<ch>The Neo-Celtic Verbal Complex and Earlier Accentual Patterns[[1]](#footnote-2)

<auth>JOHN T. KOCH

<aff>University of Wales Centre for Advanced Welsh and Celtic Studies

<a>The present proposal in a nutshell

Celtic inherited from Indo-European a system in which the first word of the sentence was invariably accented and was often followed by an unaccented word. In the evolution towards Gaelic and Brythonic, it became most common for that first word to be either a verb or a preverb. The beginning of the sentence thus became even more clearly defined because, also as an inheritance from Indo-European, verbs and preverbs were unaccented in other positions. Between Proto-Indo-European and the earliest attested Gaelic and Brythonic, the accent moved. As a result, the phonetic effects of the earlier accent became morphophonemic: phonologically stronger forms of verbs and preverbs occur in sentence-initial position in Old Irish and early Brythonic. Information about the shape and function of the clause, formerly conveyed by the accent, came to be conveyed by these morphophonemic contrasts. If the inherited primary/secondary system marking tense still survived then, this new absolute/conjunct opposition clashed with it and displaced it.

<a>§1.Background

In the 1980s I developed a theory in which the Indo-European accent explained three hard to explain features of Old Irish and early Brythonic[[2]](#footnote-3) historical grammar:[[3]](#footnote-4)

a. the absolute and conjunct verb forms;

b. non-lenition following preverbs reconstructed as ending in vowels in Proto-Celtic, such as *\*(p)ro*, *\*to* and *\*u(p)o*;

c. the retention of Proto-Celtic final consonants of prepositions, such as *\*eχs* and *\*kom*, when their Old Irish reflexes occur as pretonic preverbs, but not as proclitics before nouns.

In this article I return to reformulate the prosodic explanation of the Celtic verbal complex,[[4]](#footnote-5) as this is now desirable and possible. Further work is desirable because no consensus has yet been reached concerning the main questions posed in investigations of the three phenomena. They have received such intense scrutiny for so many years as to raise the suspicion that it might now be best to leave them as insoluble.[[5]](#footnote-6) That would be accepting a serious gap in our grasp of the evolution of Proto-Indo-European into the attested Celtic languages. Short of that, a step forward is needed.

An advance is now possible thanks to contributions to the prosodic model during the intervening years. These have made clear which aspects had most explanatory power and which needed work. Input has come from Lambert,[[6]](#footnote-7) de Hoz,[[7]](#footnote-8) Isaac,[[8]](#footnote-9) Meid,[[9]](#footnote-10) and especially Hock.[[10]](#footnote-11) Hock’s work allows us to reframe the argument within the context of features recurring cross-linguistically in verb-final (SOV) languages. Following Hock’s approach, the background of the Celtic verbal complex can be understood as a succession of evolutionary stages of features that communicated the shape and function of the sentence. Taking this focus, constants outweigh the discontinuities and transformations between Proto-Indo-European and Old Irish that have preoccupied much of the research on the verbal complex. Thus recast, the prosodic model tempers the recurrent theme of Insular Celtic as a stray that wandered off from its Indo-European kin.

<a>§2.The rival theory types and the prosodic explanation restated

The insight that (§1.a) and (§1.b) above were in complementary distribution and therefore susceptible to a unified explanation goes back to Thurneysen, who conjectured concisely:

It may be taken for granted that the gemination after preverbs goes back to the same element (*s*, whence *ṡ*), which was affixed to the first word of the clause, whether that word was a verb or not.[[11]](#footnote-12)

Thus, multiple intricacies of the Old Irish verbal complex might be unlocked with a single, straightforward key. This attractive idea inspired much of the work that followed.[[12]](#footnote-13) As a prelude to categorizing the rival theory types, we ask why one might expect a ‘single key’ or ‘integrated blanket explanation’ for phenomena §1.a–c above. The challenge is clearer if the problem is described as follows.

The words that commonly begin a normal Old Irish sentence, i.e. an affirmative statement, are a simplex verb or an unaccented preverb. The same words can occur in other positions in the sentence, in which case they have different forms, contrasting with their sentence-initial variants. In general, the sentence-initial forms go back to phonetically stronger preforms. The main theory types currently in contention recognize an integrated problem in this evidence and explain it in one of three ways, §2.a–c:

a. ‘particle explanations’,[[13]](#footnote-14) in which, following Thurneysen, an obligatory enclitic particle is reconstructed for second position in the clause;

b. ‘enclitic-deletion explanations’,[[14]](#footnote-15) in which syntactic innovations in later prehistory are seen as having produced new constructions that analogically omitted enclitics from clause-second position.

c. The ‘prosodic explanation’ restated:

Celtic inherited from (Later) Proto-Indo-European[[15]](#footnote-16) a pattern in main clauses, in which:

i. any word standing first in the clause was accented;

ii. that included verbs and preverbs;

iii. the same verbs and preverbs were regularly unaccented in other positions in the sentence;

iv. an unaccented word (Wackernagel’s enclitic or simplex verb) often occurred in second position;

v. this pattern defined the shape and function of the clause.

Then, in the evolutionary stream leading to Goidelic and Brythonic:

i. words other than verbs and preverbs became less common as the first word of the clause in everyday registers;

ii. the inherited accentual pattern produced a phonetic strong point where the end of the accented first word was followed by an unaccented word (Wackernagel’s enclitic or simplex finite verb);

iii. this prominence blocked two phonetic weakenings that occurred regularly with the same words in other positions in the sentence:

1. an early apocope of final short *\*-i* in inherited Proto-Indo-European verbal endings;

2. assimilative weakening of the first consonant following the nucleus (vowel) of the last syllable of the first word, whether that consonant ended the first word or began the second;

iv. the accent moved in Goidelic and Brythonic to the positions that conditioned the Neo-Celtic syllable losses;

v. this accent shift caused the phonetic changes conditioned by the earlier accent to become morphophonemic, creating contrasts between forms of preverbs and simplex verbs as they occurred first in the sentence and elsewhere.

The fact that the inherited system left extensive traces – or to some degree simply survived – in Old Irish is an effect of the Celtic sentential accent having been meaningful and contrastive and taking precedence over the word accent.

Enclitic-deletion explanations (§2.b) can be counted a subtype of particle explanations (§2.a),[[16]](#footnote-17) in which the rule is formulated that the obligatory enclitic is phonologically nil.[[17]](#footnote-18)

Like the prosodic explanation (§2.c), the particle and enclitic-deletion theory types account for phenomena §1.a–c above. But, in my view, they do so in a roundabout and less satisfactory way. Though the three agree in seeing special significance in Wackernagel’s enclitics in second position in the clause,[[18]](#footnote-19) the particle and enclitic-deletion explanations fail to recognize how this implies their own essentially prosodic character. Therefore, to explain the strong point in the phonology of the Old Irish sentence, it is preferable first to consider direct effects of the earlier sentential accent before seeking a Wackernagel’s enclitic – one that could precipitate precisely the intricacies of the segmental phonology of the Old Irish verbal complex, itself disappearing in most contexts – or syntactic reshuffles after lenition had operated.

<a>§3.The Vedic comparanda and Indo-European implications

The relevant point about the accentuation of the verb in Vedic Sanskrit is that it is unaccented in a main clause when in its most common position at its end, for example:

\*\*please ensure words in first and second lines of the following, and similar quotations, align as below\*\*

1.#  *índrasya nú vīríyāṇi prá* ***vocam*** #

of Indra now heroic deeds forth I speak

‘now I shall proclaim the heroic deeds of Indra’,[[19]](#footnote-20)

2. # *anyéṣām ástam úpa náktam* ***eti***#

of others house to by night he goes

‘he approaches by night the house of others’.[[20]](#footnote-21)

The verb is also unaccented in less common occurrences in the interior of main clauses: for example,

3. # *sá* ***veda*** *devá ānámaṃ / devā̒n…*#

he/this one has seen god bow? gods

‘he, the god, knows how to bow [to?] the gods …’[[21]](#footnote-22)

But it is accented when at their beginning, which is also relatively infrequent compared to clause end:[[22]](#footnote-23) for example,

4. # ***véda*** *vā̒tasya vartaním*#

has seen of the wind the roll/the run

‘he knows the trail of the wind’.[[23]](#footnote-24)

The comparable pattern in Old Irish is that the non-relative simplex verb takes conjunct form at the end or interior of the sentence, but absolute form when it comes first:

Vedic # V̒ … # # … V (…) # ~ Old Irish # Vabsolute … # # … Vconjunct (…) #

This correspondence implies that the absolute-conjunct system continues a (Later) Proto-Indo-European situation like that observable in Vedic, in which the verb in main clauses was unaccented,[[24]](#footnote-25) except when it began the clause, which is often recognized as having special prominence. Thus Klein:

Accentuation in this position seems to have possessed a demarcative value, signalling a new start-up and serving iconically and pragmatically as an attention-getting device.[[25]](#footnote-26)

We may infer that, as a rhythmic principle of Proto-Indo-European, the sentence-initial word, whatever its grammatical category, was strongly accented, and from this fact follows, by a general rhythmic principle of language (viz. the tendency for accents to alternate rather than occur successively), Wackernagel’s Law: the placement of unaccented enclitics in second position within the sentence.[[26]](#footnote-27)

The Neo-Celtic[[27]](#footnote-28) phenomena that this article seeks to explain (§1.a–c) all amount to special phonological strength of the verb or preverb as the first word in the sentence. Therefore, let us weigh what ‘strongly accented’ means in the passage above. Was there then effectively a three-tier system: strongly accented, mid level, and unaccented? Do we imagine an acoustically measurable special prominence conditioned by sentence intonation eclipsing the word accent? Alternatively, the sentence-initial accent’s invariability may have registered as perceptible strength, especially in combination with the frequent contrast of a following Wackernagel’s enclitic. In the evolution towards the attested Neo-Celtic languages, a second contrastive factor came into play: the first word was usually a preverb or simplex verb, and these same words had regularly been unaccented in other positions in the sentence.

For illustration, the following proportions use the example most common for this subject: Vedic accented *bhárati* and unaccented *bharati* ‘carries’ ~ Old Irish absolute *beirid*, conjunct *·beir* ‘carries’.

comparison:

Vedic # *bhárati …* # # *... bharati (…)* #

~Old Irish # *beirid …* ## *… ·beir (…)* #

It is not uncommon or especially controversial to accept that Vedic preserves the position and nature (i.e. elevated pitch) of the Proto-Indo-European accent,[[28]](#footnote-29) which implies the following.

historical inference:

(Later) Proto-Indo-European # *bhéreti* … # # ... *bhereti* (…) #

>Old Irish # *beirid …* ## *… beir* (…)#

Vedic evidence also implies an inherited basis for stronger and weaker positional variants of preverbs as well as verbs. Preverbs in main clauses behave as separate words and are accented. In subordinate clauses the pattern is reversed: i.e. verbs are accented, preverbs are unaccented and fully compounded with the verb, for example: *prá* ***gacchati***‘he goes forward’ versus *yadi* ***pragácchati***‘if he goes forward’.[[29]](#footnote-30) These patterns can also be explained as outcomes of falling intonation at the end of the sentence combined with SOV basic order. It is the verb of the main clause that completes the sentence on a lowered tone; therefore, the verb of the subordinate clause does not complete the sentence and can retain its accent without conflicting with the intonation of the sentence.[[30]](#footnote-31)

With the possible exception of Celtiberian, it is unlikely that Celtic continued a subordinate clause structure like that seen in Vedic.[[31]](#footnote-32) The relevant point here is that accented and unaccented verbs and preverbs alternated to show the shape of a clause, the clause type and variations in prominence.

The proposed evolution of the system is summarized as A–H and I–N below. The remainder of this paper discusses in more detail several of these stages.

A. The initial state is an SOV language, the basic order most often reconstructed for Proto-Indo-European.[[32]](#footnote-33) (§4 below)

B. As also widely accepted, the nature of the accent in Proto-Indo-European was elevated pitch, as retained in Vedic and Ancient Greek in early historical times and described by native grammarians.[[33]](#footnote-34)

C. As a cross-linguistic feature found in many of the world’s languages, Proto-Indo-European marked the end of the sentence with falling intonation.[[34]](#footnote-35)

D. Because the verb was an accentable word in Proto-Indo-European, its inherent word accent conflicted with the intonation of the sentence when the verb was in its usual sentence-final position.[[35]](#footnote-36) This conflict was resolved in favour of the sentence, so that the sentence-final verb lost its accent.[[36]](#footnote-37)

E. The verb retained its accent in the minority of instances where it was the first word in the sentence.

F. In a common ancestor of Vedic and Old Irish (possibly Proto-Indo-European itself, but in theory as late as the Post-Anatolian or Post-Tocharian stages), the contrast of the accented or unaccented verb became morphophonemic, rather than an automatic effect of sentential intonation.[[37]](#footnote-38)

G. Step F gave rise to a system in which the limits, function and structure of the clause and position and meaning of the verb (simplex or compounded) was conveyed by contrasting strongly articulated (accented) and weakly articulated (unaccented) positional variants of the verb and preverb(s).

H. Another feature of this system, which also arose in a common ancestor of Vedic and Old Irish, was to extend the neutral form of the verb (i.e. unaccented) to the minority of cases where it occurred in the middle of a main clause. (See section §5.)

This system of contrasting +prominence and –prominence positional variant forms of verbs and preverbs is fully observable and well understood for Vedic.

We can now capture a core principle holding constant from the cross-linguistic characteristics of SOV languages, through Proto-Indo-European, and down to the patterns attested in Old Irish.

# V+prominence … # #(P+prominence) (…) V-prominence (…) #

At all stages the +prominence forms are one way or another of stronger articulation and the –prominence forms are contrastingly weaker.[[38]](#footnote-39) What has obscured the continuity of this core principle for modern linguistics are the following transformations operating on other domains of the grammar:

I. The nature of the accent changed from pitch to stress, but at first retaining its Indo-European position: +prominence becomes stressed and ‑‑prominence becomes unstressed (section §6 below).

J. The stress accent affected segmental phonetics: +prominence developed stronger segmental phonetics and –prominence weaker (syllable losses and consonant weakening); these segmental changes must have become phonemic when the accent moved (= L) (section §7 below).

K. The shift from SOV to VSO basic order.

L. The stress accent moved from its Proto-Indo-European position according to new divergent principles in Goidelic and Brythonic and so was no longer the principal marker of +prominence in the sentence.

M. Apocope and syncope in Primitive and Archaic Irish (and similarly Ancient to Early Medieval Brythonic) determined by the new accent position.

N. Further reductions in unaccented words according to the new accent position.

<a>§4. The initial state: cross-linguistic prosodic weakness of the verb in SOV languages

**# X́ (…) V #**

Following Hock,[[39]](#footnote-40) I posit a starting state with features widely found in SOV languages, so not limited to Indo-European:

a. The end of an utterance tends to be marked with falling intonation.

b. This intonation fall can take precedence over the word accent, so that an accentable word becomes unaccented when utterance final.

c. Consistent with these patterns, the verb in SOV languages often shows special prosodic weakness.

d. In various languages and language families, this weakness results in retraction of accent, loss of accent and/or loss of final syllable.

e. Thus, both the Vedic and Old Irish patterns can be explained as parallel outcomes of verb-final basic order.

As confirmed by patterns found in Hittite, Vedic, Avestan, Homeric Greek and Old Latin, it is most likely that Proto-Indo-European had SOV as its basic word order. On the other hand, the combined evidence of the early Indo-European languages also implies that verb might less frequently occur at the beginning of the sentence, in which case the same cross-linguistic and comparative evidence implies that it was accented.

<a>§5.The unaccented verb spreads from sentence-final position to sentence-medial in a common ancestor of Indo-Iranian and Celtic

**# \*bhéreti … # # X́ … \*bhereti (…) #**

The principle that Vedic accented and unaccented verbs in main clauses correspond to Old Irish absolute and conjunct implies a shared innovation. The unaccented verb of Vedic main clauses occurs not just in sentence-final position, but also sentence medially: for example,

5. *táṃ dyaúr* ***veda*** *tám pṛthivī̒ tám āpaḥ*

him/that one heaven has seen that one earth that one waters

‘that does heaven know, that does earth, that the waters’[[40]](#footnote-41)

6. *sá putraír vā̒jam* ***bharate*** *dhánā nṛ̒bhiḥ*

he/this one with sons prize carry/take spoils with men/heroes

‘he with his sons bears away the prize of victory, the spoils, with his superior men.’[[41]](#footnote-42)

Similarly the conjunct verb in Old Irish poetry and the *rosc* style of elevated rhythmic prose is found in both sentence-medial and sentence-final position. This sentence type is known as ‘Bergin’s construction’, defined by its discoverer and namesake as follows.

The rule may be stated thus: when the verb does not stand at the head of its clause, particularly when it follows its subject or object, it takes the dependent form, that is, a simple verb has the conjunct ending and a compound verb is prototonic.[[42]](#footnote-43)

Here are three examples of verb-final Bergin’s construction:

7. *moladh cóir* ***canar***[[43]](#footnote-44)

praise fitting/correct is sung(cjt)

‘fitting praise is sung’

8. *demin dom t[h]riathaib* ***tung***[[44]](#footnote-45)

surely to my (to) lords I swear(cjt)

‘surely I swear to my lords’

9. *dim láim rígdai brechtaib ban* ***mberar***

from my hand kingly by spells of women is carried(cjt)

‘he is carried away from my kingly hand by women’s spells.’[[45]](#footnote-46)

The nasalization of the verb *mberar* in (9), following *ban* ‘of women’ < Proto-Celtic *\*banom*, can be explained as reflecting earlier enclisis of an unaccented verb on the preceding noun.

Verb-medial instances of Bergin’s construction also occur in the same artistic registers: for example,

10. *Lugaid Lūath* ***loisc*** *trebthu trēn tūath*[[46]](#footnote-47)

Lugaid Swift burned(cjt) settlements strong of peoples

‘Swift Lugaid burned the settlements of strong tribes.’

Compare the previous with the following, in which the same simplex verb, again 3rd-person singular preterite, occurs in sentence-initial position and absolute form:

Sentences corresponding to Old Irish verb-medial Bergin’s construction occur in early Welsh poetry:[[47]](#footnote-48) for example,

11. *Alexander Magiδaỽ[n]* ***heỽys*** *hayarnδaỽn cleδyfal anwogaỽn*[[48]](#footnote-49)

Alexander Macedonia cast(cjt) iron- gift sword-stroke most-glorious

‘Alexander of Macedonia scattered an iron gift of most glorious sword strokes.’[[49]](#footnote-50)

12. ***heessit*** *waywawr y glyw*[[50]](#footnote-51)

he cast(abs) spears in(?) battle(?)

‘he cast spears in battle.’

It is possible that this innovation occurred independently after the dialects leading to Indic and Celtic had lost contact, but it is more economical to accept that the unaccented verb (whence the Insular Celtic conjunct verb) spread to medial position in a common ancestor of Indo-Iranian and Celtic. In the tree model of Ringe, Warnow, and Taylor adopted here, these branches latest common ancestor was Post-Tocharian Indo-European, also known as ‘Core Indo-European.’[[51]](#footnote-52) The innovation could have occurred at a higher node, such as Post-Anatolian Indo-European or Proto-Indo-European itself, but there is not enough evidence for the accent at these stages.

<NOTE \*\*please position tree model diagram and caption here, or nearby – file: **Ringe et al tree.jpg**\*\*>

Two factors that possibly favoured this innovation are noted. First, for Vedic and other early Indo-European languages attested with predominant verb-final order, the exceptional verb-initial sentences are usually interpreted as somehow marked; special attention is drawn to the verb and possibly the entire atypical sentence. But in the same periods of the same languages, verb-medial orders are not usually emphatic, but rather an alternative neutral placement of the verb. Therefore, some clarity was gained by using the unaccented verb in both neutral positions, final and medial. Both would then contrast with their emphatic counterpart, accented beginning main clauses.

Secondly, as investigated by Gonda, many examples of the verb in medial position in Vedic main clauses can be understood as ‘amplified sentences’, logically and syntactically complete through the verb, with an optional ‘amplification’ following to the right.[[52]](#footnote-53) Therefore, they are, in effect, a subtype of the verb-final main clause, their underlying ending marked with lowered intonation.

This innovation was not altogether cost free. The marking of the end of the sentence with an unaccented verb became less clearly defined. Thus, the functional load shifted to the beginning of the sentence, where the first word was invariably accented and enclitics gravitated to second position. The development of VSO order in Insular Celtic is often viewed as an inherently non-Indo-European tendency, in which a substratum language possibly played a part.[[53]](#footnote-54) However, the spread of the unaccented verb to sentence-medial position made the beginning of the sentence more informative and can be recognized as an Indo-European process favouring outcomes in Insular Celtic.

If Bergin’s construction had once been the norm, the pattern of absolute and conjunct would essentially have been identical to the distribution of accented and unaccented verbs in Vedic main clauses. We might then conclude that whatever function the alternation had in Vedic it (still) had in a forerunner of Old Irish. The fact that the construction is confined, almost entirely, to high-style poetry and *roscada* in Old Irish and to Early Welsh poetry suggests that it had not been part of the everyday register in the recent past. This conclusion is also suggested by – or at least consistent with – the fact that alliteration between the simplex verb and preceding stressed word is virtually a requirement of Bergin’s construction.[[54]](#footnote-55) It is also prevalent in comparable constructions in Early Welsh poetry, such as

13. *beirδ byt* ***barnant*** *wyr o gallon*

poets world they-judge men of heart

‘the poets of the world judge men of heart’[[55]](#footnote-56)

14. *bysseδ brych* ***briwant*** *barr*

fingers speckled they-smash top of the head

‘the fingers of the speckled one smash a head’ or ‘heads’.[[56]](#footnote-57)

<a>§6.The nature of the accent changes from elevated pitch to intensive stress, but retaining its Proto-Indo-European position, in a common ancestor of Goidelic, Brythonic and Gaulish

**# \*bhéreti … # # X́ … \*bhereti (…) # >**

**# \*ˈbereti … # # ˈX … \*bereti (…) #**

The early apocope affecting categories of unaccented words ending in short front vowels, described at §7, was conditioned by the accent remaining in its Proto-Indo-European position, but having become a stress accent. Comparably in Germanic, the phenomenon called ‘Verner’s Law’ implies a prehistoric stage at which the position of Proto-Indo-European accented syllables continued, but the accent had become stress. Verner’s Law operated at a stage following the first of three waves of consonant shifts usually called ‘Grimm’s Law’. Then, Pre-Germanic *\**[φ], \*[θ], *\**[χ], *\**[χw] became *\**[β], *\**[ð], *\**[γ], *\**[γw][[57]](#footnote-58) when not beginning a word or immediately following the position of the Proto-Indo-European word accent. For example, Proto-Indo-European *\*pH2tē̒r* ‘father’ became Pre-Germanic *\*faˈþēr*by Grimm 1, then *\*faˈðēr*by Verner’s Law, then *\*ˈfaðēr*when the accent shifted to Proto-Germanic initial syllables, whence Old Norse *faðir*. Contrast Proto-Indo-European *\*bhréHatēr* ‘brother’ > Proto-Germanic *\*ˈbrōþēr* > Old English *brōþor*, in which the spirant \**þ* [θ]did not weaken (that is, assimilate to the voiced articulation of the flanking vowels) when immediately following the stressed vowel in the position of the Proto-Indo-European accent. Thus, Verner’s Law depends on the position of the accent in Proto-Indo-European, not what it later became in Germanic.[[58]](#footnote-59)

Evidence of shared vocabulary and other early Post-Proto-Indo-European innovations shows that the forerunners of Celtic and Germanic were in close contact at a stage broadly within the Greater Bronze Age, ~2500–500 BC.[[59]](#footnote-60) The cladistic model of Ringe, Warnow, and Taylor points to a primary dialect diversification from Proto-Indo-European in which Pre-Germanic was, at an early stage, a close sister of the dialects that became Balto-Slavic and Indo-Iranian, probably forming a continuum. Subsequently, but still in prehistory, Pre-Germanic shifted to closer contact with Italo-Celtic.[[60]](#footnote-61) A recent study identifies 173 words or specific evolved forms of words shared between Celtic and Germanic and no other Indo-European branch. Most of these clearly predate Grimm’s Law, and hence Verner’s Law too, and show no earmarks of loanwords. This evidence would be easier to understand assuming a high degree of prolonged mutual intelligibility.[[61]](#footnote-62) That conclusion, in turn, would be easier to understand had the forerunners of Germanic and Celtic, during this period of close contact, both been accented alike, that is, retaining the position of the Proto-Indo-European accent while both shifted its character to stress prominence.

<a>§7.Stress in the position of the Proto-Indo-European accent affects segmental phonology in Celtic

In the context of the new stress accent, sounds in unaccented words were more likely to be phonetically weakened and sounds in accented words preserved or intensified. These are the processes that explain the beginnings of the absolute-conjunct system and the behaviour of preverbal elements in Insular Celtic. A further significant attribute for the types of words that are of interest for the present subject – namely verbs, prepositions used as preverbs, and personal pronouns – is that the Vedic comparative evidence indicates that they could all occur either accented or unaccented, depending on their position and function in the clause and function of the clause. Therefore, these words’ strong and weak forms contrasted meaningfully in the syntax.

Formulated in this way, one strength of the prosodic explanation is that it does not require special Post-Proto-Indo-European rules or syntactic rearrangements applying uniquely to the verbal complex, but nowhere else in the grammar. The following example illustrates, outside of the verbal complex, the three key accent-based phonological changes (b.i–iii).

outside the verbal complex

a. Proto-Indo-European elements:

*\*do* ‘to, towards’, *\*téwe* ‘your’ genitive singular, \**wiHxrṓi* ‘man, hero’ dative singular

b. In the common ancestor of Old Irish and early Brythonic:

i) the accent changed from pitch to stress;

ii) short front vowels were lost at the end of unaccented words belonging to a category variably accented and unaccented depending on their syntactic position and function; and

iii) the consonant following the syllabic nucleus of the final syllable of an accented word supporting an enclitic became or remained phonetically strong:

*\*do-tou wirūi* [ˈdo t.tou. ˈwi.ruːi] or [… . wi.ˈruːi] ‘to your man’

*versus* accented unapocopated *\*tówe* [ˈto.we] ‘thine’

c. Old Irish:

*do-t·ḟiur,* cf. Middle Welsh *y’th wr*

versus Middle Irish *taí*, Middle Welsh *teu* ‘thine’[[62]](#footnote-63)

The phonetic reconstructions of phrasal combinations in the common ancestor of Old Irish and Brythonic are shown in square brackets. Spaces between segments represent word boundaries. Dots on the baseline represent boundaries between syllables. The sign ˈ precedes a stressed syllable. The sign is printed in bold **ˈ <\*\*NOTE** It is important that this accent symbol is visibly different when bold. Possibly a larger type size or different font will be necessary.**\*\*>** if the stressed syllable is followed by an enclitic. For the present case, whether the stress preceding an enclitic differed acoustically from normal word stress can be left aside. Nor is it crucial whether enclitic stress displaced the regular stress of the preceding word, as opposed to producing a second stress in it, possibly with a hierarchy of one primary and one secondary stress. The possibility that such patterns existed in Ancient Celtic is raised by the patterns of enclitics and preceding accented words in Greek and Latin: for example, ἄνθρωπός τις ‘some/any man’,[[63]](#footnote-64) *árma uirúmque* ‘arms and a man’.[[64]](#footnote-65) The evidence of Old Irish verbs with suffixed pronouns suggests that in Primitive Irish, at least, any stress immediately preceding the enclitic did not fully eclipse the regular stress on the verb’s first syllable, as these show no weakenings or reductions.[[65]](#footnote-66)

In the following examples, the same three accent-related phonological changes (b/c.i–iii), that account for Old Irish *do-t·ḟiur* < Proto-Indo-European *\*do*+ *\*téwe* + \**wiHxrṓi*, explain the phenomena inside the verbal complex.For ease of comparison, words commonly used to illustrate various theories of the Celtic verbal complex are again used.

inside the verbal complex

a. Proto-Indo-European elements:

*\*to* preposition/preverb or sentence connective, *\*soms* ‘those, them’ 3rd person plural, \**bhereti ‘*carries’3rd person present indicative

b–c. In the common ancestor of Old Irish and early Brythonic:

i) the accent changes from pitch to stress;

ii) short front vowels are lost at the end of unaccented words belonging in a category contrastively accented and unaccented depending on their syntactic position and function; and

iii) the consonant following the syllabic nucleus of the final syllable of an accented word supporting an enclitic becomes or remains phonetically strong. Reconstructions of the prehistoric Celtic situation are then followed by the Old Irish:

# *\*bereti …*#[ˈbe.re.ti] ‘he/she/it carries’ > *beirid* [ˈbˊerˊiδˊ]

# *\*bereti-sūs* …#[ˈbe.re.**ˈ**ti s.suːs] > [… s.sus] ‘he/she/it carries them’ > *beirthius*[[66]](#footnote-67)[ˈbˊerˊθˊus]

*\*to beret* [**ˈ**to b.be.ret] ‘he/she/it gives’ > *do·bbeir* [dɵ ˈbˊerˊ]

*\*to-tū beret* [**ˈ**to t.tuː. be.ret] ‘he/she/it gives you’ > *do-t·beir* [dɵ t ˈβˊerˊ]

<a>§7.a. Preverbal phenomena and the accent

Apart from my own work,[[67]](#footnote-68) writers favouring the prosodic explanation have focused mostly on the derivation of absolute and conjunct from the accented and unaccented verbs of Proto-Indo-European.[[68]](#footnote-69) That misses something important: we begin with a sentence-wide system involving both preverbs and verbs that evolves into a sentence-wide system involving both preverbs and verbs. As remarked above, it was a milestone when Thurneysen recognized the complementarity of the absolute endings and the absence of lenition following the first preverb. Building on this recognition is a strength of particle and enclitic-deletion explanations. Without compelling evidence that the complementarity of absolute-conjunct and the preverbal ‘irregularities’ is a coincidence – and ‘considerations of economy’ be damned![[69]](#footnote-70) – a model that only explains one half of the problem is unlikely to be acceptable or correct. Incidentally, when the prosodic explanation first occurred to me in 1983, it was as a ‘blanket solution’: the observation that all the ‘irregularities’ occurred at the juncture of accented sentence-initial words and following unaccented words.

As well as explaining non-lenition following preverbs that originally ended in a vowel, a prosodic explanation also accounts for the retention of final consonants of initial preverbs that are lost in other constructions where the same preposition occurs as a proclitic. For example, Proto-Celtic *\*eχs* ‘from, out of’ becomes Old Irish *a* + non-lenition/gemination as a proclitic before an accented dative noun: for example, *a túaith* ‘from a people’ < *\*eχs ˈtoutī*.But it is *as* when a pretonic preverb of a deuterotonic verb, for example *as·beir* ‘says’ < *\*ˈeχs beret*. Note also the non-assimilation following the first preverb in Old Breton *ecdiecnis* [eχdieŋˈkiːs] ‘he escaped (from)’ < *\*ˈeχs dī-ank-*,[[70]](#footnote-71)contrasting with the treatment in Middle Welsh *ethol* ‘to elect, choose’ from fully compounded *\*eχs-dol-*.[[71]](#footnote-72)The final consonant was evidently required for the stress matrix of an accented monosyllable at the time it was lost in the same preposition as a proclitic on a stressed noun. This consonant-retention rule is not confined to the verbal complex: the reflex of *\*eχs* is also *as* when preceding other unaccented words, for example *as mo chuimriug* ‘from my bonds’,[[72]](#footnote-73) *as cech ṡét* ‘from every treasure’.[[73]](#footnote-74) Synchronically, in Old Irish, *as* in *as·beir* is a proclitic and the verb is accented, but *as mo* and *as cech*, as well as the accentuation of Vedic verbs and preverbs, shows that the accentuation had once been the reverse in loosely compounded verbs, i.e.*\*ˈeχs beret*, &c.

Similarly, the preverb *con* < *\*kom* ‘with’ in deuterotonic verbs like *con·boing* ‘breaks, smashes’ < *\*ˈkon bonget*. As a proclitic preposition before accented dative nouns, this becomes *coN* losing its final consonant and nasalizing the initial consonant of the following word: for example, *co ndānoibh* ‘with gifts’ < *\*kom ˈdānobis*. Synchronically in Old Irish both *con* in *con·boing* and *co* in *co ndānoibh* are proclitics followed by stressed words. But at an earlier stage *\*ˡkon bonget* was a stressed monosyllable followed by an unaccented verb. As such, its final consonant was preserved and remained after the Old Irish accent system had arisen.[[74]](#footnote-75) The final *‑n* of the Old Irish preverb ‑*con* goes back to a Proto-Celtic and Proto-Indo-European word-final *\*‑m*, which is still preserved in Celtiberian. That detail imposes a narrowed chronological window for particle theories, because it implies that the particle, of whatever original shape, had only fused with the preverb after *\*kom* had become *\*kon* with word-final *\*‑n*.

In the present analyses, as in my earlier work,[[75]](#footnote-76) the phonetically unlenited consonants can be represented as geminates, similar to the models of Martinet[[76]](#footnote-77) and Jackson,[[77]](#footnote-78) defended by Isaac.[[78]](#footnote-79) In these, the Neo-Brythonic voiceless spirants [φ, θ, χ] arise from Old Celtic voiceless stops that were long or double [pp tt kk]. This approach leads to formal representation of stress, syllable structure and enclisis in Ancient Celtic similar to Allen’s for Latin,[[79]](#footnote-80) and also gemination in the mutational system of Modern Italian. For example, Latin *peccātum* [pek.ˈkaː.tum] ‘mistake, fault’ gives Italian *peccato* ‘sin, pity’, with a long or double consonant, and Middle Welsh *pechawt* [ˈphε.χaᴜḍ] ‘sin, pity’ with a voiceless spirant.[[80]](#footnote-81) In Old Irish *peccath* or *peccad* is often spelled with a double *cc*. However, in both native and borrowed vocabulary the Old Irish orthography is inconsistent[[81]](#footnote-82) and therefore inconclusive as to whether they represent phonemic double consonants or unlenited singletons.

In Tuscan and other dialects close to standard Italian, a mutational system comparable to those of Neo-Celtic occurs in speech, though not represented in writing. This includes a gemination mutation, which is found following words ending in a short accented vowel in close phrases: for example, *parlò francese* [par.ˈlɔ f.fran.ˈtʃeː.ze] ‘he/she spoke French’, *caffè nero* [ka.ˈfe n.ˈneː.ro] ‘black coffee’, *resterà con me* [res.te.ˈra k.kom.ˈme(ː)], *carità divina* [ka.ri.ˈta d.di.ˈviː.na].[[82]](#footnote-83) Recent experimental research has found that both lexical and syntactic geminates in Italian involve lengthening of the geminate and frequently two measurable bursts – in other words, an ‘honest to God’ double consonant.[[83]](#footnote-84)

Nevertheless, the prosodic explanation of the Celtic verbal complex need not be held hostage to Jackson’s theory of geminates in Celtic. There is another current model for the Neo-Brythonic voiceless spirants and the cognate unlenited consonants in Medieval and Modern Goidelic. This alternative goes back to the formulation of Greene, in which Neo-Brythonic [φ, θ, χ] and Neo-Goidelic [(p / pˊ,)[[84]](#footnote-85) t / tˊ, k / kˊ] have voiceless simplex stops as their immediate source. So that would make the emergence of the spirants in Brythonic a kind of second lenition. This change affected Brythonic [p t k] in the environments where the earlier lenition had not already changed them to [b d g][[85]](#footnote-86) (or better voiceless lenis [ḅ ḍ ġ]).[[86]](#footnote-87) The phonetic reconstructions here could be rewritten following conventions more in line with Greene’s theory. So there would be contrasting phonetic lenes and fortes, represented with lower-case and upper-case letters, but no geminates: thus, *\*to-tū beret* [**ˈ**To. Tuː. be.ret] ‘he/she/it gives you’, and so on. This would not affect the prosodic explanation.

As described above (§6), Verner’s Law in Germanic works word-internally to block the weakening (specifically voicing assimilation) of a consonant following a syllabic nucleus that had been accented in Proto-Indo-European. Using Greene’s model for ‘gemination’, a sound law similar to Verner’s law, but operating across word boundaries, would explain why the syllabic nucleus of a preverb that had been accented in Proto-Indo-European blocked the phonetic weakening of the following consonant. As with the Verner treatment following the old accent in Germanic, the non-lenition of the consonant can be described as preventing one kind or another of assimilation to the articulation of the flanking sounds.

In the case of the preverbs, words ending in accented short vowels are generally permissible in languages with pitch accents: for example, Vedic *abhí* ‘towards’, Greek ἀμφί ‘on both sides’ < Proto-Indo-European *\*H2entbhí* ‘on both sides, back and forth’. Therefore, there had been no restriction blocking a combination of accented preverb followed by an unaccented verb in a main clause like *\*pró bhereti*, phonetically \*[pró bhereti] with no lengthenings or intensifications under or around the accent and no reductions in unaccented syllables. But an accented word-final short vowel is often impossible in languages with stress accents. There are, for example, restrictions in Latin, Italian, Welsh, English and Old Irish barring words ending in accented short vowels.[[87]](#footnote-88) The restriction can be overcome, when necessary, either by lengthening the stressed vowel or strengthening the consonant of the next word to provide a suitable stress matrix, i.e. a heavy syllable of two moras. In most dialects of English, for example, the usually proclitic articles can be stressed for emphasis, but are then pronounced [ˈεɪj] and [ˈðiːj] with long vowels.

Had phonotactic constraints prevailed in the forerunner of Goidelic and Brythonic like those in the languages noted above, it would have been impossible for accented sentence-initial preverbs like *\*(p)ro*, *\*to*, and *\*u(p)o* simply to become stressed when the nature of the accent changed. Phonetic adjustments would have been necessary. The vowel could be lengthened, the word boundary could be obliterated so that these preverbs would henceforth be the accented first syllable of a full compound, or a consonant could be added after the vowel, or, at any rate, the consonant had to remain strong enough to support a stressed short vowel at the end of the preceding word. The attested Old Irish and early Brythonic forms indicate that the third route was taken: the initial consonant of the following element was realized strong, possibly lengthened, to provide a viable [‑ˈv̆C Cv-][[88]](#footnote-89) stress matrix for a final syllable of an accented word preceding an enclitic. Thus, to use the standard example (the preform of Old Irish *do·bbeir* ‘gives’), a notional Pre-Celtic *\*tó bhereti*, with pitch accent and unaccented verb, gave an Old Celtic \*[ˈtŏ b.be.ret], with a stress accent, phonetically strong consonant between preverb and verb and a phonetically reduced (i.e. apocopated) conjunct verb. Compare Early Welsh *ry cheidw* ‘may he keep’ < \*[ˈrŏ k.kat.wiːt],[[89]](#footnote-90) *go·chenyn* ‘they will sing’ < \*[ˈwŏ k.ka.nint(-)].[[90]](#footnote-91)

<a>§7.b.Early apocope and the emergence of the absolute-conjunct system

**# \*ˈbereti … # # ˈX … \*bereti (…) # >**

**# \*ˈbereti … # # ˈX … \*beret (…) #**

As shown above, early apocope affected word-final short front vowels in unaccented polysyllabic verbs and pronouns, but not final \**-ĭ* and \**-ĕ* of the same words when accented. It is this loss of *\*-ĭ* in unaccented verbs with Indo-European primary endings (but not their accented sentence-initial counterparts) that led to the absolute-conjunct opposition. In Indo-European, comparable changes occur beyond Celtic:

… verb-final reconstruction makes it possible to account for prosodic and segmental changes that single out finite verbs, such as the non-accentuation of Vedic finite verbs and *i-*apocope preferentially targeting finite verbs in Italic, Celtic, and Baltic-Slavic.[[91]](#footnote-92)

In Latin, for example, Proto-Italic two-syllable nouns that had ended in short *\*-i* do not lose their final syllable, but two-syllable verbs do: thus, *\*móri* > *\*mari* > *mare* ‘sea’, \**pedi* > *pede* ‘by foot’ versus *\*esti* > *est* ‘is’, \**eyti* > *it* ‘goes’.[[92]](#footnote-93) Similarly, (North-west) Indo-European[[93]](#footnote-94) *\*móri* ‘sea, lake’ did not undergo the Insular Celtic early apocope of *\*-i* that affected unaccented verbs, as shown by Old Irish *muir*, cf. also dative singular *déit* ‘tooth’ < Proto-Celtic *\*danti* < *\*Hdṇt-*, *inn‑uraid* ‘last year’ < Proto-Indo-European *\*péruti*.[[94]](#footnote-95)

As to Continental Celtic, there is evidence outside the verbal complex for the early apocope of short front vowelsin Gaulish: for example, *etic* with *-c* < enclitic *\*‑kwe*, likewise *-ac* in *rigani rosmertiac ‘*for Rīganī (Regina) and Rosmerta’,[[95]](#footnote-96) Late Gaulish *in mon derco …*[[96]](#footnote-97) ‘in my eye’ with proclitic *mon* from Proto-Indo-European *\*méme* or *\*móme*, and *to divo* ‘thy God’[[97]](#footnote-98) with proclitic *to* < Proto-Indo-European *\*téwe*.[[98]](#footnote-99) Cf. also in compounds *Armorica* beside *Aremorica* and Hispano-Celtic *Arceltius* with *ar-* < *\*(p)ari* < *\*prH2-i.*[[99]](#footnote-100)

The evidence for the Continental Celtic verbal complex is more difficult to assess. Confident analyses require identifications of the verb, its person, number, tense, mood, and so on, as well as its position within the clause and the type of clause (relative or non-relative, &c.). Even for the relatively extensive corpora of Celtiberian and Gaulish, there are few examples for which all those details are secure.

De Hoz noted a few verbs in Gaulish, which appear to have lost inherited *-i* and others which retained it.[[100]](#footnote-101) On the Chamalières tablet, *bissíet* is possibly a 3rd-person singular future tense (< *\*bhwisyeti*), having lost final *\*-i* and meaning ‘will be’,[[101]](#footnote-102) but its context and position in the clause are uncertain. One potentially decisive example is *sioxti albanos panna extra tuθ (…) ccc*.,[[102]](#footnote-103) if this means something like ‘Albanos sought an additional 300 vessels …’ That would imply that Gaulish had reached the advanced stage where the absolute *‑i* has spread analogically to a sentence-initial 3rd-person singular of a *t-*preterite, probably derived from a Proto-Indo-European aorist with inherited secondary endings.[[103]](#footnote-104)

For Celtiberian, difficulties of interpretation are compounded by the Palaeohispanic semisyllabaries. These had no way to represent final *-t* without an ambiguous sign that could represent a stop consonant either with or without a following vowel. Thus, subsequent writers have been less confident than Cowgill that verbs identified on inscribed bronze K.1.1 from Botorrita ended in *-ti* and not *-t* after early apocope of *-i*: **uersoniti**, **kabiseti**, **ambitiśeti**, **aśekati**, **sisonti**, **kuati**, **robiśeti**.[[104]](#footnote-105) On the other hand, on the long inscription from Peñalba de Villastar, Teruel, which is in Roman letters, we can see an unambiguous example of Celtiberian verb **SISTAT** with a final *-t*.[[105]](#footnote-106) If, as likely but not certain, this is a present indicative meaning ‘stands’ or ‘sets up’, it would show that the *-i* apocope in non-sentence-initial verbs had occurred, at least in later Celtiberian.[[106]](#footnote-107)

Among the authors of theories of the verbal complex cited here, Cowgill,[[107]](#footnote-108) McCone[[108]](#footnote-109) and Schrijver[[109]](#footnote-110) favour a genetic Insular Celtic, while Sims-Williams[[110]](#footnote-111) and Isaac[[111]](#footnote-112) are more circumspect. Particle explanations are more likely to require a genetic Insular Celtic. A model reconstructing an obligatory Wackernagel’s enclitic *\*es*, *\*eti* or nominative pronoun in most main clauses leads us to expect to see this in any Ancient Celtic language that had participated in the innovation. That expectation is not borne out, at least not clearly, by the sentences now attested in Gaulish and Celtiberian. So, if a Cowgill particle lies behind the Old Irish and early Brythonic evidence, this arose either as part of a separate Insular Celtic proto-language or spread by intense contact within an Insular Celtic geographical area. On the other hand, neither enclitic deletion nor the phonetic side effects of the accent would be so immediately obvious in written records of Ancient Celtic languages.

De Hoz grasped the complexity of the relationship of the ambiguous Continental Celtic evidence for the loss *\*-i* in (unaccented) verbs and implications of this for the configuration of the Celtic family tree.

We do not know when the Celts lost their verbal *\*-i*; we cannot be sure if there was a C[ommon] C[eltic] apocope of verbal *\*-i* in some circumstances; we can best concede that probably Gaulish had lost it in some cases and retained it in others, and that the few instances seem more adequate to the accentual theory of Koch than to the enclisis theories,[[112]](#footnote-113) but there is so little evidence that for the time being Continental Celtic has almost no practical bearing on the question of the origin of the absolute/conjunct system, and the same applies to the apocope of *\*-i* concerning the dialectal classification of Brittonic. In any case, while we wait for new evidence, I think that the different vestiges point to a Gaulish-Brittonic dialectal group imposed in Britain on speakers of different languages, some possibly Celtic, and interacted there afterwards with Irish, still in a state prior to Archaic Irish, in an insular convergence area.[[113]](#footnote-114)

What is clear is that Goidelic, Brythonic and Gaulish shared common innovations not found in Celtiberian. Some of these are syntactic and so directly relevant for the present subject. An inflected clause-initial relative particle **iom**, &c., inherited from Proto-Indo-European is retained in Celtiberian, but replaced by an uninflected Wackernagel’s enclitic *io* in Gaulish, Brythonic and Goidelic.[[114]](#footnote-115) Also, the evidence for the Gaulish sentence shows a VO order in most examples,[[115]](#footnote-116) while Celtiberian agrees with the other more anciently attested Indo-European languages in retaining SOV order.[[116]](#footnote-117)

<a>§7.c. The Watkins/Meid explanation: absolute/conjunct ~ primary/secondary

Important models were developed independently by Wolfgang Meid and Calvert Watkins. Both were published in 1963 and share a similar core idea.[[117]](#footnote-118) In this, Celtic descended from an early stage of Indo-European in which the opposed primary and secondary verbal endings had not yet evolved as such. Effectively there was only one set, which became the secondary endings, as found in past tenses in, for example, Sanskrit, Greek and Hittite. To these endings, an enclitic *\*-i* signifying *hic et nunc* could be affixed in accordance with Wackernagel’s law when the verb was in sentence-initial position. In most Indo-European languages, this *\*-i* became a marker for present tense verbs and, incorporated into the verbal endings, spread with present-tense forms to all positions in the sentence. Pre-Celtic alone did not participate in this development, but kept the *\*‑i* restricted to sentence-initial verbs, its use spreading to include verbs of the preterite-aorist tense in initial position.[[118]](#footnote-119)

The Watkins/Meid model stands off to the side from the other explanations discussed here, as it has not been actively advocated recently. Watkins himself had changed his mind by 1979, accepting that Proto-Celtic is unlikely to have remained aloof from the development found in Ancient Indo-European languages in which primary and secondary endings were used for present- and past-tense marking. ‘The tail was wagging the dog’ he is reported to have said in a Dublin lecture that year.[[119]](#footnote-120)

One change in intellectual climate that contributed to this shift is the fading of the idea that Celtic was an especially archaic branch of Indo-European. If that were so, it would be reasonable to expect that the original distribution of the Indo-European primary and secondary endings might be better reflected in Old Irish than in Indo-Iranian, Greek or even Anatolian. More recently, models like that of Ringe, Taylor and Warnow,[[120]](#footnote-121) which is the basis of the tree diagram here, are in favour. It is thus widely agreed that Anatolian split off from Proto-Indo-European first, followed by Tocharian, after which a residual ‘Core’ Proto-Indo-European, from which Proto-Celtic later emerged, remained intact.

The derivation of the Old Irish absolute and conjunct endings from Proto-Indo-European primary and secondary did not begin with Meid and Watkins, but goes back to Windisch in the 19th century.[[121]](#footnote-122) Despite the current abeyance of primary/secondary explanations, the resemblance of Old Irish 3rd person absolute and conjunct forms and the Proto-Indo-European primary and secondary is hard to miss: with the 3rd person active endings, for example,

Proto-Indo-European Old Irish

*\*bhereti* ‘carries’ *beirid* ‘carries’ (absolute)

*\*bheret* ‘used to carry’ *·beir* ‘carries’ (conjunct)

*\*bheronti* ‘they carry’ *berait* ‘they carry’ (absolute)

*\*bheront* ‘they used to carry’ *·berat* ‘they carry’ (conjunct)

There is a further suggestive correspondence, albeit a negative one: the Old Irish and early Brythonic suffixless preterite has no absolute/conjunct contrast. These forms go back to the Proto-Indo-European perfect, which had completely different endings and no primary/secondary opposition. On the other hand, the *t-* and *s-*preterites probably reflect aorists, which had Proto-Indo-European secondary endings.[[122]](#footnote-123) For example, Early Irish *s-*preterite 3rd singular absolute *carais*, conjunct *·car* ‘loved’ < aorist *\*karast*, cf. Early Welsh *keressyt*, conjunct *ny charws*,[[123]](#footnote-124) but suffixless preterite *cachain*, *·cachain* ‘sang’ < perfect *\*kekane* and Early Welsh *kigleu* ‘heard’, *ry·chigleu* ‘has heard’ < *\*kūklowe*. A particle model works to explain at least some of these forms: for example, both # *\*rāte-’s …* # and # … *\*rāte* (*…*)# would give Old Irish *ráith* ‘ran’.[[124]](#footnote-125)

A key point is that Watkins changed his mind and the Watkins/Meid approach has lost ground not for identifying absolute/conjunct with primary/ secondary *per se*. The sticking point is specifically the claim that Old Irish better reflected the original distribution of the contrast than did Ancient Indo-European languages. However, that does not rule out the reverse possibility, that is, that absolute/conjunct does reflect primary/secondary, at least in part, but a post-Proto-Indo-European innovation moved the contrast out of the tense system in an ancestor of Old Irish and early Brythonic.

How could that have happened? Pointing to the pivotally important 3rd person singular present indicative,[[125]](#footnote-126) we begin with a situation in which the shape of the sentence and + or –prominence of the verb were expressed by the contrasting accent of # *\*bhéreti …* # ~ # … *\*bhereti* (…) #. At the same stage, present and past tense contrasted in segmental phonology as *\*bhereti* ~ \**bheret*. Because the two contrasts operated within different spheres of the grammar, they coexisted without conflict. Later, when the accent moved and early apocope was phonemicized, the new absolute/conjunct presents # *\*ˈbereti …*# ~ # … *\*ˈberet* (…) # impinged directly on the inherited present/imperfect system *\*ˈbereti* ~ *\*ˈberet*. The 3rd singular active present indicative may be considered the epicentre for transformative innovations, though early apocope also produced present forms identical to secondary at other points of the paradigm: 2nd singular \**-si*, 3rd plural \**‑nti* and 1st singular athematic *\*‑mi*. The fact that the language permitted this encroachment in the first place suggests, unsurprisingly, that marking the structure of the sentence was more important than the tense contrast. Past actions and states could alternatively be expressed by the inherited aorist or perfect forms of the verb. Comparative evidence also indicates that Proto-Celtic *\*(p)ro* and *\*kom* came to mark completed actions at an early stage. In other words, the early apocope possibly created a situation in which the absolute/conjunct opposition, as the successor of accented/unaccented, spread to forms with inherited endings of the primary/secondary system, displacing the function and distribution of the earlier contrast. But at the same time this change lacked an inherited basis for spreading to verbs like perfect *\*wewrāge* ‘has wrought’, whose endings looked nothing like those of *\*bereti*, *\*beret* and *\*karast.*

A question to be raised in this connection is whether the final dental of the old secondary ending might have already disappeared and whether that would have barred any convergence. However, Jordán interprets Celtiberian **terberez** as imperfect *trē-bereθ* ‘transferred’ < *\*trei-beret*, with a 3rd singular secondary ending,[[126]](#footnote-127) in which case, after early apocope, the final dental of present-tense conjunct *\*·beret*, &c., might simply have fallen together with the only word-final dental that then existed, i.e. that of the old secondary ending.

<a>§7.d. The evidence of the South-Western inscriptions

The classification of the language of the South-western (SW) or Tartessian funerary inscriptions (7th–5th centuries BC) of South Portugal and south-west Spain is disputed.[[127]](#footnote-128) Therefore, this evidence cannot be decisive for the present subject. Nonetheless, Indo-European-looking, and specifically Celtic-looking, elements in the SW corpus have been pointed out many times.[[128]](#footnote-129) Patterns possibly having a bearing on the Celtic verbal complex are noted here.

In the following selection from the SW corpus,[[129]](#footnote-130) sequences of signs that are possibly verbs and preverbs are printed in upper-case letters. The inscriptions are written without gaps between signs. Many of the segmentable words occur in the recurring epigraphic formula. I have added spaces and hyphens based on the implications for segmentation of repeating and recombining sequences of signs across the corpus, and also the system of redundancy, that is, that different signs for the stop consonants b, t, k are used depending on which of the five vowel signs follows. The SW ‘pseudo-semisyllabary’ has no device for writing word-final stop consonants.

There are four noteworthy patterns in the selected texts below. 1) A series of signs resembling an Indo-European verb with a primary ending (such as **naŕkeentii**, **naŕkeetii**, **lakeentii**) never occurs twice in same inscription. 2) **ro** precedes forms that can be construed as verbs, but these ‘verbs’ never appear to have primary endings: for example, **tee-ro-baare**. 3) However, other combinations that resemble preverbs preceding verbs with primary endings occur in the corpus: for example **tee-baantii**, **teee‑baarentii**. 4) **ro** never occurs twice in the same inscription. These patterns suggest that forms with primary endings call attention to ongoing states or actions and those with **ro** contrastinglyto completed actions. My current working hypothesis interprets the formula, in its most usual order and including all recurrent elements, as: (name of deceased) **uar(n)baan tee-ro-baare baa-naŕkeentii** |… *uaramām de-ro-bāre ma-nar-kēnti*| ‘[this grave] has carried [the named deceased] away to the highest. So they now lie down below (here).’[[130]](#footnote-131)

J.1.1 **lokooboo≡niiraboo too aŕaiai kaaltee lokoon ane NAŔKEE kaakiiśiinkooloboo ii TEE-RO-BAARE (be)e TEASIIOONII**

J.1.2 **koo-beeliboo na-kii-buu oira uarbaan tiirtoos NE-BAA-NAŔKEENI**

J.1.3 **]ŕakuurś TEE-BAARE NAŔKEENI akaa\*\*ir-*ion* a[**

J.1.5 **mutuuireaBAAR**[E N]**AŔKEENTII a(a/m)musokeeonii**

J.2.1 ]**BOOARA NAŔKEENII**

J.3.1 **aibuuris[ ]a kiinbaaibii RO-LA?A uarbaan ubu[u]i**

J.6.1 TE]**EA-BAARE N**[AŔKE]**ENII**

J.7.1 **aśtaa boo(ti)ir NAŔKEENAI aśtaa NA-BOOLON**

J.7.5 **uarboon** i[ | **NAŔKEEN**

J.7.8 **\* \*kee≡uuakee\*[ ]eboo TEE-BAERE NAŔKEEN emun tuurea≡iubaa**

J.7.10 **]\*\*\*\*NAŔKEENII raśen BAARE**

J.11.1 **kiielaoe:**≡ **oiśaua** ≡**baane**≡ **robaae N**(**A**)**ŔKEENII**

J.11.3 **soloir uarbaan[ ]ina o\*[ | N]AŔKEENII**

J.11.4 **aiooŕorainn baaanon\*\*[ | ea RO-N-BAAREN NAŔKEENII aliśne**

J.11.5 a**]nbeiki[**i  **]arskeeirn\*[** NAŔKEE]**NTII**

J.12.1 **iru**≡**alkuu sie: NAŔKEENTII mubaa TEE-RO-BAARE hataaneatee**

J.12.4 **salsaloi ?i[** | **]bae** **BAA-LAKIIN?I I** [20, 8, 9]

J.14.1 **taalainon tuuŕekuui or[** **| [ ] i [ ] | ]noś TAAE-BAARE NAŔKEEN**

J.15.3 **aalaein ŕe[** NAŔ**]KEENI**

J.16.1 **uursaau \*arbaan TEE-BAR**[E] **BAA-NAŔKEENTII**

J.16.2 ( )**omuŕikaa**[ ]**anbaatiia**≡**iobaa**[ ]**\*e BAA**-**[**NA**]ŔKEE keeo-ion[**

J.16.3 **itiiabeŕebe anakaa** | **RO-BAARE BAA-NAŔKE**[E]**NTII**

J.17.2 **kuui arairbubu[u | ]BAARE NAŔKEENTII**

J.18.1 **bootiieana**≡ **keertoo** ≡**robaa TEE-BAARE BAA-NAŔKEENTII**

J.18.2 **]an TEEE-RO-BAARE NA[**ŔKEE(. . .)

J.19.1 **]liirnestaakuun baane**≡**ooŕoire BAA[**RE NAŔ**]KEENII**

J.19.2 **ooŕoir NAŔKEENBII**

J.20.1 **]uŕni** **beeliśon uarn**|**baan** **e\* BAAR**(E)**N NAŔKEEN[** . .

J.21.1 . . .]**uarbaan TEE[**(E)-RO-BA**]ARE** **NAŔKEENII**

J.22.1 **uarbooiir sarune ea BAARE NAŔKEENII**

J.23.1 **beetiisai TEEE-BAARENTII iru**≡|(u)**arbuu i el NAŔRKEE:N: uśnbee**

J.26.1 **]taarneku**〈ku〉**un**≡**baane** |**[**RO-**]BAARE NAŔKE**[E **. .**

J.27.1 **]ukee śaen BAARE NAŔKEE\* [ ] beeś\*\*n\*[**

J.53.1 **KO-TU-UA-RATEE tunbiitesbaan orbaa≡setaa LAKEENTII raha≡kaaśetaana || bobe kooŕbeo baarlete**

J.55.1 **RO-KOOLION eertaaune taarielnon : liŕniene NAŔKEENAI**

J.56.1 **akoosioś NAŔKEETII**

Cabeza del Buey IV **]kiiu [---] *keeilau* kee iśa N**[A]**ŔKEEN**

Mesas do Castelinho :**tiilekuurkuu**≡**arkaastaamu TEE-BAANTII lebooiireRO-BAARE NAŔKE**[E(N)-o**]lakiiuu lii\*eianiitaa ea nira-kaaltee taao bee saru[?n]an**

Corte Pinheiro **beeu\*[ ]ae\* BA[**A**]RE [**NA**]ŔKEENI**

Vale de Águia **]\*\*\*\*\*\*\*ba TEE-BAARE NA[**ŔKEE---]

Monte Gordo **uuŕerkaar ua**[rbaa]**n kiikee**≡**arkaare RO-N-BAARE NA**[Ŕ]**KEEN taa-bee anoŕ-ion**

<a>§8. Shift of the accent position in Primitive Irish and Ancient Brythonic and the Neo-Celtic syllable losses

**# \*ˈbereti … # # ˈP(-E) (P)\*beret (…) >**

**# ˈbeirid … # # P(-E) ˈbeir (…) # , # P(-E) ˈta-bair (…) #**

In Goidelic and Brythonic, the position of the stress accent shifted, according to different principles in the two dialects. The new accent was strong enough to trigger comparable, but distinct, patterns of apocope and syncope defining the transition from Primitive Irish to Old Irish and Ancient Brythonic to Early Medieval Brythonic.

Dealing with evidence outside the verbal complex, the effects of the earlier accent position can be seen in some words, followed by a layer of different effects caused by the accent in its newer position(s): for example, in Old Irish *fer*, Old Welsh *guur* ‘man, hero’ < *\*ˈwiros* < *\*wīˈros* < Proto-Indo-European *\*wiHxrós*, there was first ‘Dybo’ shortening caused by accent in its old position followed by apocope of what had once been the accented syllable after the stress accent shifted to its new position. Note the similar development of Latin *vir* < Old Latin *viros*, contrasting with Vedic *vīrá-* without accent shift or shortening. The same development is seen in Old Irish *béo*, Middle Welsh *byw* ‘alive’ < *\*gwīˈwo-* < Proto-Indo-European *\*gwiHwó-*, versus Sanskrit *jīvá* without shortening or shift.[[131]](#footnote-132)

While *fer* and *vir* < *\*wiHxrós* are not at issue, the position and effects of the earlier accent in the verbal complex can encounter a conceptual barrier. For example, McCone sounds somewhat taken aback:

There are a number of rather obvious objections to [Koch’s prosodic explanation]. For instance, whether in main or subordinate clauses, Old Irish deuterotonic compounds with non-leniting unstressed initial preverb and stressed verb have to be derived from a PIE main clause pattern with accented preverb and unaccented verb …[[132]](#footnote-133)

That is correct. The explanation is that the accent moved between Proto-Indo-European and Old Irish. That is what I said and what I am saying again now. Similarly Klein: ‘Unlike Semitic, for example, Indo-European shows no sentential proclitics.’[[133]](#footnote-134) In other words, the first word of the sentence was always accented in the earlier system, even if it was a preverb.

Illustrative examples may quell counter-intuitive disquiet. Synchronically in Old Irish, the deuterotonic verbs *as·beir* ‘says’ and *con·boing* ‘breaks’, like the prepositional phrases *a·bbardaib* ‘from poets’ and *co·mbardaib* ‘with poets’, are phrases made up of a monosyllabic proclitic followed by a stressed word. However, their derivation implies an earlier difference. We need special rules to explain why the reflexes of Proto-Celtic *\*eχs* and *\*kom* are stronger as unaccented preverbs, having retained their final consonants, than the same words as unaccented prepositions before nouns, and why the conjunct reflexes of *\*bereti* and *\*bongeti* appear especially weak, having undergone apocope twice, unlike *inn‑uraid* ‘last year’ < *\*péruti*.[[134]](#footnote-135) Another contrasting pair would be Early Old Irish *to·bbeir* versus *do·bardaib*,[[135]](#footnote-136) in which the preverbal particle would again be counted as stronger, as it does not condition lenition in the following consonant. However, in this third pair, the particle and the near-homophonous preposition have different origins.

At a much earlier stage, corresponding approximately to Pre- or Proto-Celtic, the prosodic explanation implies that these phrases are to be reconstructed \**ˈeχs bereti*, *\*ˈkom bongeti* and *\*ˈto bereti* (or *\*ˈtu bereti*) contrasting with *\*eχs ˈbardobos*, *\*kom ˈbardobis* and *\*do ˈbardobos*.[[136]](#footnote-137) Later, but still pre-apocope, evolving towards Old Irish, these phrases would be tending to phonetic realizations: \*[ˈes. be.reḍ], \*[ˈkon. boŋ.geḍ] and \*[ˈto b.be.reḍ] versus \*[e ˈb.bar.do.βih], \*[ko ˈm.bar.do.βih] and \*[do. ˈβar.do.βih]. At this point, \*/es/ and \*/kom/were articulated differently when they were stressed monosyllables preceding unaccented words, in the verbal complex, versus proclitics preceding a stressed noun. However, because the phrases were then always accented differently, these divergent phonetic realizations did not contrast in the same environment and so were not yet phonemic.

Before the accent shift, the key marking for the neutral sentence-final/sentence-medial verb was no accent. Therefore, at that stage, the segmental side effects of that lack of accent were less crucial. The final *\*-i* of these verbs could be variously totally inaudible, whispered or weakly articulated; in any case, this positional variant would still contrast with the sentence-initial accented verbs within a stable system. Therefore, until the shift, the six phrases could be phonemically: \*/ˈes bereti/, \*/ˈkom bongeti/, \*/ˈto bereti/, \*/es ˈbardobis/, \*/kom ˈbardobis/ and \*/do ˈbardobis/, though tending phonetically to \*[ˈes. be.reḍ], \*[ˈkon. boŋ.geḍ], \*[e ˈb.bar.do.βih] and so on.

Later on, the Primitive Irish accent had shifted to the position that precipitated the general apocope and syncope. At this point, all six phrases became similarly accented as a proclitic followed by a stressed word, so that the phonetic changes conditioned by the earlier accent contrasted, becoming morphophonemic. The early apocope became generalized and phonemic for the contrastive system to continue. Now as absolute and conjunct, the initial and non-initial verb were both stressed and differentiated only by the early apocope: absolute \*/ˈbereti/, \*/ˈbongeti/ versus conjunct \*/es ˈberet/, \*/kom ˈbonget/, \*/to ˈberet/. After the second apocope, absolute \*/ˈbˊerˊiθˊ/ contrasted with conjunct \*/… ˈbˊerˊ/. The six phrases had become: \*/es ˈbˊerˊ/, \*/kon ˈboŋˊgˊ/ and \*/to ˈbberˊ/ versus \*/e ˈbbardoβˊ/, \*/ko ˈmbardoβˊ/ and \*/do ˈβardoβˊ/. The old accent was gone, but its traces remained, passing to the segmental phonology, resulting in the six Old Irish phrases: *as·beir*, *con·boing*, *do·beir*, *a·bbardaib*, *co·mbardaib*, *do·bardaib*.

As to when loosely compounded combinations of preverb + verb became deuterotonic (i.e. P·ˈV = proclitic + stressed word), it may be relevant that in Early Old Irish the pretonic preverb is written *tu* or *to*: for example, Early Old Irish *to·beir* and the well known examples from the Cambrai Homily, *tu·thēgot* ‘(they) who come’ (= Classical Old Irish *do·thíagat*), *tu·esmot* ‘(they) who shed’.[[137]](#footnote-138) In other words, an observable reduction in the preverb caused by its lack of stress occurred during the literary period, rather than centuries earlier.

The accent shift had not yet taken place in the verbal complex at the stage when the assimilations arose between the proclitic and stressed words in the older type of proclitic phrases: for example, when assimilation came about in the initial of the stressed word in *co cētlaib* ‘with songs’ [ko ˈgˊeːdləβˊ] < \*/kom ˈkantlobis/[ko ˈŋga͂ndloβih], the preform of *con·canat* ‘they sing together’ [kon ˈkanəd] was still \*/ˈkom kanont/[ˈkon kano͂nd]*.* In the interior of words, the assimilations of nasal + voiceless stop had already taken place in Ogamic Primitive Irish: for example, DECCEDDAS < *\*Dekantos* and TOGITTAC < *\*Tonketākī*.[[138]](#footnote-139) There are no ogam examples where the change has not yet happened, so it was presumably complete by the 5th century.[[139]](#footnote-140) Ancient name forms identified with Howth, Old Irish *Benn Étair*, would suggest that the change was already complete some centuries earlier: *Andros* in Pliny’s *Natural History* 4.103 (written in 77 ad) arguably reflects the stage \*[andros] and Ἄδρου ἔρημοςin the Geography of Ptolemy (mid 2nd century) may reflect the subsequent \*[a͂ːdros].[[140]](#footnote-141) If so, it is possible that the stage \*/ko ˈga͂ːdlobis/[ko͂ ˈga͂ːdloβih] ‘with songs’ was already reached by the 2nd century AD, in which case the loosely compounded verb might have been phonemicized as ‘deuterotonic’ \*/kon ˈkano͂d/‘they sing together’ as early as that, without the two proclitic phrase types falling together.

<a>§9. The Cowgill particle and mystery’s end

A premise of the prosodic explanation as restated here is that the contrast of accented and unaccented verbs in Later Proto-Indo-European was meaningful and functional; it aided listeners in grasping the overall shape and function of the clause, as had the SOV basic order that gave rise to it. As a reflection of the older system, the Insular Celtic absolute and conjunct contrast continued this function, altered it or lost it. If the contrast had become meaningless, when did that happen? And why then did it last so long, so abundantly?

Some of the earlier work on the verbal complex, including my own, strongly focused on deriving individual forms in Old Irish and early Brythonic from phonologically viable reconstructions at prehistoric stages. Such demonstrations are of course necessary for any solution. In some of this research the synchronic communicative function of the system was treated as secondary or discounted.

In Cowgill’s work, this choice was more than an undercurrent.[[141]](#footnote-142) Following Thurneysen, Cowgill’s Wackernagel’s enclitic was reconstructed as Insular Celtic *\*(e)s*, probably going back to Proto-Indo-European *\*H1ésti* ‘he/she/it is’.[[142]](#footnote-143)However, he was most interested in how this reconstructed Proto-Insular Celtic form worked phonologically to predict the attested Old Irish forms, rather than the particle’s etymology or how its earlier meaning might once have been appropriate in most main clauses. Cowgill calls the absolute and conjunct system a ‘useless morphologic complication’,[[143]](#footnote-144) a ‘useless morphologic luxury’ then wonders, regarding the Watkins/Meid solution,

… why Celtic, unlike every other Indo-European language less archaic then Avestan and Vedic Sanskrit, retained two sets of present indicative endings for millennia distributing them according to a rigid and useless pattern, rather than generalizing a single set of endings for use in all positions.[[144]](#footnote-145)

The fact that the system broke down in both medieval Goidelic and Brythonic suggests that there must be some basis for this impression. A knock-on effect of such thinking is that absolute and conjunct, self-evidently useless, could not have spread by analogy at the Old Irish stage. Kortlandt concurs:

I have the impression that those colleagues who have not been convinced by CowgiIl’s demonstration do not attach sufficient weight to the fact that analogic change requires not only a model, but also a motivation. The latter is conspicuously absent in the case of the absolute and conjunct endings, which are in complementary distribution: the choice between them depends entirely on the position of the verb in the clause. The massive analogic spread of a redundant morphological distinction is simply not credible.[[145]](#footnote-146)

The idea of Old Irish verbal complex as a zombie, an animated structure, but no longer vital, leads to methods in which most or all of the absolute and conjunct forms have to be derived by regular sound laws from pre-apocope reconstructions item by item. When a pervasive pattern in the sentence and verbal system of a language is seen as having no function and carrying no information, this turns away from the usual approach to linguistic evidence and towards the genre of the detective story, prioritizing forensics over motive. That point is acknowledged – indeed celebrated – in Cowgill’s closing sentence, quoting Arthur Conan Doyle’s second Sherlock Holmes novel: ‘Eliminate all other factors, and the one that remains must be the truth.’[[146]](#footnote-147) This Holmesian flourish surely kindled fascination and energized research, launching a treasure hunt to unearth a single key for as many individual Old Irish verb forms and phrasal patterns as possible, bringing to bear a widening evidence base including cognate Celtic and other Indo-European languages, as well as typological parallels further afield. The approach also holds an appealing purity of method: if one rigorously abandons assumptions about the system’s function, and so motives for its analogical spread, any vague impressionism might be scrubbed out of the historical-comparative method. It also set the bar low for what could be claimed as a falsification of the other fellow’s explanation: all paradigmatic forms should be accounted for regularly with little or no spread by analogy – as Cowgill argued that such a process would have been pointless.

Further developments of the Cowgill-particle theory include Kim’s article, which found additional phonological evidence (to explain the forms of the Old Irish class B infixed pronouns, 1st singular *‑tamm‑*, 2nd singular *-tot-*, &c.) to favour deriving the particle specifically from Proto-Celtic *\*esti*  < *\*H1esti*.[[147]](#footnote-148)Schrijver[[148]](#footnote-149) and Schumacher,[[149]](#footnote-150) followed by Eska,[[150]](#footnote-151) provide a semantically promising etymology by deriving the particle from Proto-Celtic *\*eti* from Proto-Indo-European *\*H1eti* ‘and, in addition’.[[151]](#footnote-152) It is not so hard to imagine how an enclitic meaning ‘and’ might have come to link main clauses in natural speech and then gradually to have weakened phonologically as well as shifting function to become a mere marker of main clauses, rather than an overt conjunction. However, possible drawbacks to this explanation are that \**H1éti* was evidently not an enclitic in Proto-Indo-European, or possibly even Proto-Celtic,[[152]](#footnote-153) and that special, arguably *ad hoc*, sound laws are needed to produce Primitive Irish *\*(e)s* from Proto-Celtic *\*eti*.[[153]](#footnote-154) More recently, Budassi and Roma’s particle is a clitic pronoun agreeing with the subject of the verb and so with a paradigmatic variety of personal forms.[[154]](#footnote-155)

Was Cowgill right to think that absolute and conjunct, prototonic and deuterotonic, and so on, were useless complications synchronically within Old Irish? As a thought experiment, let us imagine an Old Irish in which there were only conjunct and prototonic verbs, no absolute or deuterotonic forms, thus, instead of

*beirid* – *ní beir do·beir – ní tabair*

the pattern would be:

*beir* – *ní beir tabair – ní tabair*

and so on, with all the other simplex and compound verbs. Does revamping Old Irish in this way achieve a gain in simplicity at zero cost? Are affirmative sentences meaning ‘he/she/it carries’ and ‘he/she/it gives’ well enough characterized by the absence of the negative particle without the shift to the fuller form of the verb to confirm that? How often was the pretonic *ní* not clearly heard, making the better-characterized distinction useful? How confusing would it have been for simple affirmative *beir* ‘carries’ at the beginning of sentence to be formally indistinguishable from the imperative 2nd singular # beir… # ‘carry!’?[[155]](#footnote-156) Can we know how useful it was to have a well characterized simplex affirmative form like *beirid* that stood out from *as·beir*, *do·beir*, &c.? Were any advantages for listeners in comprehending utterances negligible? Without native Old Irish speakers to observe and interrogate, we can only imagine.

There are wider implications for the system. In our simplified Old Irish, where do we put object pronouns if there are no deuterotonic verbs with their slot following the pretonic preverb? The system would have to evolve independent or proclitic pronouns that could be used with tensed verbs. In the case of simplex verbs, the semantically empty preverbal particle *no* is used to support infixed pronouns, so *no-s·beir* ‘he brings them’.[[156]](#footnote-157) The restrictions on this usage (only simplex verbs with infixed pronouns) show that this construction is a replacement for the waning inherited simplex verbs with suffixed pronouns, *beirthius* in this case.[[157]](#footnote-158) These might be prohibited in our experiment as recognizably built on absolute forms, e.g. *beir’thius* < Primitive Irish *\*bereti-sus*. In other words, even if we think that Old Irish had little to lose directly by replacing *beirid* with *beir* and *do·beir* with *tabair*, the grammar as a whole would have to be restructured in the direction of Modern Irish to accommodate the change.

Languages are not transmitted from generation to generation as complete paradigms and an exhaustive stock of complex utterances. A finite core of lexemes, morphemes and syntactic structures are internalized. From these rules are inferred, which will not be exactly the same rules inferred by earlier generations of speakers. Then an unlimited number of utterances can be generated from these lexemes, rules, &c. Analogy will be rife, especially at the low-frequency margins of the system. And, in the particular example of the Celtic languages near the beginning of their medieval stages, this would be an unlikely time to expect a conservative replication of grammatical structures from the preceding stage. The drastic changes of syllable losses on the phonological level directly impinged on the morphological and syntactic levels with the rise of the morphophonemic mutations. Meaning-carrying functions were extensively transferred to new phonemic contrasts that had previously been allophonic. Is it realistic to expect more than a core of high-frequency forms in the verbal complex to have passed over this tumultuous watershed unscathed as regular phonological outcomes of their Old Celtic preforms?

Cowgill’s particle explanation rests on a perceived discontinuity between Proto-Indo-European and Old Irish. He rejected the primary/secondary system as the source of absolute and conjunct, and most specifically the derivation proposed twelve years before by Meid and Watkins and then still influential. Thus, effectively as an antithesis, Cowgill’s model envisioned a system between Proto-Indo-European and Old Irish differing significantly from what we know was the case on either end, a conjecture occupying a gap that Mallory calls ‘the Indo-European dark ages’.[[158]](#footnote-159) With its obligatory Wackernagel’s enclitic, Proto-Insular-Celtic would differ from all attested ancient Indo-European languages (including Gaulish and Celtiberian) as well as Old Irish and early Brythonic. The verbal complex thus evolves through three disparate stages: first that reliably reconstructed for Proto-Indo-European with no particle, then the emergence of a particle presumably having some function in unattested Proto-Insular-Celtic, and then its petrification in the ‘rigid and useless pattern’ found in Old Irish.

On the other hand, the prosodic explanation starts recognizing a continuity from the accented and unaccented verbs of Later Proto-Indo-European to the absolute and conjunct verbs of Old Irish and early Brythonic. If Vedic Sanskrit can stand as a proxy for the former, the argument can be kept close to well known processes in well attested languages, and to innovations that we already know took place, such as the change in position and nature of the accent. A straight line can be drawn without dramatic and unobservable mid-course redirections.

On the level of phonological rules, Cowgill’s particle can unlock several intricacies of the Old Irish verbal complex. Particle explanations, enclitic-deletion explanations and the prosodic explanation equally embrace an early apocope of *\*‑i* from the inherited primary endings, so there is not much to choose between them regarding this sizeable subset. Therefore, this essay closes by considering an important contrasting pair outside this core category. Early apocope does not explain the absolute/conjunct opposition in 1st person singular verbs with inherited thematic endings, like ‘I carry’, Old Irish absolute *biru* / conjunct *·biur*  < Proto-Indo-European \**bhéroH2 /*\**bheroH2*. With the Cowgill particle, # *biru …*#/ # ... *·biur* (…) #can be derived from Proto-Insular-Celtic # *\*berū-’s …*# */* # ... *\*berū*(…) #, without invoking analogical spread or an *ad hoc* sound law. But with no particle, *biur* is predicted in both positions by established rules.

However, if the absolute/conjunct opposition is seen as having a function, at least down into later prehistory, analogical repair of the system is conceivable. Even so, an analogical trigger would be required to preserve the contrast. There would have been no shortage of potential triggering models in the system, though it is hard now to determine which scenario was most probable. McCone proposes that forms like the regular absolute 1st singular *gaibiu* ‘I grasp’ alongside 2nd singular *gaibi* might have provided the proportion yielding absolute *biru*, rather than *biur*, alongside the regular 2nd singular *biri* < *\*beresi*.[[159]](#footnote-160) In my earlier paper, I suggested that when Primitive Irish sentence-initial #*\*berū …*# was followed by an enclitic, this would have caused an enclitic stress on the final syllable of the verb, blocking the regular reduction of unstressed final *\*-ū*, producing a usefully distinctive form of the verb in this position;[[160]](#footnote-161) an analogical enclitic deletion might then have followed.

I now think that a neuter suffixed pronoun is the simpler explanation. Breatnach’s study of 310 Old Irish suffixed object pronouns shows how limited their distribution was, occurring only with 3rd person verbs in the present indicative, consuetudinal present, future indicative, imperative, and present subjunctive. His analysis also shows that the suffixed pronouns were in steep decline over the course of the 8th century.[[161]](#footnote-162) We therefore expect that their range and use had been more extensive not far behind the horizon of written evidence. In the present case, it is likely that it had been possible for sentence-initial Primitive Irish # \**berū …*# to be followed by an enclitic object pronoun: for example, \**berū-sus* ‘I carry them’ or \**berū-e* ‘I carry it’. The Old Irish suffixed neuter singular object pronoun caused the pre-apocope final vowel of the preceding absolute verb to survive, but fell away itself in the general apocope: for example, # *beirthi …*#‘he carries it’ < # *\*bereti-e* … # versus absolute (with no suffixed pronoun) # *beirid* … #< # *\*bereti …*#.

Another characteristic of the suffixed neuter pronoun is that the direct object ‘it’ is often either semantically absent or redundant (proleptic), referring to an object in the same sentence: for example, *cingthe secha* ‘he steps past him’[[162]](#footnote-163) means nearly the same thing as would *cingid secha* with the absolute verb but no suffixed pronoun. Compare also,

15. ***tēiti*** *Cūchulaind ara c[h]end*

goes-it Cú Chulainn in front of his head

‘C.C. goes towards him’;[[163]](#footnote-164)

16. ***rāiti*** *fris insain*

he relates-it to him that

‘he tells him that’.[[164]](#footnote-165)

The behaviour of the infixed neuter pronoun is similar. Though disappearing itself, it causes the final vowels otherwise lost to be preserved in some preverbs: for example, *imma*, *imme* < *\*ambi-e* and *ara* < *\*ari-e*.[[165]](#footnote-166) Once again, the sense of an object ‘it’ is often absent, as in the compound verbs *ara·chrinim* ‘I perish’, *imme·airic* ‘suits’.[[166]](#footnote-167)

Therefore, *biru* can be understood as preservation of a contrasting 1st singular absolute form by replacing the reflex of unsuffixed # *\*berū …*# (which would have given *biur* homophonous with conjunct *·biur*) with that of suffixed # *\*berū‑e …*# > *biru*. As both the unsuffixed absolute and suffixed form occurred invariably in the same position in the sentence and often meant the same thing, this proposed replacement barely amounts to an analogical change at all.

[Caption] Tree model of the Indo-European branches, indicating the anomalous position of Germanic, based on Don Ringe, Tandy Warnow and Ann Taylor, ‘Indo-European and Computational Cladistics’, *Transactions of the Philological Society*, 100/1 (2002), 59–129 (90, Figure 8).

1. Cyflwynir yr erthygl hon er cof am Yr Athro Anna Morpurgo-Davies, 1937–2014. [↑](#footnote-ref-2)
2. Early Brythonic: this term means broadly evidence from Welsh, Cornish and Breton sources chronologically earlier than and/or linguistically more archaic than the Four Branches of the Mabinogi, which may be seen as the defining Middle Welsh in a standard form. For the present subject, there is relevant evidence in Old Welsh and Old Breton surviving in contemporary manuscript copies and the poetry ascribed to ‘Cynfeirdd’ (e.g. Aneirin and Taliesin) and composed by the earlier Gogynfeirdd or ‘Poets of the Princes’ before about 1200. [↑](#footnote-ref-3)
3. I first presented this idea as a seminar in a series on the accent in various Indo-European languages, organized by Professor Anna Morpurgo-Davies at Somerville College Oxford in 1983–4. I acknowledge gratefully the Fulbright Foundation, Sir John Rhŷs Trust and Harvard’s Knox travel grant for supporting my research at Oxford that academic year. That prosodic explanation was further developed and presented in John T. Koch, ‘Linguistic Preliminaries to the Dating and Analysis of Archaic Welsh Verse’, unpublished PhD dissertation, Harvard University, 1985, chapter II; then revised and published as ‘Prosody and the Old Celtic Verbal Complex’, *Ériu*,38 (1987), 141–74; and ‘Neo-Brittonic Voiceless Spirants from Old Celtic Geminates’, *Ériu*,40 (1989), 119–28; more recently some further discussion appears in John T. Koch, *Tartessian: Celtic in the South-west at the Dawn of History*, Celtic Studies Publications 13, 2nd ed. (Aberystwyth: Celtic Studies Publications, 2013), 295–303. [↑](#footnote-ref-4)
4. ‘The Celtic verbal complex’ designates items that occur together in a fixed order and under a single accent, beginning a normal Old Irish sentence. As well as verbs and preverbs, which are the primary focus here, this umbrella term covers: 1. ‘conjunct particles’, including forms of the negative and interrogative, prepositions combined with the relative, and some conjunctions; see Rudolph Thurneysen, *A Grammar of Old Irish* (Dublin: DIAS, 1946), 28–9, for forms and examples; 2. infixed and suffixed pronouns; 3. relative infixes and suffixes; and 4. affixed emphasizing particles, also called ‘notae augentes’, see Thurneysen, *Grammar*, 252–3. The syntactic function of the emphasizing particles (4) is comparable to that of the Welsh affixed pronouns. The Old Irish 3rd singular feminine *si*, 1st plural *ni*, and 2nd plural *si* are probably cognates of the corresponding Welsh *hi*, *ni* and *chwi*. [↑](#footnote-ref-5)
5. A comprehensive overview of literature on the subject has become a daunting undertaking. For the subject down to 2018, a balanced review opens Marco Budassi and Elisa Roma, ‘On the Origin of the Absolute vs. Conjunct Opposition in Insular Celtic’, *Indogermanische Forschungen*, 123/1 (2018), 293–337 (293–301). *https://doi.org/10.1515/if-2018-0011*, accessed 12 November 2021. Several key publications before 2006 are criticized in detail by Kim R. McCone, *The Origins and Development of the Insular Celtic Verbal Complex*, Maynooth Studies in Celtic Linguistics 6 (Maynooth: Department of Old Irish, National University of Ireland, 2006). Earlier surveys are included in Patrick Sims-Williams, ‘The Double System of Verbal Inflexion in Old Irish’, *Transactions of the Philological Society*, 82/1 (1984), 138–201; Wolfgang Meid, *Die indogermanischen Grundlagen der altirischen absoluten und konjunkten Verbalflexion* (Wiesbaden: Harrassowitz, 1963). [↑](#footnote-ref-6)
6. Pierre-Yves Lambert, review of *Ériu* 38 in *Études celtiques*, 26 (1989), 286–8. In subsequent discussions in Paris and Rennes, Lambert confirmed his view that the prosodic model was the correct explanation of the absolute/conjunct contrast. [↑](#footnote-ref-7)
7. Javier de Hoz, ‘When did the Celts Lose their Verbal *\*‑i*?’, *Zeitschrift für celtische Philologie*,49/50 (1997), 107–17 (110, 114). [↑](#footnote-ref-8)
8. Graham R. Isaac, ‘A New Conjecture on the Origins of the Absolute and Conjunct Flexion’, *Ériu*,57 (2007), 49–60; ‘Die Urgeschichte der verbalen Morphosyntax im Keltischen: eine Schnittstelle zwischen Grammatik, Semantik und Pragmatik’, in Elisabeth Rieken and Paul Widmer(eds), *Akten der Arbeitstagung der Indogermanischen Gesellschaft vom 24. bis 26. September 2007 in Marburg* (Wiesbaden: Reichert Verlag, 2009), 113–23. I thank Isaac for bringing the second paper to my attention. [↑](#footnote-ref-9)
9. Personal communication during the XIV International Congress of Celtic Studies at NUI Maynooth in 2011. [↑](#footnote-ref-10)
10. Hans Henrich Hock, ‘The Insular Celtic Absolute/Conjunct Distinction Once Again: A Prosodic Proposal’, in K. Jones-Bley, M. E. Huld, A. Della Volpe and M. R. Dexter (eds), *Proceedings of the Sixteenth Annual UCLA Indo-European Conference, Los Angeles, November 5–6, 2004*, Journal of Indo-European Monograph Series 50 (Washington DC: Institute of the Study of Man, 2005), 153–72. See also Hans Henrich Hock, ‘Morphology and *i-*Apocope in Slavic and Baltic’, in Karlene Jones-Bley, Martin E. Huld, Angela Della Volpe and Miriam Robbins Dexter (eds), *Proceedings of the Eighteenth UCLA Indo-European Conference. Los Angeles, Nov. 3–4, 2006*, Journal of Indo-European Studies Monograph 53 (Washington DC: Institute of the Study of Man, 2007), 65–76; ‘Proto-Indo-European Verb-Finality: Reconstruction, Typology, Validation’, *Journal of Historical Linguistics*, 3:1 (2013), 49–76; ‘On Some Effects of Utterance Finality, with Special Consideration of South Asian Languages’, *Journal of South Asian Linguistics*, 10 (2019), 23–37. [↑](#footnote-ref-11)
11. Thurneysen, *Grammar*, 363. Thurneysen’s thoughts on the subject changed little after his 1913 review (*Indogermanische Forschungen*, 33; *Anzeiger*,23–7) of the second volume of Pedersen’s *Vergleichende Grammatik der keltischen Sprachen* (Göttingen: Vandenhoeck und Ruprecht, 1913). See further Myles Dillon, ‘On the Structure of the Celtic Verb’, *Language*, 19 (1943), 252–5; Sims-Williams, ‘Double System’, 139–42. [↑](#footnote-ref-12)
12. The criterion of logical economy is stressed by Kim R. McCone, ‘Pretonic Preverbs and the Absolute Verbal Endings in Old Irish’, *Ériu*, 30 (1979), 1–34 (1): ‘When it is further realised that the first (or pretonic) preverb of the specifically initial deuterotonic form of compound verbs displays a number of historical irregularities, it becomes clear that considerations of economy demand an integrated blanket explanation both of these irregularities and of the differentiation of the absolute from the conjunct endings.’ [↑](#footnote-ref-13)
13. Some influential particle explanations: Bruce Boling, ‘Some Problems in the Phonology and Morphology of the Old Irish Verb’, *Ériu*,23 (1972), 73–101; Warren Cowgill, ‘The Origins of the Insular Celtic Conjunct and Absolute Verbal Endings’, in Helmut Rix (ed.), *Flexion und Wortbildung: Akten der V. Fachtagung der Indergermanischen Gesellschaft, Regensburg, 9.–14. September 1973* (Wiesbaden: Reichert Verlag, 1975), 40–70; ‘Two Further Notes on the Origin of the Insular Celtic Absolute and Conjunct Verb Endings’, *Ériu*,26 (1975), 27–32; ‘On the Origin of the Absolute and Conjunct Verbal Endings of Old Irish’, in B. Schlerath with V. Rittner (eds), *Grammatische Kategorien: Funktion und Geschichte* (Wiesbaden: Reichert, 1985), 109–11; Peter Schrijver, *Studies in the History of Celtic Pronouns and Particles*, Maynooth Studies in Celtic Linguistics 2 (Maynooth: Department of Old Irish, National University of Ireland, 1997); Stefan Schumacher, ‘Randbemerkungen zu absolut und konjunkt: Mittelkymrisch *hanfot*’, in Peter Anreiter and Erzsébet Jerem (eds), *Studia celtica et indogermanica: Festschift für Wolfgang Meid zum 70. Geburstag*, Archaeolingua 10 (Budapest: Archaeolingua Alapítvány, 1999), 453–64; *Die keltischen Primärverben: Ein vergleichendes, etymologisches und morphologisches Lexikon*, Beiträge zur Sprachwissenschaft 110 (Innsbruck: Institut für Sprachwissenschaft, 2004); Joseph F. Eska, ‘Absolute and Conjunct, Cowgill and Apocope’, in H. Craig Melchert (ed.), *The Indo-European Verb. Proceedings of the Conference of the Society for Indo-European Studies, Los Angeles, 13–15 September 2010* (Wiesbaden: Reichert, 2012), 51–9. Amongst the particle explanations, Cowgill, ‘Origins’, has been especially influential. [↑](#footnote-ref-14)
14. The enclitic-deletion concept is central in the explanation of McCone, ‘Pretonic Preverbs’; *Origins and Development*; also that of Sims-Williams, ‘Double System’, though Sims-Williams’s explanation differs from McCone’s in other respects. Note that Sims-Williams avoids calling infixed pronouns enclitics, to avoid implying that the preverb preceding the pronoun had surely been stressed (‘Double System’, 156). [↑](#footnote-ref-15)
15. (Later) Proto-Indo-European, i.e. Post-Tocharian Proto-Indo-European. It is possible that this accentual system was already in place before Tocharian had separated from the rest of Post-Anatolian Indo-European, or even from Proto-Indo-European itself before Anatolian had split off, but the comparative evidence of Vedic Sanskrit and Celtic will only take us with certainty back to their latest common ancestor. On the first-order subdivisions of the Indo-European branches, see Don Ringe, Tandy Warnow and Ann Taylor, ‘Indo-European and Computational Cladistics’, *Transactions of the Philological Society*, 100/1 (2002), 59–129; cf. Joseph F. Eska, ‘The Emergence of the Celtic Languages’, in Martin J. Ball and Nicole Müller (eds), *The Celtic Languages* (London and New York: Routledge, 2010), 22–7 (22). See also Figure X below? above? Cf. Ronald I. Kim, ‘One Hundred Years of Re-reconstruction: Hittite, Tocharian, and the Continuing Revision of Proto-Indo-European’, in Elisabeth Rieken (ed.), *100 Jahre Entzifferung des Hethitischen: Morphosyntaktische Kategorien in Sprachgeschichte und Forschung, Akten der Arbeitstagung der Indogermanischen Gesellschaft vom 21. bis 23. September 2015 in Marburg* (Wiesbaden: Reichert Verlag, 2018), 157–77. For possible absolute dating and archaeological contexts of the early branches, see David W. Anthony, *The Horse, the Wheel, and Language: How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World* (Princeton: Princeton University Press, 2007), 56–7; John T. Koch, *Celto-Germanic: Later Prehistory and Post-Proto-Indo-European Vocabulary in the North and West* (Aberystwyth: Centre for Advanced Welsh and Celtic Studies, 2020), 23–30, e-book: *https://www.wales.ac.uk/Resources/Documents/Centre/2020/Celto-Germanic2020.pdf*, accessed 1 October 2021). [↑](#footnote-ref-16)
16. Cf. De Hoz, ‘When did the Celts’, 107, grouping Cowgill ‘Origins’, McCone ‘Pretonic Preverbs’, and Sims-Williams ‘Double System’ together at the opening of the same paper as being ‘on the same general lines, notwithstanding discrepancies on details’, and contrasted to the accentual model in Koch, ‘Prosody’. [↑](#footnote-ref-17)
17. The idea of a ‘zero-infix’ in the verbal complex goes back to Calvert Watkins, ‘Preliminaries to a Historical and Comparative Analysis of the Syntax of the Old Irish Verb’, *Celtica*,6 (1963), 1–49 (40). [↑](#footnote-ref-18)
18. ‘Wackernagel’s Law’ was formulated by Jacob Wackernagel, ‘Über ein Gesetz der indogermanischen Wortstellung’, *Indogermanische Forschungen*, 1 (1892), 333–45. [↑](#footnote-ref-19)
19. R̥gveda I.32.1a; translation: Stephanie W. Jamison and Joel P. Brereton (trans.), *The Rigveda: The Earliest Religious Poetry of India*, 3 vols (Oxford: OUP, 2014), 134. For a useful research tool with various editions, translations and analyses of Old Indic texts, see VedaWeb *https://vedaweb.uni-koeln.de/*, accessed 9 November 2021. The simplified semantic glosses below the Vedic syntactic examples (as well as those for the Irish and Welsh) are mine. Morphological glosses for the Vedic can be found at VedaWeb, as well as links for individual words to Hermann Grassman, *Wörterbuch zum Rig-Veda* (Leipzig: F. A. Brockhaus, 1873). [↑](#footnote-ref-20)
20. R̥gveda X.34.10; translation: Jamison and Brereton, *Rigveda*, 1431. [↑](#footnote-ref-21)
21. R̥gveda IV.8.3ab; translation: cf. Jamison and Brereton, *Rigveda*, 571. [↑](#footnote-ref-22)
22. Arthur A. Macdonell, *A Vedic Grammar for Students* (Delhi: OUP, 1981; first published 1916), 465–8; Jared S. Klein, *On Verbal Accentuation in the Rigveda*, American Oriental Society Essay Number 11 (New Haven, CT: American Oriental Society, 1992); Hock, ‘Proto-Indo-European Verb-Finality’, 49, 66–7. [↑](#footnote-ref-23)
23. R̥gveda I.25.9a; translation: Jamison and Brereton, *Rigveda*, 123. [↑](#footnote-ref-24)
24. Similarly Isaac, ‘A New Conjecture’, 51, 58: ‘one can legitimately point out that Celtic (sentence-initial) absolute forms reflect Indo-European (sentence-initial) tonic verbal forms, and Celtic (non-sentence-initial) conjunct forms reflect Proto-Indo-European (non-sentence-initial) clitic verbal forms. … The distinction between tonic and clitic verbal forms that is relevant in these considerations is the one inherited from Proto-Indo-European.’ [↑](#footnote-ref-25)
25. *On Verbal Accentuation*, 2. [↑](#footnote-ref-26)
26. *On Verbal Accentuation*, 86. Cf. McCone, *Origins and Development*, 130: ‘It seems eminently reasonable to postulate that, at the time of apocope of *‑i* unless followed by an enclitic, Insular Celtic still retained Wackernagel’s Law governing the placement of enclitics and the essentially PIE use of initial position (automatically entailing accentuation) for marking an element for topic or focus of its clause.’ [↑](#footnote-ref-27)
27. ‘Neo-Celtic’ – meaning Goidelic and Brythonic after the general apocope of c.500 AD – is not synonymous with ‘Insular Celtic’. The latter can mean a unified prehistoric protolanguage not also ancestral to Gaulish or a typological phenomenon due to prolonged survival of related languages in contact, or a state indeterminately intermediate between those alternatives. ‘Neo-Celtic’, on the other hand, involves no such ambiguity and sidesteps any unproven claim about the Celtic family tree. [↑](#footnote-ref-28)
28. Jerzy Kuryłowicz, *L’accentuation des langues indo-européennes* (Wrocław: Zakład Narodowy im. Ossolińskich, 1958), 93–105; *Indogermanische Grammatik. II Akzent-Ablaut* (Heidelberg: Winter, 1968), 70–82; Winfred P. Lehmann, *Proto-Indo-European Syntax* (Austin TX and London: University of Texas, 1974), 50; Michael Meier-Brügger in collaboration with Matthias Fritz and Manfred Mayrhofer, *Indo-European Linguistics* (Berlin: De Gruyter, 2003), 183; Isaac, ‘A New Conjecture’, 51 and n. 10; Don Ringe, *A Linguistic History of English: From Proto-Indo-European to Proto-Germanic* (Oxford: OUP, 2017; 1st edition 2006), 24. [↑](#footnote-ref-29)
29. Example of Thomas Burrow, *The Sanskrit Language* (London: Faber and Faber, 1955), 113. [↑](#footnote-ref-30)
30. Cf. Hock, ‘Proto-Indo-European Verb-Finality’. [↑](#footnote-ref-31)
31. It is unclear whether this pattern for subordinate clauses was confined to Indic or developed at an earlier stage and had broader currency. In Old Irish and early Brythonic, there are opposing clause types like: non-relative ***ry cheidv*** *y·naut rac caut gelin* ‘may he keep its protection against the wrath of the foe’ (Black Book of Carmarthen = Aberystwyth, NLW Peniarth MS 1, 14.5–7) versus relative *ri* ***ry·geidỽ*** *y·teithi* ‘a king who can keep its privileges’ (Book of Taliesin = Aberystwyth, NLW Peniarth MS 1, 72.15). In such cases, the lenition after the preverb in the relative form could be explained as the result of an infixed relative particle, from a preform like *\*ro-i̯o katwīt*. But a reconstruction*\*ro-ˈkatwīt* could account for *ry·geidỽ* as well if not better (in which the symbol ˈ precedes a stressed syllable). However, if the relative form did reflect a compound verb accented as in a Vedic subordinate clause, the prosodic explanation would falsely predict *\*\*ry-gedwit* from *\*ro-katˈwīti* without early apocope, unless some sort of analogical levelling were factored in.Nevertheless, both Old Irish and early Brythonic do show contrasting patterns of loosely compounded compound verbs (the Old Irish deuterotonic type), capable of supporting infixes, versus fully compounded compound verbs that behave like one normal word (the Old Irish prototonic type). [↑](#footnote-ref-32)
32. For example, Lehmann, *Proto-Indo-European Syntax*; Calvert Watkins, ‘Towards Proto-Indo-European Syntax: Problems and Pseudo-Problems’, in Sanford Steever, Carol A. Walker and Salikoko S. Mufwene (eds), *Papers from the Parasession on Diachronic Syntax* (Chicago: Chicago Linguistic Society, 1976), 305–26; James P. Mallory and Douglas Q. Adams (eds), *Encylopedia of Indo-European Culture* (Chicago and London: Fitzroy Dearborn, 1997). [↑](#footnote-ref-33)
33. Cf. Kuryłowicz, *L’accentuation*, 93–105; *Indogermanische Grammatik. II,* 70–82; Lehmann, *Proto-Indo-European Syntax*,50; Meier-Brügger, *Indo-European Linguistics*, 183. [↑](#footnote-ref-34)
34. Hock, ‘Proto-Indo-European Verb-Finality’. [↑](#footnote-ref-35)
35. Cf. Klein, *On Verbal Accentuation*, 96. [↑](#footnote-ref-36)
36. Cf. Klein, *On Verbal Accentuation*, 96. [↑](#footnote-ref-37)
37. Cf. Klein, *On Verbal Accentuation*, 96. [↑](#footnote-ref-38)
38. Similarly Isaac, ‘A New Conjecture’, 52: ‘… the functional burden of the absolute forms as being “emphatic” in some way, admittedly not strictly defined as yet, simply continues seamlessly the “emphatic” function of the tonic initial verb in Proto-Indo-European.’ Cf. McCone, *Origins and Development*, 130. [↑](#footnote-ref-39)
39. ‘The Insular Celtic Absolute/Conjunct Distinction’; ‘Proto-Indo-European Verb-Finality’. [↑](#footnote-ref-40)
40. R̥gveda X.88.8d; translation: Jamison and Brereton, *Rigveda*, 1534; cf. Klein, *On Verbal Accentuation*, 9. [↑](#footnote-ref-41)
41. R̥gveda II.26.3b; translation: Jamison and Brereton, *Rigveda*, 439; cf. Klein, *On Verbal Accentuation*, 24. [↑](#footnote-ref-42)
42. Osborn Bergin, ‘On the Syntax of the Verb in Old Irish’, *Ériu*, 12 (1938), 197–214 (197). [↑](#footnote-ref-43)
43. Edward J. Gwynn, ‘An Old-Irish Tract on the Privileges and Responsibilities of Poets’, *Ériu*, 13 (1942), 1–60, 220–36 (26). [↑](#footnote-ref-44)
44. Rudolph Thurneysen, ‘Zu Verslehre II’, *Zeitschrift für celtische Philologie*, 17 (1928), 263–76 (268). [↑](#footnote-ref-45)
45. On the reading in interpretation of this example, see Kim R. McCone, *Echtrae Chonnlai and the Beginnings of Vernacular Narrative Writing in Ireland: A Critical Edition with Introduction, Notes, Bibliography and Vocabulary*, Maynooth Medieval Texts 1 (Maynooth: Department of Old and Middle Irish, National University of Ireland Maynooth, 2000), 154–6. [↑](#footnote-ref-46)
46. From the Leinster genealogical poetry: Michael A. O’Brien (ed.), *Corpus Genealogiorum Hiberniae* (Dublin: DIAS, 1962), 5. [↑](#footnote-ref-47)
47. Cf. Léon Fleuriot, ‘Le loi Bergin dans “Lingua Britannica”’, *Études celtiques*, 20 (1983), 89–93. [↑](#footnote-ref-48)
48. Book of Taliesin 52.20–1. [↑](#footnote-ref-49)
49. Cf. Marged Haycock, ‘“Some Talk of Alexander and Some of Hercules”: Three Early Medieval Poems from the Book of Taliesin’, *Cambridge Medieval Celtic Studies*, 13 (1987), 7–38 (28–9). [↑](#footnote-ref-50)
50. Book of Aneirin = Cardiff MS 2.81, 8.3. Or translate, with *y* (less probably) as the definite article, ‘the chief cast spears’. See further Simon Rodway, ‘Absolute Forms in the Poetry of the Gogynfeirdd: Functionally Obsolete Archaisms or Working System?’, *Journal of Celtic Linguistics*, 7 (2002), 63–84 (77), concluding that absolute/conjunct was still a functioning system in the register of Early Middle Welsh court poetry. [↑](#footnote-ref-51)
51. See Ringe et al., ‘Indo-European and Computational Cladistics’; Koch, *Celto-Germanic*. [↑](#footnote-ref-52)
52. Jan Gonda, ‘On Amplified Sentences and Similar Structures in the Veda’, *Four Studies in the Language of the Veda*, Disputationes Rheno-Trajectinae III (’s-Gravenhage: Mouton & Co., 1959), 7–70. [↑](#footnote-ref-53)
53. The idea can be traced back to John Morris Jones, ‘Pre-Aryan Syntax in Insular Celtic’ (Appendix B), in John Rhŷs and D. Brynmor-Jones (eds), *The Welsh People* (London: T. Fisher Unwin, 1900), 617–41. See also Orin D. Gensler, ‘A Typological Evaluation of Celtic/Hamito-Semitic Syntactic Parallels’, unpublished Ph.D. thesis, University of California at Berkeley, 1993; Karol Jongeling, *Comparing Welsh and Hebrew*, CNWS Publications 81 (Leiden: Research School of Asian, African and Amerindian Studies, Universiteit Leiden, 2000); Graham R. Isaac, ‘Celtic and Afro-Asiatic’, in H. L. C. Tristram (ed.), *The Celtic Languages in Contact: Papers from the Workshop within the Framework of the XIII International Conference of Celtic Studies*. *Bonn 26–27 July, 2007* (Potsdam: Potsdam University Press, 2007), 25–80 (e-book *http://opus.kobv.de/volltext/2007/1568*,accessed 10 November 2019); Steve Hewitt ‘The Question of a Hamito-Semitic Substratum in Insular Celtic and Celtic from the West’, in J. T. Koch, B. Cunliffe, K. Cleary and C. Gibson (eds), *Celtic from the West 3: Atlantic Europe in the Metal Ages – Questions of Shared Language*, Celtic Studies Publications 19 (Oxford: Oxbow Books, 2016), 407–30. [↑](#footnote-ref-54)
54. Cf. example sentences 7–10 above. [↑](#footnote-ref-55)
55. Book of Aneirin A.24.285. [↑](#footnote-ref-56)
56. Book of Aneirin A.49.611. [↑](#footnote-ref-57)
57. In more traditional Germanicist notation*\*f*, \**þ*, *\*h*, *\*hw* > *\*b*, *\*d*, *\*g*, *\*gw.* [↑](#footnote-ref-58)
58. See Ringe, *Linguistic History of English*, 113–27; Robert D. Fulk, *A Comparative Grammar of the Early Germanic Languages* (Amsterdam/Philadelphia: John Benjamins, 2018), 107–12. [↑](#footnote-ref-59)
59. See Koch, *Celto-Germanic*. [↑](#footnote-ref-60)
60. Ringe et al., ‘Indo-European and Computational Cladistics’. [↑](#footnote-ref-61)
61. Koch, *Celto-Germanic*. [↑](#footnote-ref-62)
62. Cf. Isaac, ‘A New Conjecture’, 52. [↑](#footnote-ref-63)
63. W. Sidney Allen*, Accent and Rhythm: Prosodic Features of Latin and Greek: A Study in Theory and Reconstruction* (Cambridge: CUP, 1973), 240–3. [↑](#footnote-ref-64)
64. W. Sidney Allen, *Vox Latina: The Pronunciation of Classical Latin* (Cambridge: CUP, 2nd edition 1978; 1st edition 1965), 87–8; *Accent and Rhythm*, 159. [↑](#footnote-ref-65)
65. See the forms collected by Liam Breatnach, ‘The Suffixed Pronouns in Early Irish’, *Celtica*, 12 (1977), 75–107. [↑](#footnote-ref-66)
66. Cf. Breatnach, ‘Suffixed Pronouns’, 75–107. [↑](#footnote-ref-67)
67. Especially Koch, ‘Neo-Brittonic Voiceless Spirants’. [↑](#footnote-ref-68)
68. E.g. Lambert, review of *Ériu* 38; De Hoz, ‘When did the Celts’; Hock ‘Insular Celtic Absolute/Conjunct’; Isaac ‘A New Conjecture’. [↑](#footnote-ref-69)
69. Cf. McCone, ‘Pretonic Preverbs’, 1; n. 12 above. [↑](#footnote-ref-70)
70. Bern MS 167 70b, glossing ‘elapsus’. [↑](#footnote-ref-71)
71. Cf. *Geiriadur Prifysgol Cymru* s.n. ‘etholaf: ethol, etholi’; https://geiriadur.ac.uk/gpc/gpc.html,accessed 5 January 2022. [↑](#footnote-ref-72)
72. Würzburg glosses 23b7. [↑](#footnote-ref-73)
73. *Thesaurus Palaeohibernicus* ii.320.3. [↑](#footnote-ref-74)
74. The proposed development of *con·boing* responds to a point raised by Graham R. Isaac, ‘Non-Lenition in the Neo-Celtic Verbal Complex’, *Bulletin of the Board of Celtic Studies*, 38 (1991), 93–7. [↑](#footnote-ref-75)
75. Koch, ‘Linguistic Preliminaries’ 134–51; ‘Neo-Brittonic Voiceless Spirants’. [↑](#footnote-ref-76)
76. André Martinet, ‘Celtic Lenition and Western Romance Consonants’, *Language*, 28 (1952), 192–217; *Economie des changements phonétiques* (Bern: Francke, 1955). [↑](#footnote-ref-77)
77. Kenneth Hurlstone Jackson, *Language and History in Early Britain: A Chronological Survey of the Brittonic Languages from the 1st to the 12th c. AD*, 2nd rev. ed. (Dublin: Four Courts Press, 1994; first published, Edinburgh: Edinburgh University Press, 1953), 565–73; ‘Gemination and the Spirant Mutation’, *Celtica*, 5 (1960), 127–34; *A Historical Phonology of Breton* (Dublin: DIAS, 1967),510–57. [↑](#footnote-ref-78)
78. Graham R. Isaac, ‘The Chronology of the Development of Brittonic Stops and the Spirant Mutation’, *Journal of Celtic Linguistics*, 8 (2004), 49–85; ‘Brittonic Voiceless Spirants Again’, *Journal of Celtic Linguistics*, 12 (2008), 17–37. [↑](#footnote-ref-79)
79. Allen*, Accent and Rhythm*. [↑](#footnote-ref-80)
80. Henry Lewis, *Yr Elfen Ladin yn yr Iaith Gymraeg* (Caerdydd: Gwasg Prifysgol Cymru, 1943), 21. [↑](#footnote-ref-81)
81. Thurneysen, *Grammar*,89–91. [↑](#footnote-ref-82)
82. Marguerite Chapallaz, *The Pronunciation of Italian: A Practical Introduction* (London: Bell & Hyman, 1979), 133ff; Maria‐Gabriella Di Benedetto, ‘Gemination in Italian: The GEMMA Project’, *The Journal of the Acoustical Society of America* 108, 2507 (2000). *https://doi.org/10.1121/1.4743263*, accessed 25 October 2021. [↑](#footnote-ref-83)
83. Maria-Gabriella Di Benedetto, Stefanie Shattuck-Hufnagel, Luca De Nardis, et al., ‘Lexical and Syntactic Gemination in Italian Consonants – Does a Geminate Italian Consonant Consist of a Repeated or a Strengthened Consonant?’, *The Journal of the Acoustical Society of America* 149, 3375 (2021) *https://doi.org/10.1121/10.0004987*, accessed 25 October 2021. The same research has also shown shortening of a preceding vowel as a feature of Modern Italian geminates. I am not aware of any evidence for this in Celtic, but the possibility might be studied further. [↑](#footnote-ref-84)
84. \*/p/was not a native sound in Goidelic, but assimilated into the sound system in the post-apocope period. [↑](#footnote-ref-85)
85. David Greene, ‘Gemination’, *Celtica*, 3 (1956), 284–9; ‘The Spirant Mutation in Brythonic’, *Celtica*, 7 (1966), 116–19. [↑](#footnote-ref-86)
86. On the phonetic realization of the lenis allophones of Proto-Celtic \*/kw k t/, cf. Martinet, ‘Celtic Lenition’. [↑](#footnote-ref-87)
87. For Old Irish, see Liam Breatnach, ‘On Words Ending in a Stressed Vowel in Early Irish’, *Ériu*, 53 (2003), 133–42. [↑](#footnote-ref-88)
88. The vowels are marked short (e.g. [v̆]) in some representations here merely to emphasize that their short length is of particular relevance at this stage of the argument. This notation is not to be taken to imply a 3-length system: short [v̆], long [vː] and a mid-length [v] unmarked. [↑](#footnote-ref-89)
89. Black Book of Carmarthen 14.5. Although drawn from obsolete editions, the collection of Strachan remains useful: John Strachan, ‘On Some Mutations of Initial Consonants in the Old Welsh Verb’, *Ériu*, 3 (1907) 20–8. [↑](#footnote-ref-90)
90. Book of Aneirin A.87.1104 ‘Peis Dinogat’. [↑](#footnote-ref-91)
91. Hock, ‘Proto-Indo-European Verb-Finality’, 49. [↑](#footnote-ref-92)
92. Hock, ‘Proto-Indo-European Verb-Finality’, 68; also Michael Weiss, *Outline of the Historical and Comparative Grammar of Latin* (Ann Arbor: Beech Stave Press, 2009), 146–7. [↑](#footnote-ref-93)
93. *\*mori* is possibly confined to the North-western branches (Celtic, Italic, Germanic, Baltic and Slavic), as the derivation of Ossetic *mal* ‘deep standing water’ is uncertain; see James P. Mallory and Douglas Q. Adams, *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World* (Oxford: OUP, 2006), 127. [↑](#footnote-ref-94)
94. Frederik Kortlandt, ‘The Alleged Early Apocope of *\*-i* n Celtic’, *Études celtiques*, 32 (1996), 91–7; *Italo-Celtic Origins and Prehistoric Development of the Irish Language*, Leiden Studies in Indo-European 14 (Amsterdam–New York: Brill, 2007), 92–3, 99. [↑](#footnote-ref-95)
95. Lezoux: see Michel Lejeune and Robert Marichal, ‘Textes gaulois et gallo-romains en cursive latine’, I. Lezoux’, *Études celtiques*, 15/1(1976–7), 151–6. [↑](#footnote-ref-96)
96. From the incantations of Marcellus of Bordeaux: see Léon Fleuriot, ‘Sur quelques textes gaulois’, *Études celtiques* 14/1 (1974), 47–66 (63–6). [↑](#footnote-ref-97)
97. From the Life of St Symphorianus, see Wolfgang Meid, *Gallisch oder Lateinisch?* *Soziolinguistische und andere Bemerkungen zo populären gallo-lateinischen Inschriften*, Innsbrucker Beiträge zur Sprachwissenschaft, Vorträge und kleinere Schriften, 24 (Innsbruck, 1980), 13. [↑](#footnote-ref-98)
98. There was an inherited basis for contrasting segmental phonology of accented versus clitic 1st person and 2nd person singular genitive pronouns: thus Vedic accented *máma* and *táva* < *\*méme* or *\*móme* and \**téwe* versus clitic *me* and *te*, corresponding to Greek μοι and τοι. Cf. Macdonell, *Vedic Grammar*, 104–5. For Celtic, we can reconstruct the same segmental preforms for both the dependent and independent genitive pronouns, assuming that the dependent series lost their accent as proclitic in noun phrases. [↑](#footnote-ref-99)
99. Cf. Ranko Matasović, *Etymological Dictionary of Proto-Celtic*, Leiden Indo-European Etymological Dictionary Series 9 (Leiden/Boston: Brill, 2009), s.n. *\*fare*. [↑](#footnote-ref-100)
100. De Hoz, ‘When did the Celts’. [↑](#footnote-ref-101)
101. Pierre-Yves Lambert, *La langue gauloise*, Collection des Hesperides (Paris: Errance, 1994), 158; Xavier Delamarre, *Dictionnaire de la langue gauloise: une approche linguistique du vieux-celtique continental*, Collection des Hespérides (Paris: Errance, 2003; first published 2001), 76; Schumacher, *Die keltischen Primärverben*, 745–7. [↑](#footnote-ref-102)
102. Robert Marichal, 1988 *Les graffites de la Graufesenque*, XLVIIe supplément à «GALLIA» (Paris: Éditions du CNRS, 1988), no. 14, 135–7. [↑](#footnote-ref-103)
103. Cf. Meid, *Die indogermanischen Grundlagen*, 79–80; Koch, ‘Prosody’, 163; De Hoz, ‘When did the Celts’, 110; Schumacher, *Die keltischen Primärverben*, 745–7. For another explanation of *sioxti*, see Joseph F. Eska and D. Ellis Evans, ‘Continental Celtic’, in Martin J. Ball and Nicole Müller (eds), *The Celtic Languages* (London and New York: Routledge, 2010), 28–54 (40). [↑](#footnote-ref-104)
104. All on side A, lines 3, 5, 6, 7, 8. Believing that **-ti** means *-ti* with these forms, see Cowgill, ‘Two Further Notes’, 29–30. For **-ti** possibly meaning *-t*, see Patrizia De Bernardo Stempel, ‘Die Stummvokale: eine Bilanz für das Keltiberische’, in Wolfgang Meid and Peter Anreiter (eds), *Die größeren altkeltischen Sprachdenkmäler: Akten des Kolloquiums Innsbruck*, *29. April–3. Mai 1993*, Innsbrucker Beiträge zur Kulturwissenschaft, Sonderheft 95 (Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck, 1996)*,* 212–56; De Hoz, ‘When did the Celts’, 111. [↑](#footnote-ref-105)
105. Dagmar S. Wodtko (ed. Jürgen Untermann) *Monumenta Linguarum Hispanicarum 5.1, Wörterbuch der keltiberischen Inschriften* (Wiesbaden: Ludwig Reichert, 2000), 334–5; Carlos Jordán Cólera, *Lengua y Epigrafía Celtibéricas*, 2 vols, Monografás de Filología Briega 29 (Zaragoza: Prensas de la Universidad de Zaragoza, 2019), 878–98. [↑](#footnote-ref-106)
106. De Hoz, ‘When did the Celts’, 113; Schumacher, *Die keltischen Primärverben*, 571. [↑](#footnote-ref-107)
107. Cowgill, ‘Origins’. [↑](#footnote-ref-108)
108. Kim R. McCone, *Towards a Relative Chronology of Ancient and Medieval Celtic Sound Change*, Maynooth Studies in Celtic Linguistics I (Maynooth: Department of Old and Middle Irish, St Patrick’s College, 1996), 98–104. [↑](#footnote-ref-109)
109. Peter Schrijver, *Studies in British Celtic Historical Phonology*, Leiden Studies in Indo-European 5 (Amsterdam and Atlanta GA: Rodopi, 1995), 463–5. [↑](#footnote-ref-110)
110. ‘Double System’, 147–8. [↑](#footnote-ref-111)
111. Graham R. Isaac, ‘Issues in the Reconstruction and Analysis of Insular Celtic Syntax and Phonology’, *Ériu*,44(1993), 1–32 (5, 17); ‘Insular Celtic vs Gallo-Brittonic: An Empirical and Methodological Question’, in W. Gillies and D. W. Harding(eds), *Celtic Connections: Papers from the Tenth International Congress of Celtic Studies, Edinburgh, 1995, 2. Archaeology, Numismatics, Historical Linguistics*, University of Edinburgh Archaeology Monograph Series 2 (East Linton: Tuckwell, 2005), 190–202. [↑](#footnote-ref-112)
112. ‘Enclisis theories’ refers to the explanations of Cowgill ‘Origins’; McCone ‘Pretonic Preverbs’ and Sims-Williams ‘Double System’. [↑](#footnote-ref-113)
113. De Hoz, ‘When did the Celts’, 114. For broadly compatible positions on Gallo-Brittonic, see John T. Koch, ‘Gallo-Brittonic vs. Insular Celtic: The Inter-relationships of the Celtic Languages Reconsidered’, in Gw. Le Menn and J.-Y. Le Moing (eds), *Bretagne et pays celtiques – langues, histoire, civilisation: Mélanges offerts à la mémoire de Léon Fleuriot* (Saint-Brieuc and Rennes: Skol/Presses Universitaires de Rennes, 1992), 471–95; Isaac, ‘Insular Celtic vs Gallo-Brittonic’; Patrizia De Bernardo Stempel, 2006 ‘Language and Historiography of Celtic-speaking Peoples’, in Sabine Rieckhoff(ed.), *Celtes et Gaulois, l’Archéologie face à l’Histoire: Celtes et Gaulois dans l’Histoire, l’historiographie et l’idéologie moderne*, Bibracte 12/1 (Glux-en-Glenne: Bibracte, Centre archéologique européen, 2005), 33–56; Ranko Matasović, ‘Insular Celtic as a Language Area’, in Tristram, *Celtic Languages in Contact*, 93–112. [↑](#footnote-ref-114)
114. See McCone, ‘Origins and Development’, 277–80; *The Celtic Question: Modern Constructs and Ancient Realities*, Myles Dillon Memorial Lecture (Dublin: DIAS, 2008), 37–9; Eska, ‘The Emergence’, 23–4; John T. Koch, ‘Phoenicians in the West and Break-up of the Atlantic Bronze Age’, in J. T. Koch, B. Cunliffe, C. D. Gibson & K. Cleary (eds), *Celtic from the West 3. Atlantic Europe in the Metal Ages. Questions of Shared Language*, Celtic Studies Publications 19 (Oxford: Oxbow Books, 2016), 431–76. [↑](#footnote-ref-115)
115. See John T. Koch, ‘The Sentence in Gaulish’, *Proceedings of the Harvard Celtic Colloquium*, 3 (1983), 169–216; ‘Emphasis and Movement in Gaulish’, *BBCS* 32 (1985), 1–37; Eska and Evans, ‘Continental Celtic’, 39, 45. [↑](#footnote-ref-116)
116. Karl Horst Schmidt, ‘Der Beitrag der keltiberischen Inschrift von Botorrita zur Rekonstruktion der protokeltischen Syntax’, *Word*, 28 (1976) 51–62; Peter E. Busse, ‘Celtiberian language’, in John T. Koch (ed.), *Celtic Culture: A Historical Encyclopedia* (5 vols) (Santa Barbara: ABC-Clio, 2006), 364–5; Eska and Evans, ‘Continental Celtic’, 33. [↑](#footnote-ref-117)
117. Meid, *Die indogermanischen Grundlagen*; Watkins, ‘Preliminaries’. [↑](#footnote-ref-118)
118. In criticizing this hypothesis, McCone (‘Pretonic Preverbs’, 27–8) points out that it is ‘irrelevant to the irregularities after pretonic preverbs’, thus uneconomical and that the primary/secondary opposition is used to distinguish present from past tenses also in Anatolian and, therefore, ‘can hardly have been either late or dialectal in Indo-European, and it becomes virtually inconceivable that the ancestor of Celtic failed to participate in it.’ [↑](#footnote-ref-119)
119. As quoted by Sims-Williams, ‘Double System’, 143. [↑](#footnote-ref-120)
120. Don Ringe et al., ‘Indo-European and Computational Cladistics’, 59–129; cf. Eska, ‘The Emergence’, 22; more recently Alexei S. Kassian, Mikhail Zhivlov, George Starostin, Artem A. Trofimov, Petr A. Kocharov, Anna Kuritsyna and Mikhail N. Saenko, ‘Rapid Radiation of the Inner Indo-European Languages: An Advanced Approach to Indo-European Lexicostatistics’, *Linguistics*, 59(4) (2021), 949–79, *https://doi.org/10.1515/ling-2020-0060*,accessed 10/11/2021. [↑](#footnote-ref-121)
121. Ernst Windisch, ‘Das irische *t-*praeteritum’, *Beiträge zur vergleichenden Sprachforschung auf dem Gebiete der arischen, celtischen und slawischen Sprachen*,8 (1876), 442–70. [↑](#footnote-ref-122)
122. Cf. Cowgill, ‘Origins’, 41: ‘Most scholars … agree that the Proto-Indo-European aorist indicative, from which the Celtic *s-* and *t-*preterits derive, had only secondary ending. If so, then the absolute endings of these formations can reflect primary endings only as the result of analogic spread.’ [↑](#footnote-ref-123)
123. Later replaced in most dialects by the innovative *carawδ*, but *caras* in Middle Cornish and Middle Breton. [↑](#footnote-ref-124)
124. Cf. Kim R. McCone, ‘An tSean-Ghaeilge agus a Réamhstair’, in eagar ag K. McCone, et al., *Stair na Gaeilge in Ómós do Pádraig Ó Fiannachta* (Maigh Nuad: Roinn na Sean-Ghaeilge, Coláiste Phádraig, 1994), 61–219 (168). [↑](#footnote-ref-125)
125. On the pivotal role of the 3rd person singular of verbal paradigms, cf. Calvert Watkins, *Indo-European Origins of the Celtic Verb 1. The Sigmatic Aorist* (Dublin: DIAS, 1962) 90–6, 158–80. [↑](#footnote-ref-126)
126. On the ‘Res’ bronze tablet (K.0.14), **terbereð** in Untermann’s transcription system. Cf. Old Irish *tremi-berar*, *tarmi·berar* ‘is transferred’, *tarm-breth* ‘was transferred’. See Carlos Jordán Cólera, ‘Consideraciones paleo-epigráficas a propósito del Bronce Res’, *Kalathos*, 24–25 (2009), 475–86; *Lengua y Epigrafía Celtibéricas*, 210–11. For different ideas on **terberez** and the ‘res’ inscription, see Blanca María Prósper, ‘Some Notes on the Structure and Meaning of the Bronze “Res” K.0.14’, *Keltische Forschungen*, 6 (2013–14), 151–8. [↑](#footnote-ref-127)
127. Cf. José Antonio Correa Rodríguez and Amilcar Guerra, ‘The Epigraphic and Linguistic Situation in the South-west of the Iberian Peninsula’, in A. G. Sinner and J. Velaza (eds) *Palaeohispanic Languages and Epigraphies* (Oxford: OUP, 2019), 109–37. *DOI: 10.1093/oso/9780198790822.003.0005*, accessed 30 May 2021. [↑](#footnote-ref-128)
128. See John T. Koch, *Common Ground and Progress on the Celtic of the South-western (S.W.) Inscriptions* (Aberystwyth: Centre for Advanced Welsh and Celtic Studies, 2019), e-book: *https://www.wales.ac.uk/Resources/Documents/Centre/2019/Koch-Celtic-of-the-SW-inscriptions-2019.pdf*, accessed 30 May 2021 [↑](#footnote-ref-129)
129. The numbers listed with the inscriptions are those of Jürgen Untermann with Dagmar S. Wodtko, *Monumenta Linguarum Hispanicarum IV. Die tartessischen, keltiberischen und lusitanischen Inschriften* (Wiesbaden: Ludwig Reichert, 1997). The inscriptions labelled with site names towards the bottom of the list were published since 1997. [↑](#footnote-ref-130)
130. A fuller account of this material and my proposal about it were given in talks at the Department of Irish and Celtic Studies, Queen’s University Belfast, in May 2011 and at the 14th Congress of Celtic Studies held in Maynooth in August 2011. This was published as Appendix C in Koch, *Tartessian* (2nd ed.), 295–303. [↑](#footnote-ref-131)
131. Frederik Kortlandt, *Italo-Celtic Origins and Prehistoric Development of the Irish Language*, Leiden Studies in Indo-European 14 (Amsterdam-New York: Brill, 2007), 25–44; Ranko Matasović, ‘Dybo’s Law in Proto-Celtic’, *Zeitschrift für celtische Philologie*, 59 (2012), 129–41. [↑](#footnote-ref-132)
132. *Origins and Development*, 95. [↑](#footnote-ref-133)
133. *On Verbal Accentuation*, 2. [↑](#footnote-ref-134)
134. Kortlandt, *Italo-Celtic Origins*, 92–3. [↑](#footnote-ref-135)
135. Regarding *do·bardaib*, &c., often in Old Irish and Middle Irish manuscripts – and not uncommonly in Old and Middle Welsh ones – scribes wrote proclitics (such as prepositions, possessive pronouns and the article) together with the following stressed word with no gap. Modern editors frequently add spaces after the proclitics silently. Therefore, in many cases, it will be necessary to look at the manuscript to recover this evidence for accented phrasal groups. However, a second factor influencing scribal practice is that the combinations of Old Irish and early Brythonic preposition+noun or preposition+article+noun would translate a single Latin word in an oblique case. [↑](#footnote-ref-136)
136. Which syllable was accented in the Proto-Celtic dative/ablative plural and instrumental plural forms of ‘poet’ is not certain, but irrelevant for the present point. The Greek borrowing from Celtic is βάρδος in the nominative singular. [↑](#footnote-ref-137)
137. See Whitley Stokes and John Strachan(eds)*, Thesaurus Palaeohibernicus*, 2 vols (Cambridge: CUP, 1901–3), II, 247. [↑](#footnote-ref-138)
138. Damian McManus, *A Guide to Ogam*, Maynooth Monographs 4 (Maynooth: An Sagart, 1991), 84. [↑](#footnote-ref-139)
139. McCone, *Towards a Relative Chronology*, 108. [↑](#footnote-ref-140)
140. Cf. Gregory Toner, ‘Identifying Ptolemy’s Irish Places and Tribes’, in David N. Parsons and Patrick Sims-Williams(eds), *Ptolemy: Towards a Linguistic Atlas of the Earliest Celtic Place-names of Europe* (Aberystwyth: CMCS Publications, 2000), 73–82 (79 n. 12); Philip M. Freeman, *Ireland and the Classical World* (Austin, TX: University of Texas Press, 2001), 50–2, 81–3; Edel Bhreathnach, ‘Étar/Benn Étair (Howth)’, in Koch, *Celtic Culture*, 721. For a different explanation of the name in Ptolemy without Proto-Celtic *\*-nt-*, see Patrizia De Bernardo Stempel, ‘Ptolemy’s Celtic Italy and Ireland: A Linguistic Analysis’, in Parsons and Sims-Williams (eds), *Ptolemy*, 83–112 (104). [↑](#footnote-ref-141)
141. Cowgill, ‘Origins’; ‘Two Further Notes’. See also Cowgill, ‘On the Origin’. [↑](#footnote-ref-142)
142. Cowgill, ‘Origins’, 66. [↑](#footnote-ref-143)
143. And again Cowgill, ‘Two Further Notes’, 27. [↑](#footnote-ref-144)
144. Cowgill, ‘Origins’, 41, 43, 46. [↑](#footnote-ref-145)
145. Frederik Kortlandt, ‘The Old Irish Absolute and Conjunct Endings and Questions of Relative Chronology’, *Ériu* 30 (1979), 35–52 (35), reprinted in Kortlandt, *Italo-Celtic Origins*, 1–2. [↑](#footnote-ref-146)
146. Arthur Conan Doyle, ‘The Sign of the Four; or, The Problem of the Sholtos’, *Lippincott’s Monthly Magazine* (February, 1890) 145–223. Passage quoted at Cowgill, ‘Origins’, 67. [↑](#footnote-ref-147)
147. Ronald Kim, ‘The Distribution of the Old Irish Infixed Pronouns, Cowgill’s Particle, and the Syntactic Evolution of Insular Celtic’, in Mark R. V. Southern (ed.), *Indo-European Perspectives*, Journal of Indo-European Studies Monograph 43 (Washington DC: Institute of the Study of Man, 2002), 151–76. For criticism of Kim, see Kortlandt, *Italo-Celtic Origins*, 133–4. [↑](#footnote-ref-148)
148. Peter Schrijver, *Studies in the History of Celtic Pronouns and Particles*, Maynooth Studies in Celtic Linguistics 2 (Maynooth: Department of Old Irish, National University of Ireland, 1997). [↑](#footnote-ref-149)
149. Stefan Schumacher, ‘Randbemerkungen zu absolut und konjunkt: Mittelkymrisch *hanfot*’, in Peter Anreiter and Erzsébet Jerem (eds), *Studia celtica et indogermanica: Festschift für Wolfgang Meid zum 70. Geburstag*, Archaeolingua 10 (Budapest: Archaeolingua Alapítvány, 1999) 453–64; *Die keltischen Primärverben*, 97–114. [↑](#footnote-ref-150)
150. Eska, ‘Absolute and Conjunct’. [↑](#footnote-ref-151)
151. Though Kortlandt, *Italo-Celtic Origins*, 106, finds the semantics unsuitable. [↑](#footnote-ref-152)
152. Depending on how one derives *eti* in Gaulish *etic* and *coetic*. [↑](#footnote-ref-153)
153. As pointed out by McCone, *Origins and Development*, 225–45; cf. Kortlandt, *Italo-Celtic Origins*, 106. [↑](#footnote-ref-154)
154. ‘On the Origin’. [↑](#footnote-ref-155)
155. Cf. Jerzy Kuryłowicz, *The Inflectional Categories of Indo-European* (Heidelberg: Winter, 1964), 132; Sims-Williams, ‘Double System’, 171. [↑](#footnote-ref-156)
156. Thurneysen, *Grammar*, 348. [↑](#footnote-ref-157)
157. Cf. Breatnach, ‘Suffixed Pronouns’. [↑](#footnote-ref-158)
158. James P. Mallory, ‘The Indo-European Homeland Problem: A Matter of Time’, in Karlene Jones-Bley and Martin E. Huld (eds), *The Indo-Europeanization of Northern Europe: Papers Presented at the International Conference Held at the University of Vilnius, Vilnius, Lithuania*, *September 1–7, 1994* (Washington DC: Institute for the Study of Man, 1996), 1–22 (12–13). [↑](#footnote-ref-159)
159. *Origins and Development*, 101. [↑](#footnote-ref-160)
160. ‘Prosody’, 164. [↑](#footnote-ref-161)
161. Breatnach, ‘Suffixed Pronouns’, 85–107. [↑](#footnote-ref-162)
162. R. I. Best and Osborn Bergin (eds), *Lebor na hUidre: The Book of the Dun Cow* (Dublin: Royal Irish Academy, 1929), line 9656, [↑](#footnote-ref-163)
163. Cecile O’Rahilly (ed.), *Táin Bó Cúalnge from the Book of Leinster*, Irish Texts Society 49 (Dublin: DIAS, 1967), line 2784. [↑](#footnote-ref-164)
164. O’Rahilly, *TBC from LL*, line 1063. [↑](#footnote-ref-165)
165. Cf. Thurneysen, *Grammar*, 257. [↑](#footnote-ref-166)
166. Thurneysen, *Grammar*, 267. [↑](#footnote-ref-167)