

USQUE AD RADICES

*Indo-European studies in honour of
Birgit Anette Olsen*

Edited by

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Usque ad Radices: Indo-European Studies in Honour of Birgit Anette Olsen

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The Old Irish *f*-future

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Despite phonological difficulties, there is good circumstantial reason to believe that the Old Irish *f*-future goes back, as often thought, to a periphrastic construction with PIE **b^huH-* ‘be(come)’. Some way must be found, however, to explain the appearance of *-f-* for expected *-β-* <*-b-*>. The approach taken here begins by reconstructing the future of the verb “to be” in Insular Celtic as **bisāse/o-*. This, it is argued, was the phonological source, via the intermediate stage **bihā-*, of both OIr. 3 sg. fut. *bieid*, *·bia* and (with analogical remodeling) MW *bydhawt*, *biawt*, etc. In combination with a preceding verbal element ending in a vowel, **-bihā-* would have given **-βia-* by normal sound change, with loss of **-h-* preceding syncope. This would have led to incorrect future forms of the type **·scairbe* ‘will separate’ (for correct *·scairfea*). But if **-i-* was syncopated precociously, as is often the case in long periphrastic forms, **-βihā-* would have developed via **-β^hā-* to the correct suffix form **-fā-*.

The *f*-future needs no introduction. It is the only productive future formation of Old Irish, common to all weak verbs and even a few strong ones. Its distribution roughly parallels that of the other OIr. “weak” tense formation, the *s*-preterite. But while the *s*-preterite has a clear history going back to the PIE *s*-aorist, with cognates around the IE family and in Brittonic, the *f*-future has never been convincingly explained. It recalls in this respect such other famously opaque formations around the IE world as the Germanic dental preterite, the Greek *k*-perfect, and the Latin *v*-perfect. Like these, it tends to attract the attention of scholars who find it hard to believe that a formation so conspicuous and so obviously “late” should not have a discoverable explanation. Such a scholar was the late J.E. Rasmussen, who wrote at least two articles on the *f*-future in his lifetime. Another is the present author, for whom this little *opusculum* represents a third attempt to deal with the

problem. I dedicate it to my friend Birgit, remembering that the occasion of our first meeting, in Copenhagen in 1993, was the occasion of an earlier try.¹

The facts are easily stated. The internally reconstructible sign of the *f*-future is a sequence **-fā-*, which in A II weak verbs (e.g., *léicid* ‘leaves’) is added to the present stem in **-ī-*:

ABSOLUTE		CONJUNCT	
sg. 1	<i>léicfea</i>	pl.	<i>léicfimmi</i>
2	<i>léicfe</i>		<i>léicfide</i>
3	<i>léicfid</i>		<i>léicfit</i>
sg. 1	<i>·léiciub</i>	pl.	<i>·léicfem</i>
	<i>·léicfe</i>		<i>*·léicfid</i>
	<i>·léicfea</i>		<i>·léicfet</i>

After palatalizing the root-final consonant, the stem vowel **-ī-* is mostly syncope.² Significantly, as we will see, palatalizing **-ī-* seems also to have been the vowel that was syncopated in the weak verbs of class A I, where non-palatalizing **-ā-* would rather have been expected (hence *·soírfea* (with *-r'f'-*) ‘will free’ beside pres. *·soíra*).³ The inflection of the *f*-future is the same as that of the reduplicated (*ā-*) future, save for the 1 sg. conjunct in *-(i)ub*, which was taken from the *s*-future (cf. *·gigius* ‘I will pray’ < **-gessū*).

Inevitably, scholars have thought of comparing these forms with the Latin *b*-future (*cantābō*, etc.) and *b*-imperfect (*cantābam*). The Latin *b*-tenses are compounds with forms of the PIE root **b^huH-* ‘become’ – the root aorist subjunctive **b^huH-e/o-* (\sim **-b^hu-e/o-* < **-b^hu~~h~~-e/o-*) in the case of the future, and the “*ā*-preterite” **b^huH-eh₂-* (\sim **-b^hu-eh₂-* < **-b^hu~~h~~-eh₂-*) in the case of the imperfect.⁴ The appeal of the comparison with Latin, which goes back to Zeuss and was influentially championed at the beginning of the twentieth century by Pedersen (1913: 364), is obvious. Yet, as has been recognized since Thurneysen (1909: 372), there is a serious phonological problem. Intervocalic **-b-* should have been lenited to **-β-* in Insular Celtic, while the distribution of *f*- and *b*-spellings in the future points unambiguously to *-f*.⁵

1 See Jasanoff 1994: 215–18, superseding Jasanoff 1988: 304. Rasmussen tackled the problem in 1974 and again in 1990–91.

2 Syncope did not occur, of course, where the stem vowel was not in the second syllable, e.g., *·samlafammar* (< **samal-*) ‘we shall liken’, *·tomnibther* (< **to-mo-ni-*) ‘it will be thought’.

3 Thurneysen 1946: 397.

4 With loss of the laryngeal by the “*neognos*-rule” (Mayrhofer 1986: 129).

5 The facts as set forth by Thurneysen are quite clear; the possibility that *-f-* could have spread by analogy from clusters where *-β-* was devoiced to *-f-* before an unvoiced consonant is hardly credible. So great is the allure of the Latin comparison, however, that Lewis-Pedersen 1937 still refers to the Irish formation as the

The only uncontroversial source of intervocalic *-f* in Old Irish is **-sw-*, a much less inviting point of departure than **-b(w)-*. For the past hundred years, attempts to explain the *f*-future have either opted to maintain the Latin connection by looking for ways to get around the phonological difficulty, or argued for **-sw-* by trying to come up with ways to make **-sw-* a plausible future marker.⁶

The canonical defense of the connection with the Latin *b*-tenses was offered by Sommerfelt (1921: 230 ff.), whose argument rests on the fact that many, if not most, of the actual reflexes of the root **b^huH-* in Celtic go back to forms with initial **bw-* (< **b^hu-*) rather than simple **b-*. The cluster **bw*, according to Sommerfelt, was treated differently depending on whether it was word-initial or preceded by a vowel. In word-initial position the **w* was lost, giving simple *b-* (cf., e.g., subj. *beith*, *·bé*, pret. 3 pl. *báatar*, *·báatar*, 3 sg. pres. (consuet.) *bíid*, *·bí*, etc.). But after a vowel, Sommerfelt says, **-bw-* developed via lenited **-βw-* to **-ww-*, which, in keeping with the general rule for geminates, fell together with word-initial **w-* to give *-f-*. Variants of this idea are accepted by, among others, Rasmussen (1974 and 1991) and Kortlandt (1979: 49). It is not, in principle, an impossible scenario; there is nothing *a priori* unlikely (*pace* Watkins 1966: 70 f.) about both **-ww-* and **w-* giving **(-)f-*.⁷ But it does not conform to the facts. If **-βw-* had really gone to **-ww-* and become *-f-*, we should have expected to find **f-* as the lenition product of *b-* in the numerous forms of the substantive verb and copula that begin with etymological **bw-*, e.g., the subjunctive **bwe-* and *ā*-preterite **bwā-*.⁸ In fact, however, there is no hint of *f-* in these forms, not even in the deeply entrenched prototonic *ro*-forms of the substantive verb, e.g., subj. 3 sg. *-roib*, pl. *-robat*, pret. 1 sg. *-raba*, pl. *-robammar*, etc., which consistently have [*-β-*]. Occasional post-Würzburg spellings like *amal fid* ‘as if it were’ (Ml. 34b 11,

“*b*-future.” The tradition of treating the *b*-forms as primary is continued by Quin (1978).

6 Watkins 1966: 68–74 gives a useful account of the history up to the time of his writing.

7 Watkins attributed the change of initial **w-* (e.g., in **wiros* ‘man’) to *f-* (*fer*) to the generalized effect of a preceding word-final **h* (**indah wirah* > *in fer*; cf. below). But this does not explain why **w-* also gave *f-* in words where there would never have been a preceding **h*, such as the typically sentence-initial preverbs *fō* and *for*. It is simpler to assume that “strong” **w* simply became *f* by sound change in Old Irish, just as “strong” **l* became voiceless *ll* in Welsh.

8 Other forms, of course (e.g., the verbal noun *buith*), began with simple **b-*.

37b 22) for much more common *amal bid* (Wb. 5d 26, etc.) are of no value.⁹ The β - in the lenited *bw*-forms cannot easily be analogical; if *f*- had been replaced by β - on the model of the forms beginning with $*b$ -, we should also have expected suppletive *fil* ‘there is’ and rel. *file* ‘who/which is’ (< $*u\acute{e}l$ -) to be remade to $*bil$, $*bile$ [β -]. It seems far likelier, therefore, that the pre-lenition cluster $*bw$ was uniformly simplified to $*b$ in Irish – and indeed, in the absence of Brittonic evidence to the contrary, in Common Insular Celtic.¹⁰

Unfortunately, none of the theories that start from $*-sw-$ are any more plausible than those that start from $*-bw-$. The idea that an *s*-future 1 sg. in $*-s\acute{u}$ could have been made to $*-sw\acute{a}$, whence 2 sg. $*-sw\acute{a}si$, 3 sg. $*-sw\acute{a}ti$, etc. (Pisani 1933: 545 ff.) is, as Thurneysen rather understatedly remarks (1946: 398), “too artificial to be convincing.” Watkins (1966: 78 ff.) sees the *f*-future as a denominative present type in $*-sw-\acute{a}$ - built to desiderative adjectives in $*-su-$ (cf. Ved. *jigīṣú-* ‘desirous of winning’, *didṛkṣú-* ‘desirous of seeing’, etc.).¹¹ Adjectives of this type are productive in Indo-Iranian, where they are based on reduplicated desiderative presents in $*-sa-$ (cf. desid. pres. *jigīṣate*, *didṛkṣate*), the Indo-Iranian counterpart of the Old Irish strong (i.e., *s-*, *ē-*, and *ā-*) futures (cf. 1 sg. *gigsiu*, *gigiús* < $*g^{w}ig^{w}ess\acute{u}$ < $*g^{w}ig^{w}ed-\acute{h}_{1}s-\acute{o}$; 3 sg. *célaid*, *céla* ‘will hide’ < $*ke\lambda\acute{a}he\theta(i)$ < $*kikl\acute{a}se-$ < $*-k\acute{l}se-$ < $*-k\acute{l}-h_{1}se-$; 3 sg. *cechnaid*, *cechna* ‘will sing’ < $*kikanase-$ < $*-kan-h_{1}se-$).¹² But there is no independent

9 The common writing of *fa*, *fá* ‘or’ for *ba*, *bá* (β -), with the semantics of French *soit*, may have a morphological explanation. In a case like *imb i céin fa* [β -] *in accus beo-sa*. . . ‘whether I be far or near. . .’ (Wb 23b 41), the scribe could have misattributed the voicing of the β - to the persevering nasalizing effect of *in* ‘whether’. This would have led him to spell the β - morphophonemically with an *f*-.

10 Which is reason enough to be skeptical of other *bw*-based approaches, such as Bammesberger’s proposed periphrastic construction with a present participle (1979): $*-Vnts + bw- > *-Vh + bw- > *-Vhw- > *-f-$. Apart from a few lexicalized survivals, *nt*-participles are not found in Celtic.

11 The connection with adjectives in $*-su-$ is credited to his student Ives Goddard.

12 All Old Irish strong futures, with the exception of the uncommon unreduplicated type *reiss*, *ré* ‘will run’, go back to the same PIE reduplicated thematic (< $h_{2}e$ -conjugation) formation in $*(h_{1})s-e/o-$. When the root ended in an obstruent and the *-s-* was preserved, the 3 sg. was “athematized,” exactly as in the *s*-subjunctive (3 sg. fut. absol. *gigis* < $*g^{w}ig^{w}ed-s-ti(h)$, not $*gigsid$ < $*g^{w}ig^{w}ed-se-ti(h)$; cf. subj. absol. *geiss* < $*g^{w}ed-s-ti(h)$, not $*gessid$ < $*g^{w}ed-se-ti(h)$). The reconstruction $*kikanase-$ (< $*-kan-h_{1}se-$) for *cechnaid*, *cechna* is only one possibility; the preform could also have been $*kikanāse-$, analogically altered from $*kiknāse-$ < $*kikījse-$ < $*ki-kn-h_{1}se-$. The outcomes would have been the same.

evidence for desiderative adjectives in **-su-* anywhere outside Indo-Iranian, and it is hard to see why, if forms of this type were ever productive enough in pre-Irish to spread from strong to weak verbs, the underlying verbal formation in **-se/o-* should not have spread at the same time, eliminating the need for the putative denominative futures in **-swā-*. For these and other reasons, Watkins' approach has not been accepted by many scholars.¹³ Another theory, due to McCone (1991: 180 ff.), sees the *f*-future as having originated in the strong verb *soïd*, *·soí* 'turns' < **suh₁-éló-*. The regular desiderative/future of the root **seuh₁-* would have been **sisuh₁-h₁s-e-* > **sisūse-* (cf. *ririd* 'will sell' < **rirīseti* (: pres. *renaid*)). This, according to McCone, was remodeled to **siswāse-* under the influence of the more common future type in **-āse-*, and **siswāse-* gave pre-Ir. **sifā-*, which, with substitution of *soí-* (or **sow'-*) from the present, became the prototypical *f*-future **soífā-* (3 sg. *soíf(a)id*, *·soíf(e)a*). From **soífā-*, McCone says, the reanalyzed future marker **-fā-* spread to other hiatus verbs, and eventually to the basic weak classes, A I (*·soírf(a)id*, *·soírf(e)a*) and A II (*léicfid*, *·léicfea*). No individual step in this progression is impossible. The overall construction, however, is so elaborate, and the position of the verb *soïd* so marginal in the language, that the picture is no more convincing than Watkins'. Still less plausible is Matasović's proposal (2008: 363–65) that the *f*-future grew out of a periphrastic construction involving the 2 sg. mid. imperative ("**iswe*") of the root present **h₁ei-mi* 'I go', a verb which is otherwise *activum tantum*.

My own earlier attempts to explain the *f*-future (see below) were based on two assumptions that I still regard as fundamental:

- 1 the resemblance between the *f*-future and the Latin *b*-tenses is not a coincidence, but reflects their common descent from an inherited periphrastic construction with PIE **b^huH-*; and
- 2 the inner-Celtic treatment of the inherited construction must therefore have added phonological material that caused the devoicing of **-β(w)-* (*vel sim.*) to *-f-* in Old Irish.

If the assumption is correct that the *f*-future and the Latin *b*-tenses go back to a common construction, there can be little doubt what this was. In the Latin imperfect, verbs with presents in *-ā-* and *-ē-* add the auxiliary *-bam*, *-bās*, *-bat*, etc. directly to the present stem (*cantā-bam*, *tacē-bam*), while ordinary

13 A partial exception is Isaac 1996: 368–71, who takes a variant of Watkins' **-swā-* to be the source not only of the Old Irish future in **-fā-*, but also of the Middle Welsh future in *-(h)aw-* (see below).

thematic presents interpose an unmotivated $*\bar{e}$ - between the root and the b -element (*dūc-ē-bam*). Precisely the same oddity is found in the imperfect in Slavic, where simple thematic verbs insert an unexpected \bar{e} - < $*\bar{e}$ - before the auxiliary $*\bar{e}s$ - (cf. OCS infin. *glagolati* ‘to speak’, impf. 1 sg. *glagola-axǔ*; infin. *viděti* ‘to see’, impf. *vidě-axǔ*; but *vesti* ‘to lead’, impf. *ved-ě-axǔ*). The underlying syntagma in both cases, as argued in Jasanoff 1978: 121–25, is a grammaticalized descendant of the construction seen in Ved. *gúhā as-/bhū-* ‘be(come) hidden’ and *gúhā dhā-/kṛ-* ‘make hidden’, where *gúhā* = *guhā* < $*g^hu\acute{g}h\acute{e}h_1$, lit. ‘with concealment’, the instr. sg. in \bar{a} < $*\bar{e}$ < $*\acute{e}h_1$ of the root noun *guh-*/ $*g^hu\acute{g}h\acute{e}h_1$ ‘concealment’. Lat. *dūcēbam* and OCS *veděaxǔ* thus mean ‘I was in (lit., with) the act of leading’. If “cognate” with the Latin and Slavic forms, therefore, the forerunner of the f -future might likewise have been expected to include primary verbs in which an \bar{e} - – the historical instrumental ending – was inserted between the root and the b^h/f -element. A case of this kind is actually found in the historical root present *scaraid* ‘separates’ (pres. $*skerH-$: $*skṛH-$), the periphrastic future of which would have been – temporarily ignoring the problem of the $-f-$ – $*skṛH-eh_1-$ + b^h- > $*skarī-fā-$ (> *scairfid*, etc.). When *scaraid* and other laryngeal-final root presents were reassigned to class A I,¹⁴ a model was created for the spread of root-final palatalization to all f -futures of A I, where it became the regular pattern.

The central problem for the f -future, of course, is to explain the morphology and phonology of the second element. In Latin, $-bō$, $-bis$, $-bit$, etc. and $-bam$, $-bās$, $-bat$ are the pre-Latin future and imperfect, respectively, of $*b^huH-$. In Slavic the second element of the periphrastic imperfect is a morphologically transformed version of the augmented imperfect (i.e., $*(h_1)e-h_1(e)s-$) of PIE $*h_1es-$ ‘be’.¹⁵ In Vedic any form of the roots *as-*, *bhū-*, *dhā-* or *kṛ-* may combine with *gúhā*.¹⁶ It can be surmised, therefore, that the second, finite component of the f -future was some kind of pre-Irish future of the root $*bū-$ < $*b^huH-$. What could this have been? Clues can be gathered from the free-standing forms of the future in the other Celtic languages. In Gaulish, 3 sg. *bissiet* ‘will be’ (Chamalières), like *pissúmí* ‘I will see’ and *toncsiiontio* ‘who will swear’ (both also Chamalières), is a future in $*-sje/o-$ of the same type as Ved. *dāsyāti* ‘will give’, Lith. ptcp. *dúosiant-* ‘about to give’, etc.; the corresponding

14 The clearest other example is *anaid* ‘stays’ (= Ved. *ániti* ‘breathes’).

15 The same augmented stem, with secondarily prefixed $b-$, appears in the “imperfective aorist” OCS *běxǔ*, *bě*, etc.

16 Interestingly, the antonym of *gúhā kṛ-* is *āvīh kṛ-* ‘expose, make apparent’, where *āvīh* is itself interpretable as a historical instrumental (cf. Jasanoff 2009: 142).

2 pl. is perhaps attested in the form *bissíte* (Châteaubleau). Note that the future tense marker is added not to the etymological root **bū-*, but to the quasi-root **bi-*, extracted from the present **biē/o-*. Closer to home, Middle Welsh has distinctive future forms 3 sg. *bydhawt*, *bythawt*, *bydawt*, *biawt*, 3 pl. *bydhawnt*, etc. These are instantiations of the Middle Welsh future in *-(h)aw-*, an archaic formation well known from forms like 3 sg. *llettaud* (*-tt-* < **-d + h-*) ‘will spread’;¹⁷ *kymerawd* ‘will take’, *gyrhawt* ‘will drive’; 3 pl. *cuin-haunt* (OW) ‘will lament’, *gwnahawnt* ‘will make’, *pebyllyawnt* ‘will encamp’; impers. *yscarhawr* ‘will be separated’, *talhaur* ‘will be paid’, etc.¹⁸ The original *s*-future underlying these forms, whatever the original form of the *s*-suffix in IE terms (**-se/o-*, **-s-*?), was recharacterized in Brittonic by applying the *-ā-* < **-āse/o-* of futures of the type seen in OIr. *·céla* (< **kiklāse-* < **-k̑se-* < **-k̑-h₁se-*) and/or *·cechna* (< **kikanase-* < **-kan-h₁se-*).¹⁹ MW *llettaud* thus presupposes a preform of the type **letasāseti*, with the recharacterized future sign **-sāse/o-* added to the synchronic present stem **leta-*. The two intervocalic *s*’s in **letasāseti*, being differently situated in the prosodic word, were differently treated. The second *-s-*, located before an unstressed vowel, was lost with contraction, exactly as in Old Irish (**-āse/o-* > **-āhe/o-* > **-ā-*). The first *-s-*, however, was retained as *-h-* in Brittonic before secondarily stressed *-a-* (**létasāse/o-*), eventually being brought into contact with the root-final consonant by syncope (cf. 3 pl. subj. *carhont* < **kárāsònti*, superl. *hynhaf* ‘oldest’ < **sénisàmos*).²⁰ The earliest recoverable future of the verb “to be” in Brittonic was thus a formula of the type **bisāse/o-*. The phonological reflex of 3 sg. **bisāseti*, or something very close to it, appears in MW *biawt*;²¹ the more usual future forms with *-ð-* show the replacement of **bi-* by *byð-*, the

17 With so-called provection – devoicing of a voiced consonant in contact with *-h-*.

18 For the forms see Evans 1964: 119–21, Lewis-Pedersen 1937: 279 f., and above all the complete survey of c. 200 forms in Isaac (2004). Isaac’s discussion completely undercuts Schumacher’s attempt to explain away the *(h)aw*-future as a (partly) specialized class of presents in **-ā-* with *-h-* taken from the subjunctive (Schumacher 1995: 67–70).

19 Recall note 12. I write **-āse/o-* to cover all possibilities.

20 This account of the phonology of **-s-* is preferable to the needlessly complicated treatment in Jasanoff 1994: 205 ff., where the potential relevance of secondary stress was too hastily rejected. For a careful attempt to specify the precise conditions governing the retention of **-h-* in Brittonic see Zair 2012.

21 The only point in doubt is whether the sequence *-ia-* would have been phonologically regular or analogical. The treatment of hiatus groups resulting from *s*-loss in Brittonic is beset with uncertainties. For different views on this question see, e.g., Schrijver 1995: 383 ff. and Griffith 2010 *passim*.

stem of the semantically overlapping consuetudinal present (1 sg. *byd(d)af*, 2 sg. *byd(d)y*, 3 sg. *byd(d)*, etc.). Minimally, we can say that the common starting point of the Gaulish and Brittonic forms was a base **bi-s-*, with the quasi-root **bi-* standing in for theoretically expected **bū-* or **bŭ-*. In Brittonic, **bis-* was expanded to **bisāse/o-*.

We can now return to Old Irish. The future forms of the Old Irish substantive verb (1 sg. *bia*, 2 sg. *bie*, 3 sg. *bieid*, *·bia*, 1 pl. *bemmi*, *·biam*, 2 pl. *bethe*, *·bieid*, 3 pl. *bieit*, *·biat*) point to a proximate underlying stem **biġā-*.²² This, of course, could have had multiple sources. A direct equation of OIr. *·bia* with the Latin present subjunctive *fiam*, *-ās*, *-at*, etc., though noted as a formal possibility by Thurneysen (1946: 483), is unlikely; if pre-OIr. **biġā-* and Lat. *fiā-* were historically identical, we would have to give up the possibility of connecting the **-ā-* of *·bia* (< **-ā-* < **-eh₂-*) with the **-ā-* (< **-āse/o-*) of the future type(s) *·céla* and *·cechna*.²³ The **-ā-* of pre-OIr. **biġā-* is thus better taken from **-āse/o-*. The two likeliest reconstructions for the stem as a whole are **biġāse/o-* and **bisāse/o-*.²⁴ The latter, which has the advantage of being identical with the Brittonic preform, is our best *a priori* choice for the second term in the periphrastic construction that yielded the *f*-future.

The claim of this paper is that **bisāse/o-* was the Common Insular Celtic future of the verb “to be,” and that it appears in two guises: (1) as a free-standing future (MW *biawt*, *byd(h)awt*, etc., OIr. *bieid*, *·bia*); and (2) as the second term of the OIr. *f*-future (*scairfid*, *·scairfea* < **skari bisāseti*). The latter development requires elaboration. The rules governing the loss of intervocalic **-s-* in Brittonic and Goidelic were not the same. While **-h-* < **-s-* was preserved before secondarily stressed vowels in Brittonic, leading to provection (cf. note 17) after syncope, **-h-* was eventually lost in all positions *before* the operation of syncope in Old Irish. The difference between the two branches can be seen, e.g., in the differing treatments of the superlative: while Middle Welsh has *hynhaf* and *teckaf* ‘fairest’ < **teg + haf*, Old Irish has *sinem* ‘oldest’ and *ardam* ‘highest’ < pre-syncope **s’in’eaṽ*, **ardeaṽ* < pre-*h*-loss **s’in’ihaṽ*, **ardihaṽ*, without a hint of the lost **-h-* < **-s-*. Yet intervocalic

22 The corresponding copular forms (*bid*, *-be*, *bemmi*, *bit*, *-bat*, etc.) are unstressed variants of the same stem.

23 The possibility of a connection between pre-OIr. **biġā-* and Lat. *fiā-* does not arise at all for the school of H. Rix, which denies the identity of the Italic and Celtic *ā*-subjunctives.

24 McCone (1991: 124–6) sets up **biwāse/o-* < **bibwāse/o-*, remade from **bibūse/o-* like **siswāse/o-* from **sisūse/o-*.

*-*h*- was still preserved in some environments in Old Irish at the time of the loss/reduction of final syllables. This is why we find provection and prefixation of *h*- at historical word boundaries: cf. *int-* for *ind* + *ś-* and *inna h-* in the definite article (*int súil* ‘the eye’ < **ind* *hul-*, *int én* ‘the bird’ < **ind* *h* *ē-*, gen. sg. *inna [h]ingine* ‘the girl’ < **indāh in-*); preposition + pronoun combinations like *impu* ‘around them’ < **im* *β* *-hūh*; and compounds like *míathamle* ‘magnificence’, lit. ‘honor (*míad*) likeness (*samail*)’ < **mē* *δ* *h* *-hav-*. Nothing prevents us, therefore, from assuming that (1) postvocalic *-*h*- (< *-*s-*) was at first retained before stressed and secondarily stressed vowels in Goidelic as in Brittonic, but that (2) retained intervocalic *h*’s were subsequently lost in Irish during the period between the operation of the final syllable rules and syncope. Syncope was later than final syllable loss; for the relative chronology see McCone 1996: 120–25.

Under these assumptions, we would predict the following development for the future of a verb like *scaraid*: **skarī bisāseti* lit. ‘will-be splitting’ > **skar* *’i-β* *’ihāθ* (*-*h*- preserved before secondary stress)²⁵ > **skar* *’i-β* *’ihā(h)* (weakening of final syllables) > **skar* *’i-β* *’ea(h)* (intervocalic *h*-loss) > **skar* *’β* *’e* < *scairbe* > (syncope and contraction). This is not, of course, the form we find. But, as pointed out in my otherwise unsatisfactory 1994 discussion of the problem, strict phonological regularity is not always to be expected in periphrastic tense formations. The auxiliary in periphrastic constructions, owing to its loss of full lexical status, is often a locus for irregular shortening. Well-known cases of this phenomenon include the English “gonna” future (*gonna* < *going to*), the compressed forms of the Romance future (Fr. *chanterons* < **chanteravons*, etc.), the Modern Greek future (θα γράψει ‘(s)he will write’ < θέλει να γράψει lit. ‘(s)he wants that (s)he will write’), and – less familiar but particularly apposite – the Lithuanian subjunctive (or “optative”). This, in most of its forms, is a periphrastic combination of the “supine” in *-tu* < *-*tum* with an auxiliary *bi-*, historically a refashioned optative form of the verb “to be.” The oldest paradigm, according to Stang 1966: 428 ff., is recoverable as

25 Whether or not there was an actual phonetic secondary stress on the *-*ā*- of free-standing **bisāseti*, which stood in a second syllable (as opposed to the normal pattern seen in **létasāseti*), the *-*h*- would surely have been preserved or reintroduced by *Systemzwang*.

sg.	du.	pl.
1 [dirbčia] ²⁶ 'I would work'	dirbtumbiva	dirbtumbime
2 dirbtumb(e)i	dirbtumbita	dirbtumbite
3 dirbtu ²⁷	–	–

where the segmentation in the plural and dual forms (*dirbtum* + *bime*, etc.) is still transparent. In the standard language, however, various irregular changes (simplification of *-mb-* to *-m-*, haplological reduction of *-mim-* to *-m-*, analogical loss of *-i-* elsewhere) have led to complete suppression of the auxiliary in the first and second persons:²⁸

1 [dirbčiau]	dirbtuva	dirbtume
2 dirbtum	dirbtuta	dirbtute

Without the older and dialectal variants in *-bi-* the presence of the auxiliary would be completely undetectable.

My proposal, then, is the following. At the time of the weakening and loss of final syllables, and hence *before* the loss of intervocalic *-h-* and regular syncope, the form *skar'ī-β'ihāθ was precociously (i.e., “irregularly”) syncopated to *skar'ī-β''hāθ or (with fast-speech loss of palatalization) *skar'ī-β'hāθ. In the resulting cluster β(′) + h, the h had the same devoicing effect as at word boundaries, yielding the voiceless fricative f(′) (cf. *int é́n*, *impu*, *miathamle*, etc.).²⁹ The full development was *skar'ī-β'ihāθ > *skar'ī-β(′)hāθ > *skar'ī-f(′)ā(h) > *skar'f'a <·scairfea>. The absolute form *scairfid* would have developed in the same way from *skar'ī-β(′)hāθ'i(h).

Two special assumptions separate this account from other *b^huH-based theories of the *f*-future. The first is that the form of the auxiliary was *bisāse/o-. We have interpreted this as the continuant of an inherited (Proto-Celtic?) *s*-future in *bis-, morphologically renewed by the addition of stem-final *-āse/o- from the future types OIr. ·céla and/or ·cechna. Taken by itself, free-standing OIr. fut. ·bia, bieid does not specifically necessitate a preform

26 Of heterogeneous origin; cf. Stang *ibid*.

27 With zero copula. As always in Lithuanian (and Baltic), the third person forms make no distinction of number.

28 There are also longer forms in *-mē-* (*-tumēme*, *-tumēte*, etc.), remade to look like *ē*-preterites.

29 The idea of obtaining the *-f-* from a β + h cluster was originally proposed in Jasanoff 1994: 217 f., where, however, I wrongly set up the auxiliary as *besā- (i.e., *b- + modal *esā-). As the shortest of the vowels, *-ī-* would have been particularly susceptible to sporadic syncope.

**bisāse/o-*; **bijā-* or **biāse/o-* would do just as well. But the Middle Welsh future in *-(h)aw-*, which is not limited to the verb “to be,” points unambiguously to an earlier suffix-form **-hā-*, and this can only be understood morphologically as the reflex of a yet earlier suffix **-sāse/o-*. **bisāse/o-* thus emerges as the one formula capable of accounting for both the Irish and Welsh free-standing forms. It provides the input to our second special assumption: that at a prehistoric stage of Old Irish the auxiliary **-βihā-* (< **-bisāse/o-*) was subject to a fast-speech syncope rule, roughly contemporary with the loss of final syllables, which reduced it to **-β(ʰ)hā-* and then **-f(ʰ)a-*. Non-Neogrammarian sound changes of this type are, of course, a notoriously costly explanatory tool. But in typologically well-motivated environments – affective words, words that are typically unstressed, words that are very long or very short – irregular changes can and have been fruitfully used to solve the most intransigent problems.³⁰ Just such a case, I submit, is what we have here.

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³⁰ Including, it should be mentioned, two celebrated Celtic puzzles solved by Cowgill – the origin of the superlatives in **-samos* (e.g., OIr. *tressam* ‘strongest’ < **treksamos*, irregularly haplogogized from **treks-isamos*; Cowgill 1970: 131), and the origin of the active conjunct endings (e.g., *-beir*, *-berat*, semi-irregularly apocopated from **bereti*, **beronti*; Cowgill 1975: 56 ff.).

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