



2000

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Recommended Citation

Kim, Ronald (2000) "The Distribution of the Old Irish Infixed Pronouns: Evidence for the Syntactic Evolution of Insular Celtic?," *University of Pennsylvania Working Papers in Linguistics*: Vol. 6 : Iss. 3 , Article 7.

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The Distribution of the Old Irish Infixed Pronouns: Evidence for the Syntactic Evolution of Insular Celtic?

The Distribution of the Old Irish Infix Pronouns: Evidence for the Syntactic Evolution of Insular Celtic?*

Ronald Kim

1 Infix Pronouns in Old Irish

One of the most peculiar features of the highly intricate Old Irish pronominal system is the existence of three separate classes of infix pronouns used with compound verbs. These sets, denoted as A, B, and C, are not interchangeable: each is found with particular preverbs or, in the case of set C, under specific syntactic conditions. Below are listed the forms of these pronouns, adapted from Strachan (1949:26) and Thurneysen (1946:259-60), excluding rare variants:

	A	B	C
sg. 1	- <i>m(m)</i> '	- <i>dom</i> ', - <i>dum</i> ', - <i>dam(m)</i> ' - <i>tom</i> ', - <i>tum</i> ', - <i>tam(m)</i> '	- <i>dom</i> ', - <i>dam</i> '
2	- <i>t</i> '	- <i>tot</i> ', - <i>tut</i> ', - <i>tat</i> ', - <i>t</i> '	- <i>dot</i> ', - <i>dat</i> ', - <i>dit</i> '
3m.	- <i>a n-</i> , - \emptyset <i>n-</i>	- <i>t n-</i>	-(<i>d</i>) <i>id n-</i> , - <i>d n-</i> , - \emptyset <i>n-</i>
f.	- <i>s (n-)</i>	- <i>da h-</i> , - <i>ta h-</i>	- <i>da h-</i>
n.	- <i>a</i> ', - \emptyset '	- <i>t</i> '	-(<i>d</i>) <i>id</i> ', - <i>d</i> ', - \emptyset '
pl. 1	- <i>n(n)</i>	- <i>don</i> , - <i>ton</i> , - <i>tan(n)-don</i> , - <i>dun</i> , - <i>dan(n)</i>	
2	- <i>b</i>	- <i>dob</i> , - <i>dub</i> , - <i>tob</i> , - <i>tab</i>	- <i>dob</i> , - <i>dub</i> , - <i>dab</i>
3	- <i>s (n-)</i>	- <i>da h-</i> , - <i>ta h-</i>	- <i>da h-</i>

Leaving aside for the moment the last set, which is limited to relative clauses introduced by a preposition (plus relative (*s*)*a n-*, with the sole exception of *i n-* 'in, in which') and after certain conjunct particles such as *día n-*, *ma* 'if, when', *cía* 'though, unless', *ara n-* 'in order that', *co n-* 'so that', and interrogative *in n-* (Pedersen 1913:145-7, Thurneysen 1946:258), it is

*This paper was written in February-March 1999 for the fall 1998 Old Irish seminar in the Department of Linguistics at the University of Pennsylvania. Very special thanks to my advisor Don Ringe for his assistance and helpful comments throughout, to Heidi Harley and Beatrice Santorini for discussion of syntactic matters, and to Joseph Eska for numerous suggestions for improvement and for providing me with copies of his and others' articles. H.V.S.

generally agreed that the distribution of the first two classes is determined by the (prehistoric) phonetic shape of the individual preverbs. Those which ended in a vowel in Primitive Irish take class A, e.g., Wb. 5c6 *ním-charat-sa* 'they don't love me', 30d20 *imma-n-imcab* 'avoid him', 15a7 *na-chomalnid-si* 'fulfill it', 23d4 *rob-car-si* 'he has loved you (pl.)', 19d24 *dos-m-bérthe* 'ye would have given them'. Preverbs which ended in a consonant, on the other hand, are found with class B pronouns: cf. Ml. 39c27 *fritamm-orcat* 'they offend me', Wb. 6c16 *attot-aig* 'which impels you', Ml. 112a3 *cot-n-erba* 'he will trust himself', Wb. 31c16 *fordon-cain* 'teaches us', 5a13 *ata-samlibid-si* 'you (pl.) will imitate them'. The preverbs associated with each class and their reconstructed Primitive Irish, Proto-Celtic, and Proto-Indo-European shapes are the following:

Class A

ar- < PrimIr. *ari < PC *φari < PIE *pr̥H-i

di-, do- < PrimIr. *dī < PC, PIE *dē

do- < PrimIr. *tu < *tū < PC *tō < PIE *tō (Schrijver 1995:17fn.2) or < PrimIr., PC, PIE *to (OHitt. *ta*)¹

fo- < PrimIr. *wo < PC *uφo < PIE *upo

im(m)- < PrimIr. *imbi < PC *ambi < PIE *h₂nt-bʰi (Jasanoff 1976; see Schrijver 1991 for raising of *a before nasal + voiced stop in pre-OIr.)

neg. *nī-, ní-* < PrimIr. *nē < PC, PIE *nē

no- < PrimIr. *no, *nu (?) < PC, PIE *nu

ro- < PrimIr. *ro < PC *φro < PIE *pro

Class B

ad-, ·ad-/aC-/á- < PC, PIE *ad

ad-, ·aith-/aid- < *ati²

con-, ·com- < PrimIr., PC *kom < PIE *kom

¹See Schrijver (1995:17fn.2) for arguments in favor of a preform *tu. Note, however, that only *to is attested in Continental Celtic (J. Eska, p.c.), e.g., in Gaul. *to=me=declai natina* '(their) dear daughter set me up' (Voltino; see fn. 23) and as a sentence connective in Celtib. *ENIOROSEI VTA TIGINO TIATUNEI ERECAIAS TO LUGUEI ARAIANOM COMEIMV* 'To Eniorosis and to Tiatu of Tiginos the furrows, (and) to Lugus the farmland we dedicate' (Peñalba de Villastar; cf. Ködderitzsch 1985:216, Eska 1990a:106-7).

²The class B infixed pronouns used with *ad-, ·aith-/aid-* < *ati are analogical to *ad-* < *ad.

as-, *-ess-/eC-/é-* < PrimIr., PC **exs* < PIE **eǵ(s)*

eter-, *-et(a)r-* < PrimIr. **edder* < PC **anter* < (post-)PIE **ǵ-ter* (Lat. *inter*)

for-, *-for-* < PrimIr. **wor* ← **wer* (probably on analogy of **wo* 'under')
< PC **uφer*³ < PIE **uper*

fri-, *-frith-/freC-* < **writi*

in-, *-in(d)-* < PrimIr. **in* < PC **en* (?) < PIE **en*

as-, *-oss-* < PrimIr. **uxs*, **uss* < PC **uxs*, **uts* < PIE **up(s)* or **ud(s)*

It is highly surprising, then, that no explanation has yet been proposed for this clear phonological distribution. The standard handbooks call no special attention to these separate sets of infixes, and until recently (Schrijver 1997:131-9) there have been, to my knowledge, no efforts to provide a common origin and/or historical account of their coexistence.

Below I will first consider this problem from a purely phonological approach (section 2), from which it follows that the combinations of the preverb + infixes must originally have contained an intervening particle of the form *-(V)stV-. This reconstruction is strongly reminiscent of Cowgill's suggestion of **esti* as underlying the enclitic particle *-(e)s which he posited to explain the contrast between the Old Irish absolute and conjunct inflections; the phonological problems raised by such a preform will be examined in section 3. In section 4, Old British relics of the absolute/conjunct verbal contrast are adduced as support for Old Irish clause-second **esti*. Finally, I will outline the considerable implications of this hypothesis for the prehistory of the VSO syntax of Insular Celtic, and more generally for the evolution of Celtic constituent configuration (section 5). In particular, I will propose that all main clauses in declarative sentences were topicalized at the Proto-Insular-Celtic (PIC) stage, with **esti* in C(omplementizer) position and a preverb or simple verb obligatorily fronted to Spec-CP.

2 Phonological Reconstruction

As already noted, earlier scholars, beginning with Thurneysen, described the occurrence of the class A and B infixes with their respective pre-

³Probably on the analogy of **wo* 'under'; cf. Gaulish *Ver-cingeto-rīx* 'superhero-king', Celtiberian *ver-amos* 'leader' (Schrijver 1995:120).

⁴Cf. Pedersen (1913:147), Lewis and Pedersen (1937:198), Thurneysen (1946:257-8), Strachan (1949:26), all of whom merely state the distribution as fact and list the individual preverbs which take class A or B.

verbs and noted the (exact) correlation between choice of class and final segment of the Primitive Irish preform.

Watkins (1963:26-8) suggests that an originally connective enclitic **de* became fused with preverbs ending in a consonant, leading to the *-d-* of the class B pronouns, but retained its "quasi-independent status" after final vowels, allowing a distinction between e.g., 1sg. **ro-me* (> class A *rom-*) and **ro-de-me* (> class C *rodom-*, restricted to relative clauses and eventually becoming generalized there at the expense of class A). This descriptive account, however, fails to explain why sequences of consonant-final preverb + infixed pronoun, e.g., 1sg. **kom-me*, 3sg. m. **kom-em*, were lost and replaced by constructions with a particle that otherwise occurred only in relative function. Though the sort of phonologically conditioned occurrence of particles or morphemes proposed by Watkins for pre-Old Irish **de* is not unknown in the world's languages,⁵ one would nonetheless prefer to seek some other origin for the observed distribution of class A and B endings without recourse to any *ad hoc* particles (or rather particles assumed to have followed an *ad hoc* pattern) at an earlier stage of the language. Most importantly, Schrijver (1997:132-4) has emphasized that **de* could not have given the *-t-*, *-d-* [-*d-*] of the class B forms by sound change.

Let us approach the problem from a different, and apparently unrelated, area of Old Irish grammar, the verb. In his groundbreaking 1975 article on the absolute and conjunct verbal inflection of Insular Celtic and specifically Old Irish, Cowgill persuasively argues in favor of a derivation of conjunct forms from unsuffixed PIE primary endings, whereas absolute forms arose from the addition of a suffix *(*e*)s in Wackernagel position after a clause-initial verb: e.g., 3sg. conj. **beir* < **beret* < **bereti*, abs. *be(i)rid* < **bereti+s* (see also Cowgill 1985). Thurneysen (1914:29-30), who rejected Pedersen's (1913:340-1) view that the absolute forms resulted from enclitic subject pronouns, noted that "gemination" after *ní* 'not', i.e., *ní h-* < **nīs(t)* < **nīsti* < **nēsti* < **ne esti*, and other preverbs could be due to a postposed **s* (see also Thurneysen 1946:152-3, 362-3). A particle of this shape explains the vast majority of attested endings in the OIr. absolute and conjunct paradigms. The lack of an obvious etymology carries little weight against such convincing phonological evidence, which itself must provide the basis for any etymo-

⁵So, for instance, the modern Korean subject-marking suffix is realized as *-i* after a consonant but *-ka* after a vowel, e.g., *che-ka* 'I' vs. *ur-i* 'we'; as *-ka* is not attested until the late 16th c., the two do not appear to share a common historical source (Lee 1977:251, 279). For another example cf. the distribution of Proto-Slavic **-no-* and **-to-* in OCS past passive participles: **-to-* is found with unsuffixed sonorant-final and most semivocalic roots (e.g., *jetŭ* 'seized' to **jīm-*, *bitŭ* 'beat(en)' to **bij-*), **-no-* elsewhere (Schenker 1993:106).

logical conjecture (cf. Boling 1972:80-1, who takes the particle to be *(e)d; Cowgill 1975:54-6, 66-7, Schrijver 1994:180-1). Cowgill himself, on the basis of the attractive derivation of *ní* given above, suggests the 3sg. copula *esti 'it is', but agreed with Thurneysen that extension of *esti from the pass. pret., where it would have been expected (in e.g., *brethae in fer* 'the man is carried' < *britos-est' sindos wiros vs. *ní breth in fer* 'the man isn't carried' < *nīst' britos), throughout the verbal inflection is difficult to explain (1975:66-7).

More recently, Schrijver (1994) has proposed an altogether different source for the Cowgill particle *(e)s. He begins with a plausible reconstruction of the OIr. prepositions *fri h-* 'towards, against', *la h-* 'with' from Proto-Celtic *writi, *(ϕ)leti via the stages *writ, *let (via early apocope of *-i, which Schrijver takes to be Proto-Insular-Celtic) and *wris, *les (through the Irish-only change of new final *-t > *-s).⁶ These two sound changes, which he then uses to explain the long troublesome 3sg. relative forms of OIr., allow for a derivation of *(e)s from the PIE connecting particle *eti, attested in Skt. *āti* 'beyond', Gr. *éti* 'still, yet', Lat. *et* 'and', Goth. *ip* 'and, but', and in Celtic as Gaul. *eti* 'also, likewise' and *etic*, *eðdic* 'and' < *eti=k^we. Schrijver adduces apparent support for this etymology from British forms which have an alternant with final -d before a following vowel-initial word, e.g., MW *nyt* [-d] 'not' for *ny* before a vowel-initial verb in main clauses, *neut* for *neu* (preverbal particle, spirantizing), MB *ned* 'not' for *ne* before vowel-initial forms of 'be' and 'go'. These latter, which Schrijver assumes to be the direct phonological counterpart to the *h-* of OIr. *ní h-* 'not' and initial *h-* in e.g., *do·ic* [do híg] 'reaches', would require a PIC preverbal *et < *eti.⁷

Returning to the problem at hand, it is not difficult to see that neither *es/*is nor Schrijver's hypothetical *eti can explain the distribution of infixated pronouns found with OIr. preverbs. Whether or not one wishes to identify it with a masc. sg. anaphoric pronoun, *es (*is) leaves the -d- of class B utterly without a source. On the other hand, a particle *eti is highly unlikely to have resulted in the class A pronouns unless we make the improbable as-

⁶The British cognates of *fri h-* are Old Welsh *gurth* (Mid. (*g*)wrth, Mod. wrth), Middle Cornish (*w*)orth, Old Breton *gurth* (Mod. ouzh), reflecting Proto-British *wurt < *wirt < *writ (by metathesis) < *writi (Thurneysen 1946:515, Jackson 1953:337; cf. W *gwr* 'man' < *wur < *wiros). OIr. *la h-* has no direct British cognate, though both Irish and British preserve the derived *s*-stem noun *pleth₂os, *-es- in OIr. *leth* (n.) 'side, half', W *lled*, C *les*, B *led* (m.) 'width, half' and adj. *p_lth₂-no- > *litano- in OIr. *lethan*, W *llydan* 'wide' (cf. Gaul. *litano-*).

⁷Under this analysis, MW *nyt*, MB *ned* 'is not', OIr. *ní h-* continue, not *ne-esti as usually assumed, but *ne-eti esti.

sumption that the *s proper to enclitic (final) *-es < *-et < *eti was introduced into internal position in the putative preforms of vowel-final preverbs, e.g., 1sg. *ro-(e)ti-me, 3sg. m. *ro-(e)t-en < *ro-eti-en, but not in those of consonant-final preverbs, e.g., 1sg. *kom-eti-me, 3sg. m. *kom-et(i)-en (Schrijver 1997:135).⁸ For the forms of *kom, he thus has to assume that “the *e of the particle was lost before PrIr. *-t became *-s ... I propose an *ad-hoc* sound law, by which in a PrIr. proclitic group of more than two syllables the vowel of the second syllable (in this case *e of *et) was regularly lost as a result of an early syncope.”⁹

Note also that whatever solution is proposed must account for the contrast between class A -s (*n-*) and class B -*d-a* (*n-*), -*t-a* (*n-*) in the 3sg. fem. and 3pl., as well as between class A -*a n-*, -*a'* and class B -*t-Ø n-*, -*t-Ø'* in the 3sg. masc. and nt. Watkins (1965:287) takes the first pair back to “coexisting feminine anaphoric stems *siya- and *iya- in Celtic” (and by extension presumably pl. *siyo- and *iyo- as well?), but it would be remarkable at least for two distinct stems to have survived in *identical* function and then been partitioned according to a purely phonological criterion without any apparent motivation. Schrijver (1994:183-4), following Watkins’s hypothesis of a particle *de underlying the class B pronouns, implicitly treats this problem as it affects the preverb *friss-*: 3pl. *frita-* < *writi-de-sons vs. e.g., *dos-* < *tu-es-sons; the arguments against such a complementary distribution of *de and *es have been raised above.

In seeking a unitary origin for the two classes of infixing pronouns, we must ask what preform of a particle in second position (following the preverb) would have disappeared after a vowel but given -*d-* after a consonant. Intervocally, *s was weakened to *h and disappeared, probably already in Proto-Insular-Celtic; cf. OIr. *tige*, MW *tei* (ModW *tai*) < PIC *tege'a¹⁰ <

⁸Contra Schrijver, such analogical spread is necessary for *ro-(e)ti-me, *ro-(e)t-en, as *-t- here was hardly at the end of a phonological word. Schrijver has apparently rescinded his earlier view (1994:183-4), which followed Watkins in assuming a particle *de in complementary distribution with *es < *eti, hence e.g., 1sg. *kom-de-me, 3sg. *kom-d(e)-en to *kom.

⁹Schrijver (1997:177-8) attempts to adduce further support for *eti from Gaul. pret. 3sg. *legasit* ‘offered’, which he takes from *leg-ā-s-ti= < *leg^h- (*t < *-eti). This is not the only possible analysis, however: K.H. Schmidt (1983:79, 1986:167-8) derives it from thematized *leg-ā-s-e-t or *-s-t+et. The form therefore cannot be used as evidence for or against the particle *eti in Gaulish.

¹⁰Or perhaps already *tegi'a? The OIr. development was *tege'a > *tegi'a (> *tegiya) > *tigiya (raising) > *tigeria (lowering) > *tige*. For raising of pre-OIr. *e > *i in hiatus before a back vowel cf. OIr. gen. sg. *niad* ‘nephew’, Ogam NIOTTA < *ni'otas < *ne'otas < *nepotos. On the Welsh form, which presupposes a like raising

*tegesa. But intervocalic *st became *ss in the prehistory of Old Irish as well: cf. *is* 'is' < *esti < *h₁esti, *·sissedar* 'places' < *si-sta- < *(s)(t)i-sth₂-, (Thurneysen 1946:96). If the resulting *ss was simplified to *s in pretonic position—certainly a very plausible and phonetically natural development—early enough, this new *s could have participated in the weakening of intervocalic *s > *h.

If we ask ourselves what would have happened to such a cluster *st after a consonant, we can make reference to by now well-established sound laws. In a sequence consisting of *r, *l, or *m, *s would have been lost, giving *rt, *lt, and *mt, respectively. This change is most familiar from the 3sg. pret. of verbal roots ending in these consonants, where, as Watkins astutely demonstrated (1962:169-74), the resulting final *-t was reinterpreted as a marker of preterite inflection (with zero-ending of the 3sg.) and spread to the other forms of the original *s*-aorist paradigm, leading to the creation of the Insular Celtic *t*-preterite: e.g., 3sg. *berst > *bert > *bert*, whence 1sg. *bers-ṃ → *bert-a (vel sim.) > *bert*, 3pl. *bers-ṃd → *bert-oddar > *bertatar*.¹¹ Stem-internal examples of such *s*-deletion, which Watkins adduced in support of his conclusion, include OIr. *tart* 'thirst' < *tarsto- < *t_ṛsto- (OHG *durst*) and *arco* 'I ask for' < *parsk- < *p_ṛsk- (Lat. *poscō* 'I demand', Skt. *pṛcchati* 's/he asks'; PIE *p_ṛsk- < **p_ṛk-sk-, cf. Lat. *precēs* 'prayers'); see Pedersen 1909:80-1 for other, less secure cases.

The same loss of *s is found in PC *xst < *kst,¹² e.g., OIr. *echtar* 'outside' < *eks-tero- (and other compound of *eks- with *t-initial roots),

of hiatus *e > *i, cf. Schrijver 1995:390-2.

¹¹I leave aside the vexed question of the origin and preforms of the 2sg. and 1, 2pl. endings of the *t*- and suffixless preterites. Note that the lengthened grade reconstructed for the PIE sigmatic aorist on the basis of Indo-Iranian, Slavic, and Tocharian may also have survived in (Insular) Celtic and into the prehistory of Irish, contra Watkins 1962:21-2: otherwise one would not expect 3sg. perf. *ru-bart* < *ru bert ← *ru birt < *ro birt (vowel raising) < *bīrt < *bērt < *bēr-s-t (Don Ringe, p.c., following a suggestion of Warren Cowgill). For brief discussion see McCone 1986:231. (Note here that the sigmatic aorist of OCS *vezǫ* 'I convey' < *weǵ^h-is attested in Serbian CS 3du. *oīvēsta se* 'the two of them sailed off', translating Gr. *apēpleusan*, thus confirming the word-equation with 3sg. Skt. *āvāt*, Lat. *vēxit* 'carried, conveyed' (contra Watkins 1962:41).)

The loss of *s in these clusters may have been of Proto-Celtic date: cf. Gaul. (Lezoux) *loberte* 'brought' ← *ber-s-t < *b^her-, which, if correctly read by Thurneysen, provides another source of the Gaul. *t*-pret. (Eska 1990b:85-6 with refs.), and Celtib. (Botorrita A1) *ComPalCes* < *balsk- < *b^hjs-sk- or *b^hjs-k- (Hamp 1989).

¹²And presumably also pre-PC *pst, though good examples are lacking.

úachtar 'upper part' < *uks-tero-, and the *t*-preterite of velar-final roots such as *aingid* 'protect' and *agid* 'drive', respectively *-anacht* (Wb.) and *-acht* (McCone 1986:232-3, refuting Watkins 1962:143-4). The *t*-preterites of the British languages such as W 3sg. *aeth* 's/he went' < *axt < *axst (pret. of *mynd* 'go'), an exact cognate of OIr. *acht*, strongly imply an Insular Celtic date for this phonetic change and possibly the resulting paradigmatic remodeling. Least certain is the phonetic outcome of *tst, at least in Insular Celtic,¹³ but here we have one fairly secure etymology: *at-tá* (*atá*) 's/he is' (substantive) < *atstā- < *ad-steh₂- 'to stand at/to', cf. Lat. *astat* 'stands at/by/near'.¹⁴

If we compare these sound rules with the forms of those originally consonant-final preverbs which take class B infixed pronouns, a striking pattern emerges:

preverb	preposition	with infixed pronoun
<i>con-</i> , <i>com-</i>	<i>co n-</i> < *kom	<i>cot-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>eter-</i> , <i>et(a)r-</i>	<i>eter</i> < *edder	<i>etart-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>for-</i> , <i>for-</i>	<i>for</i> < *wor	<i>fort-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>in-</i> , <i>in(d)-</i>	<i>i n-</i> < *in	<i>at-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>ad-</i> , <i>ad-/aC-/l-á-</i>	— < *ad	<i>at-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>as-</i> , <i>ess-/eC-/l-é-</i>	<i>a h-</i> < *es	<i>at-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>as-</i> , <i>oss-</i>	— < *us, *uss	<i>at-om'</i> , <i>-ot'</i> , <i>-a...</i>
<i>fri-</i> , <i>frith-/freC-</i>	<i>fri h-</i> < *writ	<i>frit-om'</i> , <i>-ot'</i> , <i>-a...</i>

With the exception of the voicing of the component *-t-* [-d] of the class B person/number endings, which is regular and expected in pretonic position (Thurneysen 1946:111; see section 3), the agreement between the expected outcomes of *-Cst- and the actually attested forms of preverb + infixed pronoun is complete.

Such an exact and systematic correspondence is unlikely to be fortuitous. Although a following *de (as proposed by Watkins and advocated by Schrijver) could account for the shape of the above preverbs as well, the obvious advantage of a particle containing *-st- is its potential to account for *both* classes A and B of infixed pronouns (almost) exclusively by sound change. The phonological details of this hypothesis will be pursued in detail below.

¹³Pre-PC *tst appears to have become *ts and then the "tau Gallicum" phoneme in Gaul.; cf. Eska 1998 with refs.

¹⁴The initial *t-* of conjunct *-tá*, and perhaps also W *taw*, is abstracted from this compound, contra Jackson 1953:530.

3 Enclitic *esti in Clause-Second Position?

The reconstruction of a particle containing *-st- which originally followed the initial preverb in Wackernagel position in the clause immediately recalls Thurneysen's and Cowgill's idea of tracing postverbal *-(e)s to the copula *esti 'it is', and indeed it is hard to see what other etymological source a particle of this shape could have had. Below we shall trace the stages in the evolution of the prehistoric complex of preverb + *esti + infixed pronoun and attempt to determine the developments which must have taken place under this hypothesis. So as to be able to follow the prehistories of classes A and B in parallel, I have chosen *ro·* and *com·* as representative of vowel- and consonant-final preverbs, respectively.

After *esti had become fixed in clause-second position at the Insular Celtic stage, the preverbal complexes must have been these:

sg. 1	*ro-(e)sti-me?	*kom-esti-me?
2	*ro-(e)sti-te?	*kom-esti-te?
3m.	*ro-(e)st(i)-en	*kom-est(i)-en
f.	*ro-(e)sti-sen	*kom-esti-sen
n.	*ro-(e)st(i)-e	*kom-est(i)-e
pl. 1	*ro-(e)sti-nus	*kom-esti-nus
2	*ro-(e)sti-wus	*kom-esti-wus
3	*ro-(e)sti-sus	*kom-esti-sus ¹⁵

When combined with a preverb ending in a vowel such as *ro, the first vowel of *esti was almost certainly elided; cf. Cowgill's reconstruction of the postverbal particle as *(e)s, i.e., *es after consonants (e.g., 2pl. *beretes-es > *beirthe*) vs. *s after vowels (e.g., 1sg. *berū-s > *biru*). The surface variant *-st(i)- of the original copula *esti thus came to be used with *ro, *tu, *di, *nu, etc., hence with a majority of preverbs in the language.

I propose that the consonant-final preverbs altered the second component *est(i) of their preverbal complexes to *st(i) on the model of the vowel-final

¹⁵The reconstruction of the person/number infixed pronouns will not be dealt with in detail here. As already pointed out by Thurneysen (1904:114), final *-d in 3sg. neut. *-ed must have dropped early enough to trigger lenition; here this loss has been tentatively ascribed to Insular Celtic. I here reconstruct *-e < *ed, cf. the 3sg. neut. pron. *ed* 'it' < *ed-V-, following Watkins 1969. On 3sg. fem. *sēn < *seyen < *seyan < *seyām (cf. OHG *sia*, Lat. *eam*) see Watkins 1965:287, Boling 1972:87; sim. 3pl. *sūs < *sōs < *sons. These then became *sen and *sus by shortening of unaccented long vowels; cf. Cowgill 1975:49-50.

type, resulting in the following preforms (with assimilation of nasal *m to *n before now adjacent *s):

sg. 1	*ro-sti-me?	*kon-sti-me?
2	*ro-sti-te?	*kon-sti-te?
3m.	*ro-st-en	*kon-st-en
f.	*ro-sti-sen	*kon-sti-sen
n.	*ro-st-e	*kon-st-e
pl. 1	*ro-sti-nus	*kon-sti-nus
2	*ro-sti-wus	*kon-sti-wus
3	*ro-sti-sus	*kon-sti-sus

It remains to be seen whether such a small assumption of analogical remodeling will prove sufficient to derive the attested infixed pronouns.

Next, suppose that intervocalic *st > *ss. This change, which occurred in both Irish and British and may therefore be dated to the pre-PIC stage, would have affected only the first column of preforms, producing sg. 1 *ro-ssi-me, 2 *ro-ssi-te, 3 masc. *ross-en, fem. *rossi-sen, etc.; similarly for all other preverbs ending in a vowel such as *tu and *di.

Consonant-final preverbs, however, would have been subjected to loss of *s between a sonorant and *t, as in *tart* 'thirst' < *tarsto-, *arco* 'I ask for' < *parsk-, and those PIE and PC sigmatic aorists which gave rise to the distinctive *t*-preterite of OIr. and British; cf. section 2 above. These two developments would have produced the following:

sg. 1	*rossime?	*kontime?
2	*rossite?	*kontite?
3m.	*rossen	*konten
f.	*rossisen	*kontisen
n.	*rosse	*konte
pl. 1	*rossinus	*kontinus
2	*rossiwus	*kontiwus
3	*rossisus	*kontisus

I then posit a degemination of intervocalic *ss in the conjugated forms of *ro to *s. Syncope between like consonants then affected the 3sg.f. and 3pl., producing *rossisen > *rossisen > *rossen and *rossisus > *rossisus > *rossus, respectively. This is the early syncope first proposed by Meid (1972:350-1) to account for the unlenited final /-d/ in the pres. conj. 3sg. of dental-final verbal roots,¹⁶ e.g., *·neget* 'prays' < *nig^wedd < *nig^wedit < *nig^wediti, and

¹⁶Though probably not in *·tét* 'goes', the exact origin of which remains unclear

restricted by Cowgill (1980:58) to position after an unstressed syllable, hence $*-V_1TV_2T(-) > *-V_1TT(-)$ where $*V_1$ and $*V_2$ are both unstressed—clearly the case above. The remaining person-number forms of $*ro$, and the 3sg.f. and 3pl. of $*kom-$, then underwent the normal weakening and loss of intervocalic $*s$, likewise shared by Irish and British, e.g., in OIr. pl. *tige*, MW *tei* < $*tege'a$ < PC $*tegesa$, OIr. *sieir*, MW *chwior(-ydd)* < $*swe'oreh$ < PC $*swesores$ 'sisters'. So far as can be determined, this was the state of affairs in the Primitive Irish period:

sg. 1	$*ro'ime?$	$*kontime?$
2	$*ro'ite?$	$*kontite?$
3m.	$*ro'en$	$*konten$
f.	$*rossen$	$*konti'en$
n.	$*ro'e$	$*konte$
pl. 1	$*ro'inus$	$*kontinus$
2	$*ro'iwus$	$*kontiwus$
3	$*rossus$	$*konti'us$

The subsequent development of these preforms from Primitive to Old Irish is not entirely certain. The compounds of $*kom$ may have given *condom'*, *condot'*, *cond n-*, *conda n-*, *cond'*, *condon*, *condob*, *conda h*¹⁷ by final apocope, or rather syncope of the vowel immediately preceding the stressed syllable—a natural pretonic extension of the regular and productive syncope rule of Old Irish deleting vowels in alternating syllables after the stress (see Thurneysen 1946:67 for some typical examples)—but it is hard to see why pretonic $*i$ would have given only back *a*, *o*, or *u* (see the table in section 1). This same rule will also explain 3sg. f., 3pl. *ros (n-)* < $*rossen$, $*rossus$, but not the other person-number compounds of vowel-final preverbs such as $*ro$, in which $*i$ must have somehow been syncopated. I leave the solution of these and other remaining phonological difficulties for future research. The final sound change affecting initial preverb + infixed pronoun was the voicing of $*t > [d]$ in pretonic position, which affected all obstruents other than $*s$ (Thurneysen 1946:111; Cowgill 1975:54fn.11).

(Cowgill 1980:58fn.10); for a recent proposal see Schrijver (1993:42-6), who takes $*-ét < *(s)tinx-ti < *(s)ting^h-ti$ to the PIE root $*steyg^h-$ 'go up' (Gr. *steikhō* 'I walk, step', Goth. *steigan* 'ascend, climb up', OCS *stignō* 'I'll reach').

¹⁷The distinction in mutation between the 3sg. f. and 3pl. was effaced already by the Old Irish period, in which we find class A *-s (n-)* and class B *-a h-* in both contexts; see Thurneysen 1946:261ff. for examples. I cannot now account for the generalization of *h-* in class B vs. optional nasalization in class A.

Clearly some of the above developments have had to be assumed, and their relative chronology appears almost totally ad hoc: the changes have been presented in the order necessary to derive the required forms. A systematic investigation of the prehistory of that other major class of pretonic particles, the notorious Old Irish copula, should alleviate this drawback by providing an independent comparandum for, and hopefully confirmation of, the relative ordering of these sound changes.

These reservations aside, the foregoing has served to demonstrate the plausibility of explaining the contrast between classes A and B of infixed pronouns by positing a mandatory clause-second *esti. At this point, one should be reminded that the Cowgill particle *(e)s can also be straightforwardly derived from *esti by early PIC apocope of final *-i and simplification of the new final cluster *-st > *-s. I am not aware of any direct parallels for the latter change, but nor are there any counterexamples; other instances of final *-sti must have been extremely rare (or nonexistent) in any case.¹⁸

4 Evidence from British

Due to the limited extent and fragmentary nature of our surviving Old British documents and the substantially greater loss of overt morphological marking (e.g., the disappearance of case-marking in the noun or almost complete elimination of the absolute/conjunct distinction in the verb), it is not surprising that Old Irish provides by far the best evidence for the syntactic structure of an earlier stage of Celtic. Nevertheless, traces of an earlier Proto-British twofold verbal paradigm survive, e.g., in MW *trenghit golut, ny threingk molut* (RBH 1082) 'wealth perishes, fame perishes not', *egid* (Computus), MW *eyt* 'goes' or in OB glosses such as *fleriot* 'smell of' < *-āti+s, *trouit* 'returns, withdraws' < *-īti+s (Fleuriot 1964:300; Pedersen 1913:338, 343, Lewis and Pedersen 1937:283)¹⁹, which match OW and MW forms in *-awt*, *-awd*, *-aud* and *-it*, *-id*, respectively (Simon Evans 1964:118-9). These relic forms agree in preserving a dental-final ending that must go back to abs. *-ti+s rather than conj. *-ti > *-∅, from which the usual Middle and Modern British 3sg. endings are descended.

¹⁸A parallel for *-st > *-s occurs in Gaul. pret. 3sg. *prinas* < *k^wri-n-h₂-s-t (La Graufesenque) or *readdas* (Argenton-sur-Creuse). Thanks to Joe Eska for bringing these forms to my attention.

¹⁹See Fleuriot 1985:171, 323 respectively for details. The OB glosses *eit*, *egit* 'goes', if correctly interpreted, match OW *egid*, MW *eyt* (but cf. Fleuriot 1985:156, 155).

As Cowgill has shown, the presence vs. absence of a particle *(e)s in clause-second position will also account for Old British relic forms such as those above, as well as the *s*-preterite (Cowgill 1975:63-4). Clearly, however, the often fragmentary and sparse data of older British constitutes less probative evidence than that of Old Irish, and adds little further support to the hypothesis of an original particle *esti.²⁰

If this is correct, it follows that at least Irish and British have shared in the syntactic innovation by which *esti came to stand in second position in most clauses. This development, which is unlikely to have occurred independently, would therefore provide additional support for the Insular Celtic hypothesis, according to which Irish and British comprise a separate subgroup of Celtic (cf. most recently McCone 1992, 1996:98-104). Though we cannot perhaps entirely rule out the possibility that “*esti-second” arose earlier in the history of Celtic, say in the “Nuclear Celtic” ancestor of Gaulish, British, and Irish,²¹ the lack of any trace of *esti or its syntactic effects in the attested clausal configuration of Gaul. (see Eska, forthcoming) speaks in favor of an Insular Celtic innovation.

²⁰One obstacle to deriving the OBr. absolute forms from postposed *esti is that the treatment of intervocalic *st in British is problematic: among words both *s(s)* and *st* seem to occur, with no discernable conditioning factor distinguishing the two outcomes (Pedersen 1909:78-80, 136; Lewis and Pedersen 1937:20-1, 47, Jackson 1953:529-34, 1967:756fn.1). Cf. for example W *gwaz* ‘servant’, MC *gwaz* ‘boy’, B *gwaz* ‘man, servant’ (OIr. *foss* ‘servant’; cf. Medieval Lat. *vassus*, the source of Engl. ‘vassal’) < *wosto- < *upo-sth₂-o ‘standing under’ vs. W *clust* (f./m.) ‘ear’ (OIr. v.n. *clúas* ‘hearing’) < *klowstā or sim. After discussing the relevant examples and eliminating what he believes to be doubtful or false etymologies, Schrijver (1995:414-5) observes that “all alleged instances of PBr. *-st- ... belong or may belong to a root ending in *s”; he explains this pattern by postulating that these PBr. *-st- reflect *-s-st-, i.e., root-final *s followed by a suffix in *-st- (on which see pp. 406-7), though it is also possible that *s could have been analogically restored in these words after the change of *VstV > *VssV. He therefore concludes that “there can be no doubt that the regular reflex of PCl. intervocalic *-st- in British is *s*”, or rather *ss. Even if the evidence may perhaps be less clear-cut than presented by Schrijver, observe that we have two solid examples of *st > PBr. *ss between unstressed vowels: MW *ys* ‘is’ (OIr. *is*) < *esti+s, originally enclitic, and *s*-pret. 3sg. W, C, B -s (OIr. abs. -(a)is) < *-st+es. There is thus good reason to believe that *st in pretonic (attached to the first preverb) or posttonic position (after a simplex verb) would have developed to *ss, whence degemination to *s.

²¹As pointed out to me by Don Ringe. The use of the term “Nuclear Celtic” for the ancestor of all (continental and insular) varieties of Celtic following the separation of Celtiberian is also due to him. Below I shall continue to use “Insular Celtic” to denote developments common to British and Irish.

5 Syntactic Consequences

If the postverbal “Cowgill particle” and the distribution of class A and B infixed pronouns do indeed descend from near-obligatory clause-second placement of the PIE copula $*(h_1)esti$, this has major consequences for our understanding of the prehistory, not only of the verbal system, but of the constituent configuration of Celtic as well. As Cowgill himself noted at the end of his 1975 article (1975:68fn.22), Paul Thieme had remarked that “the obligatory use [of $*esti$] in most clauses may have grown out of a usage similar to that of Sanskrit *asti* ‘it is the case that’”, e.g., in Patañjali, *Mahābhāṣya* I 230.19ff.: *kaścit ... pṛcchati: asty atra kā mēid gām payaśi* “Somebody asks: ‘Is it [that] you see here a certain cow?’”, namely “do you actually see, do you see?”. For further examples and discussion see Thieme 1965:90-1.

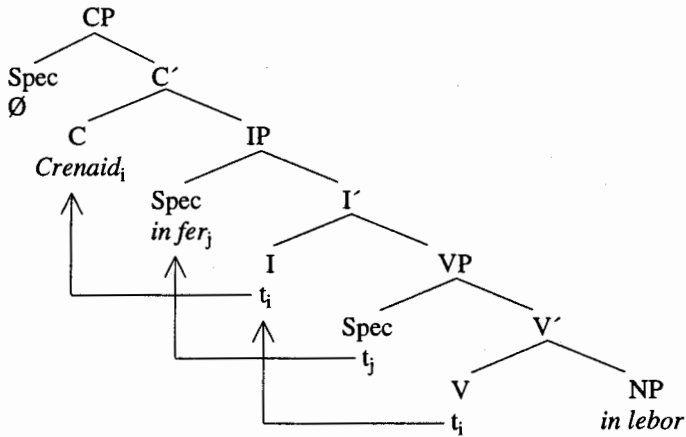
Put another way, it would appear that at some point in the prehistory of Irish, main clauses of declarative sentences were transformed by a cleft construction, in which the first preverbal particle (of a compound verb) or a simple verb was fronted to initial position. As traces of this same $*esti$ are also found in British (see section 4), we may infer that this syntactic change was completed before the breakup of the last common ancestor of British and Irish.

This proposal has consequences for the developments which took place during the evolution of VSO configuration in Insular Celtic. Carnie, Pyatt, and Harley (1994) present evidence that the VSO order of Old Irish (and Old Welsh) results from a “weak verb-second (V2)” constraint which requires the C(omplementizer) slot to be filled with overt phonological material at surface structure (s-structure). For compound verbs, this constraint is fulfilled by raising the first preverb to C, as already suggested by McCloskey (1978); in the absence of a preverb, the simplex verb itself moves to C, where it assumes a special clause-initial, i.e., absolute, inflection. Object clitics—in practice principally pronouns—adjoin to C, giving the familiar infixed pronouns after a preverb and suffixed pronouns after a clause-initial simplex verb, a contrast fully preserved in Early Old Irish. Because the specifier of CP must remain empty (unlike, say, in the Germanic languages, where some XP is fronted to produce verb-second order—hence the “weak V2” constraint), this movement to C, in addition to the V-to-I raising known from Modern Irish, accounts fully for the VSO order of Old Irish. Below I give examples for sentences (1) and (2).

Recently, Eska (1994) has proposed a model for the historical evolution of Celtic constituent configuration, from the SOV order reconstructed for PIE and Proto-Celtic and attested in Celtiberian, through the underlying SVO

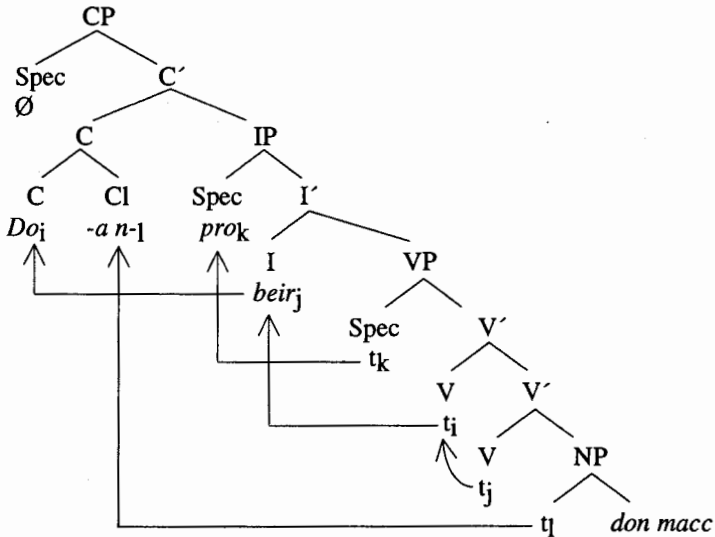
structure of Gaulish to the VSO of Insular Celtic. According to Eska, verb-initial surface order in Celtiberian could result from movement “to initial position in the clause for a variety of pragmatic purposes” (p.18), extraposition (pp.19-20), or a following clause with verb-gapping in compound sentences (p.20); these “presumably led to a reanalysis such that the dominant configuration at s-structure in Gaulish eventually became verb-medial” (p.21). In Gaulish, the sources of VSO surface order, in addition to pragmatic movement to initial position, included imperative verbs fronted to C and verbs raised to C to host a clitic, e.g., in *sioxt=i* ‘added them’, *DUGIJONTI=JO* ‘(they) who serve’, and *to=me=declai*²² ‘(and?) set me up’ (24-6). In this last example, with *-me* ‘me’ phonologically enclitic to the sentential connective *to*, *eclai* must still raise to C to serve as a syntactic host—i.e., Vendryes’s Restriction is in effect in Gaulish, if only optionally (see below).

- (1) *Crenaid* *in fer* *in lebor.*
 Buys (pres. ind. 3sg. abs.) the man (nom.) the book (acc.)’
 ‘The man buys the book.’



²²On the segmentation of this form see Eska and Weiss 1996: *declai* < *de+ek+lā-i, with 3sg. perf. -i < *-e in hiatus. For the root cf. OIr. *ro-lá*, perf. to *fo:ceird*, *cuirethar* ‘puts, throws’.

- (2) *Da-mbeir* *don macc.*
 Gives it (pres. ind. 3sg. deut.) to-the boy (dat.)
 lit. 'to-it (masc.)-brings'
 'He gives it to the boy.'

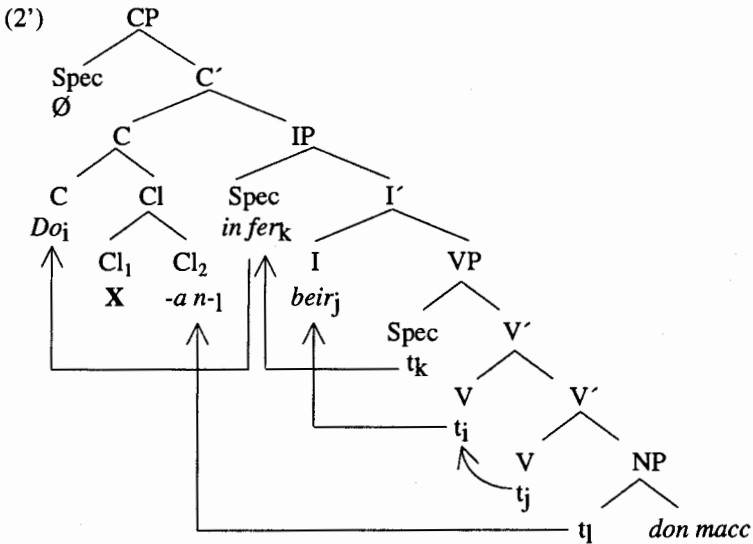
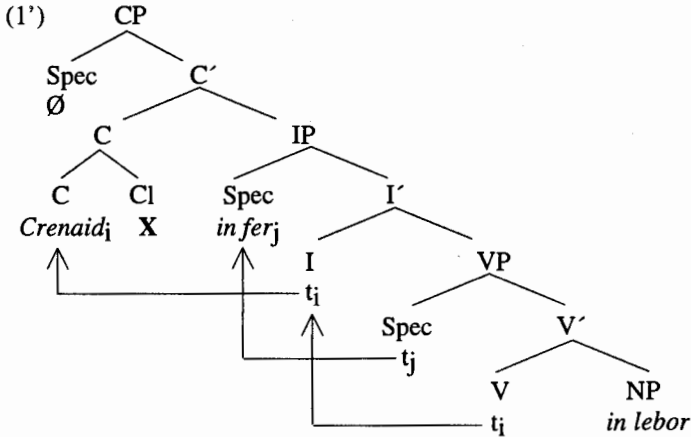


Such cases, Eska suggests, apparently led to a generalized rule of V-to-C movement in Insular Celtic, with the innovation being a requirement for C to be filled at s-structure.

In light of the evidence from the distribution of Old Irish infixes for a requirement of clause-second *esti at some point in the prehistory of the language—a hypothesis supported by the success of the Cowgill particle *es < *esti in explaining the contrast of absolute and conjunct verbal inflections in Insular Celtic—these views, both synchronic and diachronic, may be slightly modified. Specifically, this evidence suggests that, at some point in time, the *esti found at C in cleft constructions became obligatory, along with the raising of the first preverb or simple verb to provide overt phonological matter in C. Vendryes's Restriction, or rather Eska's (1994:32) description of it as "requir[ing] the verb to host clitic pronominal objects syntactically,"²³ then had the effect of raising the verb to C in compounds

²³As Eska observes, the "Bergin's Rule" and tmesis constructions of Early Old Irish (which survive into the 8th and 9th centuries; see Greene 1976) must then reflect "manifestations of residual grammars no longer in active use in vernacular speech, but

such as *da-mbeir* in (2). The revised configurations for sentences (1) and (2) are therefore (1') and (2') below, where X stands for the "Cowgill particle", originally *esti.



preserved for literary use, i.e. they are genuine archaisms" dating from the time before Vendryes's Restriction became obligatory (32-3).

Since V-to-C movement is believed to have been triggered by a requirement for C to be lexicalized, i.e., to contain overt phonological material, one might assume that X itself does not satisfy this requirement. Yet it is clear that X is realized phonetically as [-h-] in compound verbs such as *do-ic* [do híg] 'reaches', and the combination of preverb and X results in the form to which the enclitic pronoun is attached; moreover, the distinction between verb and X and bare verb underlies the absolute/conjunct contrast of the OIr. verbal system. Further study should shed more light on the exact status of X, both syntactic and phonological.

The changing status of X may help to account for some of the syntactic developments postulated for the prehistory of OIr. Whereas Carnie et al. (1994) give no syntactic (or morphological) motivation for their "weak-V2" constraint, Heidi Harley has recently suggested (p.c.) that V-to-C movement may have been motivated in order to host X (i.e., *es < *esti) after its phonological reduction to clitic status and the consequent loss of cleft syntax. Later, as the Cowgill particle became phonetically fused into preverbs and absolute verb forms and morphologized as the absolute-conjunct or proto-tonic-deuterotonic contrast, verb movement became feature-driven, resulting in a genuine "weak-V2" constraint in OIr. This would have the benefit of deriving V-to-C movement universally in main declarative clauses, versus Eska's (1994) generalization from Vendryes's Restriction in sentences containing pronominal objects.

Obviously much of the above is far from fully established: in particular, the exact phonological details of pretonic sequences of preverb + *esti + pronoun (section 3) remain to be worked out, and the status of the always tricky "Bergin's Law" constructions may need to be interpreted somewhat differently. Among the many questions awaiting discussion, I will mention only the apparent absence of *esti in the "responsive", i.e., the first sentence in response to a question, in which a simple verb occurs in conjunct instead of absolute inflection. Here Schrijver's account (1994:184fn.23) is undeniably attractive: whereas discourse-internal clauses would regularly have employed *eti, the first clause would naturally have dispensed with any such connecting particle. Nevertheless, the brief discussion above should hopefully demonstrate how the hypothesis of an obligatory *esti in clause-second position fits with much of the syntactic research to date on the prehistory of VSO configuration in Old Irish and Insular Celtic, including the "weak-V2" hypothesis of Carnie et al. (1994) and Eska's formulation of Vendryes's Restriction. As so often in the case of Irish, the massive accumulation of sound change has all but effaced the original shape of a morphological element, leaving behind two sets of verbal inflections and an otherwise inexplicable distribution of infixes as our only remaining clues to its prior existence.

References

- Boling, Bruce. 1972. Some problems of the phonology and morphology of the Old Irish verb. *Ériu* 23, 73-101.
- Carnie, Andrew, Elizabeth Pyatt, and Heidi Harley. 1994. The resurrection: raising to COMP? Some evidence from Old Irish. *Studies in the Linguistic Sciences* 24:1/2, 85-100. (To appear as "VSO as raising to COMP: Some evidence from Old Irish" in *The Syntax of Verb-Initial Languages*, ed. by Andrew Carnie and Eithne Guilfoyle. Oxford and New York: Oxford University Press.)
- Cowgill, Warren. 1975. The origins of the Insular Celtic conjunct and absolute verbal endings. In *Flexion und Wortbildung: Akten der V. Fachtagung der Indogermanischen Gesellschaft, Regensburg, 9.-14. September 1975*, ed. Helmut Rix, 40-70. Wiesbaden: Reichert.
- Cowgill, Warren. 1980. The etymology of Irish *guidid* and the outcome of *g^wh in Celtic. In *Lautgeschichte und Etymologie: Akten der VI. Fachtagung der indogermanischen Gesellschaft*, ed. Manfred Mayrhofer, 49-78. Wiesbaden: Reichert.
- Cowgill, Warren. 1985. On the origin of the absolute and conjunct verbal inflexion of Old Irish. In *Grammatische Kategorien: Funktion und Geschichte*, ed. Bernfried Schlerath and Veronica Rittner, 109-18. Wiesbaden: Reichert.
- Eska, Joseph F. 1990a. Syntactic notes on the great inscription of Peñalba de Villastar. *Bulletin of the Board of Celtic Studies* 37, 104-7.
- Eska, Joseph F. 1990b. The so-called weak or dental preterite in Continental Celtic, Watkins' law, and related matters. *Historische Sprachforschung* 103, 81-91.
- Eska, Joseph F. 1994. Rethinking the evolution of Celtic constituent configuration. *Münchener Studien zur Sprachwissenschaft* 55, 7-39.
- Eska, Joseph F. 1996. On syntax and phonology within the Early Irish verbal complex. *Diachronica* 13:2, 225-57.
- Eska, Joseph F. 1998. *Tau Gallicum*. *Studia Celtica* 32, 115-27.
- Eska, Joseph F. Forthcoming. On basic configuration and movement within the Gaulish clause. In *Actes du Colloque International "Gaulois et celtique continentale"*, ed. Georges-Jean Pinault and Pierre-Yves Lambert.
- Eska, Joseph F. and Michael Weiss. 1996. Segmenting Gaul. *tomedclai*. *Studia Celtica* 30, 289-92.
- Fleuriot, Léon. 1964. *Le vieux breton: éléments d'une grammaire*. Paris: Klincksieck.
- Fleuriot, Léon. 1985. *A Dictionary of Old Breton/Dictionnaire du vieux breton, Historical and Comparative*. Toronto: Prepcorp.
- Greene, David. 1977. Archaic Irish. In *Indogermanisch und Keltisch: Kolloquium der Indogermanischen Gesellschaft am 16. und 17. Februar 1976 in Bonn*. Vorträge unter Mitwirkung von Rolf Ködderitzsch, hrsg. von Karl Horst Schmidt, 11-33. Wiesbaden: Reichert.
- Hamp, Eric P. 1989. Celtiberian *ComPalCes*. *Zeitschrift für Celtische Philologie* 43, 190-1.

- Jackson, Kenneth H. 1953. *Language and History in Early Britain: A Chronological Survey of the Brittonic Languages, First to Twelfth Century A.D.* Edinburgh: Edinburgh U. Press.
- Jackson, Kenneth H. 1967. *A Historical Phonology of Breton*. Dublin: Dublin Institute for Advanced Studies.
- Jasanoff, Jay. 1976. Gr. ἀμῶ, lat. *ambō*-et le mot indo-européen pour 'l'un et l'autre'. *Bulletin de la Société de Linguistique* 71, 123-31.
- Köderitzsch, Rolf. 1985. Die große Felsinschrift von Peñalba de Villastar. In *Sprachwissenschaftliche Forschungen: Festschrift für Johann Knobloch zum 65. Geburtstag am 5. Januar 1984 dargebracht von Freunden und Kollegen*, hrsg. von Hermann M. Ölberg und Gernot Schmidt unter Mitarbeit von Heinz Bothien, 211-22. (Innsbrucker Beiträge zur Sprachwissenschaft, Band 23.) Innsbruck: Institut für Sprachwissenschaft.
- Lee, Ki-Moon. 1977. *Geschichte der koreanischen Sprache*. Deutsche Übersetzung, herausgegeben von Bruno Lewin. Wiesbaden: Reichert.
- Lewis, Henry and Holger Pedersen. 1937. *A Concise Comparative Celtic Grammar*. Göttingen: Vandenhoeck und Ruprecht.
- McCloskey, James. 1978. Stress and syntax in Old Irish compound verbs. *Texas Linguistic Forum* 10, 58-71.
- McCone, Kim. 1986. From Indo-European to Old Irish: conservation and innovation in the verbal system. In *Proceedings of the Seventh International Congress of Celtic Studies*, ed. D. Ellis Evans, J.G. Griffith, and E.M. Jope, 222-66. Oxford: Oxford U. Press.
- McCone, Kim. 1992. Relative Chronologie: Keltisch. In *Rekonstruktion und Relative Chronologie. Akten der VIII. Fachtagung der Indogermanischen Gesellschaft, Leiden, 31. August-4. September 1987*, ed. Robert Beekes, Alexander Lubotsky, and Jos Weitenberg, 11-39. Innsbruck.
- McCone, Kim. 1996. *Towards a Relative Chronology of Ancient and Medieval Celtic Sound Change*. (Maynooth Studies in Celtic Linguistics 1.) Maynooth: Department of Old Irish, St. Patrick's College.
- Meid, Wolfgang. 1972. On two points of Celtic morphology. *Études Celtiques* 13, 346-52.
- Pedersen, Holger. 1909. *Vergleichende Grammatik der keltischen Sprachen. Band I*. Göttingen: Vandenhoeck und Ruprecht.
- Pedersen, Holger. 1913. *Vergleichende Grammatik der keltischen Sprachen. Band II*. Göttingen: Vandenhoeck und Ruprecht.
- Schenker, Alexander. 1993. Proto-Slavic. In *The Slavic Languages*, ed. Bernard Comrie and Greville G. Corbett, 60-121. London and New York: Routledge.
- Schmidt, Karl Horst. 1983. Grundlagen einer festlandkeltischen Grammatik. In *Le lingue indoeuropee di frammentaria attestazione / Die indogermanischen Restsprachen: Atti del Convegno della Società Italiana di Glottologia e della Indogermanische Gesellschaft, Udine, 22-24 Settembre 1981*. Testi raccolti a cura di Edoardo Vineis, 65-90. Pisa: Giardini.
- Schmidt, Karl Horst. 1986. Zur Rekonstruktion des Keltischen. Festlandkeltisches und inselkeltisches Verbum. *Zeitschrift für Celtische Philologie* 41, 159-79.

- Schrijver, Peter. 1991. The development of Primitive Irish *aV before voiced stop. *Ériu* 42, 13-25.
- Schrijver, Peter. 1994. The Celtic adverbs for 'against' and 'with' and the early apocope of *-i. *Ériu* 45, 151-89.
- Schrijver, Peter. 1995. *Studies in British Celtic Historical Phonology*. (Leiden Studies in Indo-European, Vol. 5.) Amsterdam: Rodopi.
- Schrijver, Peter. 1997. *Studies in the History of Celtic Pronouns and Particles*. Maynooth: Department of Old Irish, National University of Ireland.
- Simon Evans, D. 1964. *A Grammar of Middle Welsh*. Dublin: Dublin Institute for Advanced Studies.
- Strachan, John. 1949. *Old-Irish Paradigms and Selections from the Old-Irish Glosses*. 4th ed. Dublin: Royal Irish Academy.
- Thieme, Paul. 1965. Ísopanisad (=Vājasaneyi-Saṃhitā 40) 1-14. *Journal of the American Oriental Society* 85:1, 89-99.
- Thurneysen, Rudolf. 1904. Zum keltischen verbum. *Zeitschrift für Vergleichende Sprachforschung* 37, 52-120.
- Thurneysen, Rudolf. 1914. Review of Pedersen 1913. *Indogermanische Forschungen: Anzeiger* 33, 23-37.
- Thurneysen, Rudolf. 1946. *A Grammar of Old Irish*. Dublin: Dublin Institute for Advanced Studies.
- Watkins, Calvert. 1962. *Indo-European Origins of the Celtic Verb. I: The Sigmatic Aorist*. Dublin: Dublin Institute for Advanced Studies.
- Watkins, Calvert. 1963. Preliminaries to a historical and comparative analysis of the syntax of the Old Irish verb. *Celtica* 6, 1-49.
- Watkins, Calvert. 1965. Notes on Celtic and Indo-European morphology and syntax. *Lochlann* 3, 286-97.
- Watkins, Calvert. 1969. The Celtic masculine and neuter enclitic pronouns. *Études Celtiques* 12, 92-5.

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