *Galáthach hAthevíu* is a planned language intending to develop a plausible modern descendant of the Gaulish language, a Continental Celtic language spoken in Western Europe that became extinct in the 6th century.

Unlike Cumbraek the intention of MG was to create a modern descendant language from the outset. Additionally the inventor of MG has a much more ambitious vision for its community of practice, reaching further up the taxonomy laid out in Blanke (2006) thanks to a collection of learner support material, texts and songs (GwirCeth, 2023). Much of the supplementary material for MG is made by the language inventor, but it has formed a small community. MG follows the trend of Brithenig and Cumbraek in taking heavy inspiration from modern natural languages with which it shares a source. Where Cumbraek is conservative in its difference from those of historical changes MG is more radical, pulling from a wider array of languages from which to pull inspiration as the Godeilic languages were included. The language resembles the

Godeilic languages, especially Irish, to the ear but the phonology is much more similar to that of Welsh at a surface level, lacking the broad/slender distinction for which Irish is known.

As a result of the source language for Modern Gaulish being spoken a millennium than earlier than that of Cumbræak, diverges far more significantly from its 'ancestor'. Some of these grammatical innovations are motivated by projecting trends attested in Ancient Gaulish, such as a shift away from free word order in favour of the VSO characteristic of the majority of Modern Celtic languages.

Unlike Cumbræak which draws its influence solely from the Brittonic languages and English, MG exhibits grammatical features more associated with the modern Godeilic languages, though some of these represent the conservation of features that have been lost in the Brittonic languages. The most notable of these features is the conservation of an inflected present tense, in lieu of the periphrastic constructions which are prevalent in spoken Modern Welsh and Cornish.

Not all the peculiarities of MG's grammar are a result of conservation however, the language eschews the inflected past tense that can be seen in all modern Celtic languages in favour of using a preverbal particle *ré* to express the past tense. A cognate to this preverbal particle can be found in the historical development of many Celtic languages (Williams, 1910). This propensity for preverbal particles is typical of Celtic languages though it takes a far different form in MG, where Modern Colloquial Welsh only uses preverbal particles rarely for emphasising grammatical relations that are encoded elsewhere, MG has an extensive system of particles used for encoding TAM information.

Table 7: Preverbal particles in Modern Gaulish & Welsh

Welsh	Meaning	MG	Meaning
<i>fe / mi</i>	Affirmative	<i>ré</i>	Past Tense
<i>a</i>	Interrogative	<i>en</i>	Continuous Aspect
<i>na(c)/ni(d)</i>	Negative	<i>a</i>	Intentional Form Marker
		<i>né</i>	Negative
		<i>a</i>	Interrogative

Unlike all modern Celtic languages, which exhibit at least two different types of initial consonant mutation with a consistent phonological effect and trigger for the various types of mutation, MG instead makes use of a single mixed mutation, the effect of which depends upon the consonant being mutated rather than the context in which it occurs. In doing so, the language creator nods toward the extant Celtic languages without treading directly in their footsteps, allowing a recognisable Celtic 'feel' or *phonoaesthetic* (Tolkien, 1983).

1.4 Comparison of Vocabulary

Table 8: Comparison of Vocabulary

English	Latin	Welsh	Brithenig	Cumbraek	M. Gaulish
tree	arbor	coeden	arfur	gwidhenn ¹	pren ¹
house	casa	tŷ	cas	ti	téi
man	homō	dyn	of	din	don
to eat	manduco	bwyta	manugar	esset	depri ²
language	lingua	iaith	llinghedig	yeth	tengu ³

White and Riddle, 1862

1: Cognate with Literary Welsh *gwydden* - 'tree' (Obsolete) and *pren* - 'wood'.

2: Cognate with Cornish *debry* and Breton *debrñ*.

3: Possibly cognate with Welsh *tafod* - 'tongue' from Proto-Indo-European **dnghū* via Proto-Celtic.

2 Taxonomy of Simulated Diachrony

As indicated in the previous section, the different approaches to diachronic language invention can broadly be defined by the level to which they follow the historical development of an existing languages. Additionally diachronic planned languages may be phonologically conservative but innovative in other respects. Brithenig (Smith, 2007a) sticks to the historical sound changes of Welsh closely, but does not mirror the grammatical innovations of Welsh instead resembling a typical Romance language in its syntax.

Each of the planned languages analysed in this paper take a different approach to the planning process, but are unified in the use of diachrony: Brithenig 'grafts' the historical sound changes of the Welsh language onto Proto-Romance, creating a language which sounds almost exactly like Welsh but made up almost entirely of Romance vocabulary and grammar reminiscent of French or Spanish. As a result of this technique, the online community of *conlangers* (those who invent languages for enjoyment) might label Brithenig as a *graftlang* (Conlang Mailing List, 2014). A *graftlang* is a constructed language in which a substrate, which could be either a documented natural language or a constructed proto-language, provides the lexicon and undergoes a series of simulated sound changes taken from the historical development of a target natural language. In this way, the sound system of the target language is 'grafted' onto the lexicon of the substrate language.

Cumbraek opts for a different approach, following its departure from its original aims to reconstruct the original Cumbric language, attempting to create a modern sister language to Welsh, Cornish and Breton incorporating the attested information we have regarding Cumbric. As a result Cumbraek does solely not derive from a single language with sound changes laid overtop, but instead uses attested sound divergences between Welsh and Cumbric to derive vocabulary for an early form of the language, then uses a small number of sound changes, grammatical simplifications and innovations devised by Whal-

ley (2022) to produce the final form of the language.

The creator of Modern Gaulish takes advantage of the earlier point of divergence from the extant Celtic languages and the relatively poor attestation of Gaulish to exert even more creative freedom over the language invention process. While the language creation process has been meticulously documented, with the assurances that a reflex of any lexeme or grammatical feature in MG existed or was likely to have existed in Ancient Gaulish, the reflexes in MG grammaticalise the original features to serve different purposes. As a language stated to exist in an 'alternate universe' and with a diachronic approach, the online conlang community might call MG an *altlang* (Landau, 2003).

3 Motivations for a Diachronic Approach

3.1 Phonoaesthetic Reasons

Phonoaesthetics, a term coined by Tolkien (1983) to explain his preference for the sound of one language over another, is one reason why one might use simulated sound change when inventing a language.

Brithenig (Smith, 2007a) was initially planned as the result of a thought experiment borne from interest in the modern Celtic languages, and certainly shows that employing simulated sound changes is an effective way to influence the phonoaesthetics of the invented language as to a non-speaker Brithenig and Welsh may not be distinguishable.

3.2 Generating Naturalistic Irregularity

One of the ways in which one can make a constructed language appear more naturalistic is to add irregularity. When constructing a language a diachronic approach can be conducive to creating believable irregularity given that language change is a contributing factor in producing the irregularities of language.

This can be done through sound change, *opaque* synchronic changes which seem to occur for no reason often arise because the sounds that use to condition them have been lost, this is the case with the of origin Celtic mutations, but can applied to synchronic processes in general.

In reference to the taxonomy of planned languages as laid out by Gobbo (2017), languages planned using a diachronic approach are almost certain to be placed within the 'alternative' half of the graph. Utilising diachronic principals in the planning of an auxiliary language is likely to obscure the sources from which the language was derived and impede the ability to learn read the language quickly and insert undesirable irregularity which has little place in an international auxiliary language.

4 Conclusion

In closing, this paper has discussed three Celtic (or Celtic-inspired) constructed languages, exploring the intersection of Interlinguistics and Historical Linguistics by examining the ways in which each creator approaches the internal historical development of their constructed language.

Moreover, the analysis underscores the importance of motivations behind language planning, especially in the context of achieving phonoaesthetic goals, creating a sense of historical continuity or creating a plausible sister-language. The exploration of these languages within the framework of Gobbo's taxonomy further enriches our understanding of the motivation behind decisions made in the language invention process.

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