The Brittonic Subjunctive and Future

The origin of the subjunctive in Middle Welsh (MW), Cornish (Co.) and Middle Breton (Mbr.) remains one of the enduring mysteries of Celtic comparative grammar. The paradigms are given by Lewis and Pedersen (1937:286) as follows:

	MW 'may love'	Co. 'may be able'	MBr. 'may be able'
sg.1	car(h)wyf	gyllyf	guillif
2	cer(h)ych	gylly	guilly
3	car(h)o	gallo	gallo
pl.1	car(h)om	gyllyn	guelhomp (-imp)
2	car(h)och	gallough	guelhet
3	car(h)ont	gallons	galhint (-ont)

It is generally agreed that these forms go back to a Common Brittonic subjunctive with a suffix of the structure $*-V_1sV_2-$. The evidence for $*-s-$, which surfaces as -h- in Middle Welsh and Middle Breton and occasionally causes provection in Cornish, is unambiguous and uncontroversial[1]. The identity of the vowels $*-V_1-$ and $-V_2-$ is less clear. $*-V_1-$, which is everywhere syncopated, can in principle have been any short syllable nucleus; morphological considerations suggest that it may have been $*-a-$, which serves as a union vowel in other environments in Celtic. Two possible sources have been proposed for $*-V_2-$. Watkins (1962:145 ff), following Thurneysen (1884:270), sets up $*-\bar{a}-$, the mood sign traditionally assumed for the Old Irish (OIr.) ā-subjunctive (type 3 sg. *beraid, ·bera* 'may carry, ferat'). This hypothesis could conceivably account for the Cornish and Middle

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[1] The restriction of -h- to the 1-3 pl. and the impersonal (e.g., *lauarher* 'will be said') in Middle Breton is doubtless secondary.

Breton endings with *o*-vocalism, particularly those of the plural[2]. It cannot, however, explain the Cornish and Breton 1 sg. and 2 sg. (Co. -*yf*, -*y*; MBr. -*if*, -*y*; cf. MW -*(h)ych*), and it is fatally compromised by the fact that PCelt. *-*ā*- regularly gives -*aw*-, and not -*o*-, in Middle Welsh. It is thus better to accept Morris Jones' view (1913:339), recently revived and extended by McCone (1991:100 ff.),[3] that the stem-final vowel of the Brittonic subjunctive was the PIE thematic vowel *-*e/o*-.[4] As demonstrated by McCone, the *o*-vocalism of the 1 pl. and 3 pl. in Welsh and Breton, and of the 3 pl. in Cornish, is most simply taken from PCelt. *-*so*-, while the paradigmatically isolated MBr. 2 pl. in -*het* points to *-*sete* (*vel sim.*), with *e*-color of the thematic vowel. The Co. and MBr. 2 sg. in -*y* suggests a preform in *-*sisi*, regularly developed from earlier *-*sesi*. Particularly attractive is McCone's derivation of the Co. 1 sg. in -*yf* and MBr. 1 sg. in -*if* from a thematic preform in *-*sūmi* (i.e., *-*sō* + *-*mi*). As will appear shortly, this ending is attested in Middle Welsh as well.

The productive mark of the subjunctive in Brittonic was thus probably a sequence *-*ase/o*-, with reflexes that were later modified by analogical developments of various kinds. Some of these secondary changes, especially those relating to the creation of the general Brittonic 3 sg. in -*(h)o*, will be discussed in detail below. Of more immediate interest, however, is the question of the origin of *-*ase/o*- and its relationship to the formation of the subjunctive in the other Insular Celtic language, Old Irish.

Old Irish builds its subjunctives in two main ways. The *ā*-subjunctive, mentioned above, is characterized by a pre-Irish suffix *-*ā*-, which is added to the present stem in weak verbs (e.g., *marwā*- 'kill', subj. *marwā* + -*ā*- > *marwā*- (3 sg. conj. *·marba*); *linkʷī*- 'leave', subj. *linkʷī*- + -*ā*- > *linkʷiiā*- (3 sg. *·léicea*)), but to the underlying root in strong verbs (e.g., *bere/o* 'carry', subj. *berā*- (3 sg. *·bera*); *kʷrinā*- 'buy', subj. *kʷrei*- + -*ā*- > *kʷriiā*- (3 sg. *·cria*)). A Brittonic reflex of the *ā*-subjunctive is often seen in the isolated MW 3 sg. *el* < *(p)elāt*,[5] which patterns synchronically as the subjunctive of the suppletive verb 'to go' (1 sg. indic. *af* < *agami*). Outside

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[2] But note that the normal Middle Breton reflex of PCelt. *ā* was *ọ̄*, which was further unrounded to *e* in final syllables and often so spelled (cf. Jackson (1953: 288)).

[3] References henceforth to "McCone" are to this work.

[4] So too independently Rasmussen (1992).

[5] Whether the etymological affinities of this form are with Gk. ἐλαύνω 'I drive' or πίλναμαι 'I draw near' is of no importance here.

Celtic, the *ā*-subjunctive is usually identified with the Latin present subjunctive in -*ā*- and its Osco-Umbrian counterpart (cf. Lat. *ferat, faciat,* Osc. *fakiiad,* etc.); significantly, in Italic as in Old Irish, this formation shows signs of having originally been built directly to the verbal root (cf. archaic Lat. *aduenat, attigās,* etc. beside *aduenīre, attingere,* etc.). The historical position of the mood sign *-*ā*- is disputed. Since the influential work of Trubetzkoy (1926) and Benveniste (1951), it has been the *communis opinio* that the *ā*-subjunctive was an Italo-Celtic replacement of the PIE thematic optative in *-*oi(h₁)*-, no trace of which survives in either Celtic or Italic. From a formal point of view the "*ā*-optative" seems to have originated as a preterite of the PIE "short-vowel" subjunctive, incorporating a tense sign otherwise attested in the *ā*-preterites of Balto-Slavic and Tocharian (cf. Jasanoff (1983:75 ff.)).[6]

The other major subjunctive type in Old Irish is the *s*-subjunctive. Unlike tha *ā*-subjunctive, which is freely formed to weak verbs, the *s*-subjunctive is confined to the subset of strong verbs with roots ending in an obstruent. The inflectional pattern is for the most part thematic (cf., e.g., 1 sg. conj. *·tías* 'I may go' < *tēssū* < *(s)teigh-sō*, *·gius* 'I may pray' < *gʷessū* < *gʷhedh-s-ō*; 1 pl. *·tíasam, ·gessam*; 3 pl. *·tíasat, ·gessat*); the 3 sg., however, is athematic (cf. conj. *·té, ·gé* (absol. *téis, geis*) < *tēss(i), *gʷess(i)* < *(s)teigh-s-ti(s) *gʷedh-s-ti(s)*). This "mixed" paradigm, which recurs in two other categories, the *s*-preterite (type 1 sg. conj. *·gabus* 'I took' < *gabassū*, 3. sg. *·gab* < *gabas(s)* < *-s-ti*) and the *s*-future (*·gigius* 'I will pray' < *gʷi-gʷessū*, 3 sg. *·gig* < *gʷigʷes(s)* < *-s-ti*), is clearly secondary. The comparative evidence shows that the *s*-preterite was originally athematic, like the *s*-aorist elsewhere in IE; the *s*-future was originally thematic, like its only exact cognate outside Celtic, the Indo-Iranian desiderative.[7] The shared inflection of the three Old Irish sigmatic categories is the result of mutual contamination, the thematic : athematic contrast having in effect been eliminated. In principle, nothing can be concluded about the pre-Irish paradigm of the *s*-subjunctive from its

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[6] This still seems to me the best explanation for the Italic and Celtic *ā*-subjunctive, although my suggestion (*ibid.*, 61 f.) that forms like Toch B pret. 3 sg. *śarsa* 'knew' (< *kersH-t) and Ved. aor. 3 sg. *ástambhīt* 'propped up' (< *stembhH-t) continue a PIE "*h₂*-aorist" should be withdrawn. The relevant Tocharian forms are the preterite participles in B -*au*, obl. -*os*, which presuppose stems in *-*ā*- < pre-Toch. *-*ā*-.

[7] The best proof that the *s*-future was once wholly thematic is furnished by 3 sg. forms of the type *célaid ·céla* 'will hide' (< *-āseti) and *·riri* 'will sell' (< *-īseti), where *-*s*- had its normal intervocalic treatment. Cf. below.

inflection alone. Nevertheless, there are strong indications that the *s*-subjunctive was originally thematic, and that its specific PIE source was the subjunctive of the *s*-aorist. The few survivals of the *s*-subjunctive in Middle Welsh, notably the 3 sg. forms *gwares* 'may help' < **wo-resset* (< **-ret-s-), *ry-res* 'may run' < **ro-resset*, *(dy-)duch* 'may bring' < **(do-)deukset* and *gwnech* 'may make' < **wrekset* (< **wreg-s-), are, *pace* Evans (1964:128), unequivocally thematic. Even in Old Irish, an originally thematic 3 sg. can be inferred from the fact that roots ending in a velar invariably show the prevocalic treatment of the **-ks-* cluster, contrasting with the preconsonantal treatment observable in the preterite (cf. subj. *at·ré* 'may arise' < **-reg-s(e)-* vs. pret. *at·recht* < **-reg-s-t*, subj. *orr-* 'may slay' < **org-s(e)-* vs. pret. *ort-* < **org-s-t*, etc.; similarly MW pret. *gwreith* 'made' < **wrext* < **wreg-s-t* beside subj. *gwnech*).[8] There is thus an exact formal and functional match between the *s*-subjunctive and the Vedic Sanskrit *s*-aorist subjunctive (cf., e.g., 3 sg. *vákṣat* 'may convey', *nésat* 'may lead', *yákṣat* 'may sacrifice'). The historical identity of the two categories is underscored by the parallelism between the irregular Old Irish imperative type *at·ré* 'arise!' (< **-reg-si*), which is confined to root which form *s*-subjunctives, and the Vedic "*si*-imperatives" of the type *vákṣi*, *nési*, *yákṣi*, etc., which appear to represent haplologized 2 sg. subjunctives in **-sesi*.[9]

To be sure, no aspect of this account has gone unquestioned. In particular, the long-standard view that *ā-* and *s*-subjunctives represent historically unrelated formations was dramatically challenged in an important 1977 article by H. Rix. Rejecting the traditional comparison of the *s*-subjunctive with the system of the sigmatic aorist, Rix identified the *-s-* of the Celtic forms with the "desiderative" **-s-* of the Greek future (e.g., δείξω 'I will show', γράψω 'I will write'), the Vedic future (*vakṣyáti* 'will say') and desiderative (*cíkitsati* 'wishes to understand'), and related formations elsewhere. To appreciate the significance of this proposal it is important to realize that the two PIE *s*-morphemes were not completely homophonous. The **-s-* of the desiderative/future, unlike that of the aorist, required the interposition of a laryngeal when added to roots ending in a liquid, nasal or glide; cf.,

e.g., Ved. fut. *kariṣyáti* 'will do', desid. *cíkīrṣati* (< **-kr̥š-* < **-kr̥-Hs-*), OIr. fut. *célaid*, *·céla* 'will hide' (< **kiklāseti* < **-kl̥s-* < **-kl̥-Hs-*) and Gk. fut. τενέω 'I will stretch' (< **-esō*), the last of which identifies the laryngeal in question as **-h₁-*. The desiderative suffix can accordingly be reconstructed, at least formulaically, as **-(h₁)s-*.[10] According to Rix it was this sequence, and not the bare **-s-* of the *s*-aorist, that was added to roots to form the *s*-subjunctive. Roots ending in a liquid or nasal made subjunctives in **-(h₁)s-* in exactly the same way as roots ending in an obstruent, but with the important difference that the laryngeal was here vocalized, as in Greek and Sanskrit. Preforms of the type **bher-* + **-(h₁)se/o-* and **kel-* + **-(h₁)se/o-* thus gave **berase/o-* and **kelase/o-*, respectively, which developed regularly to pre-Irish **berā-* and **kelā-*. In Rix's view, the outward resemblance of the Old Irish *ā*-subjunctive to the *ā*-subjunctives of Italic is purely accidental.

Rix's theory of the Old Irish subjunctive has the very real merits of referring the *ā-* and *s*-subjunctives to a single source, and of providing a principled explanation for their distribution. These advantages, however, are dearly bought. No rationale is given for why the alleged desideratives **gʷhedh-(h₁)se/o-* and **kel-h₁se/o-* should have developed into subjunctives, while the corresponding reduplicated stems **gʷhi-gʷhedh-(h₁)se/o-* (> pre-Oir. **gigess-*) and **ki-kl̥-h₁se/o* (> pre-OIr. **kiklā-* > **kēlā-*), which were desideratives as well, became futures. By abandoning the equation of the *s*-subjunctive type *at·ré* with the Vedic *s*-aorist subjunctive type *vákṣat*, Rix also abandons the possibility of comparing imperatives of the type *at·ré* with Vedic *si*-imperatives of the type *vákṣi*. Phonologically, the derivation of pre-OIr. **-ā-* from **-ase/o-* is impeccable, but a 3 sg. in **-aset* will not account for the monosyllabicity of MW *el*, which must be differently explained. And finally — an obvious but compelling point— the claim that OIr. *·bera* and Lat. *ferat* are entirely unrelated simply flies in the face of common sense. It is not surprising that, as McCone reports (92), "Rix's theory about the origins of the Old Irish *a*-subjunctive and the lack of a connection between it and the Italic *ā*-subjunctive does not seem to have met with even partial acceptance."

Indeed, the hypothesis of a unitary source for the *ā-* and *s*-subjunctives would require no further attention if McCone himself had not

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[8] So too McCone (72 ff.); otherwise Watkins (1962:143 f.).

[9] Cf. Jasanoff (1986). Other forms like *at·ré* include *coméir* 'id.', *tair* 'come!' (**-ink-si*), *tog* 'choose!' (< **geus-si*), *no-m-ain* 'protect me!' '< **aneg-si*) and **foir* 'help!' (< **-ret-si*). The haplology of the 2 sg. *s*-aorist subjunctive to *-si* was described for Indo-Iranian by Szemerényi (1966), who did not, however, recognize the PIE character of the process.

[10] It is immaterial to the present discussion whether the parenthesized **-h₁-* was originally extracted from roots in **-Rh₁-* (e.g., **genh₁-* 'be born', **terh₁-* 'bore') or — likelier in my opinion — simply constituted an unanalyzable part of the desiderative morpheme.

made a memorably valiant effort (92 ff.) to salvage it. McCone's own theory of the Celtic subjunctive accepts the phonological, but not the morphological, premises of Rix's analysis. His proposed synthesis reverts to the standard view of the *s*-subjunctive as a reflex of the PIE *s*-aorist subjunctive. But McCone goes beyond the standard view in attempting to derive the *ā*-subjunctive from the *s*-aorist subjunctive as well. Specifically, he claims that laryngeal-final roots like *melh₂*- 'grind', which developed *s*-aorist subjunctives of the type *melase/o*- by regular sound change (< *melh₂-se/o*-), became the basis for the analogical extension of *-ase/o*- to *aniṭ* roots like *ber*- (subj. *berase/o*- for *berse/o*-) and *kel*- (subj. *kelase/o*- for *kelse/o*-). This scenario has certain advantages over Rix's theory. By taking the *s*-subjunctive from the PIE *s*-aorist subjunctive rather than from the desiderative/ future, McCone is able to retain the *at·rǽ : vákṣi* equation and to account for the functional difference between *gess*- < *gʷhedh-s*- (subj.) and *gigess*- < *gʷhi-gʷhedh-(h₁)s*- (fut.). In addition, he notes the striking fact, apparently overlooked by Rix, that the reconstruction *-ase/o*-, though motivated by considerations internal to Old Irish, is precisely the suffix-form needed to explain the subjunctive in Brittonic.

For all its superficial appeal, however, McCone's theory is no more satisfactory than Rix's. It has two of the same shortcomings: like Rix, McCone treats the Italic and Celtic *ā*-subjunctives as completely separate formations and leaves the phonology of MW *el* unexplained. Moreover, by rejecting the morpheme-shape *-(h₁)s*-, McCone is forced to replace Rix's phonologically-based account of the distribution of the *ā*- and *s*-subjunctives with a far less compelling morphological explanation. These difficulties, as we shall see, are not easily surmounted.

Rix and McCone both take a properly cautious position vis-à-vis the Italo-Celtic controversy. The comparative evidence, however, leaves no doubt that the thematic optative in *-oi(h₁)*- was a remarkably stable formation in the dialectal history of the IE family, with clear traces preserved in all the older IE languages except Anatolian, Italic and Celtic.[11] Given the other well-known innovations common to Italic and Celtic, such as the superlatives in *-isamo*- and the third person

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[11] The Armenian present subjunctive marker -*icʿ*- (cf. *bericʿem* 'I may bear', etc.) is still in my view best taken from *-oi-ske/o*- added to the *-oi*- of the thematic optative (cf. Meillet (1936:121)). Even in Tocharian, where there is no unambiguous reflex of *-oi*-, it is not unlikely that the generalization of *-i*- (< CToch. *-äi*-) to the optatives of thematic stems had its origin in the accidental merger of athematic *-ih₁*- and thematic *-oi(h₁)*- in final syllables.

middle endings in *-(n)tro*,[12] it would be perverse to consider the shared elimination of *-oi(h₁)*- a coincidence. But if the loss of *-oi(h₁)*- was a common, or at least mutually conditioned, development, then the morpheme which replaced it must have been a common creation as well. And the only morpheme that could possibly have played this role in pre-Italic and pre-Celtic was the *-ā*- that Rix and McCone deny.[13]

Properly noting that the MW 3 sg. in -*(h)o* is analogical, McCone argues (101) that the anomalous 3 sg. subj. *el* is the regular reflex of a preform *elaset*.[14] This does not appear to be correct. Although there are still substantial gaps in our knowledge of Brittonic phonology, it is clear that PIE and PCelt. intervocalic *-s*- became *-h*- at a very early date in Brittonic. Normally this *-h*- was lost, the resulting hiatus being filled, at least after front vowels, by the glide *-i*- (cf. MW 2 sg. *wy[t]* 'you are' < *ei < *eii < *ehi < *esi, *chwaer* 'sister' < *hweir < *hweir < *swehīr < *swesūr, 3 sg. *oe[d]* 'was' < *ei < *eiat < *ehāt < *esāt).[15] *-h*- was apparently retained, however, in certain morphological categories, notably including the subjunctive itself (*carho*, etc.), the superlative in -*haf* (e.g., MW *hynhaf* 'oldest' < *senisamos* (Oir. *sinem*); cf. equative *hynhet* < *seniset*-) and the second member of nominal compounds (e.g., MW *dyffrynt* (with provec-

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[12] Setting up endings of this form offers the only rational way to explain Osco-Umbrian -*(n)ter* and Old Irish non-syncopating -*t(h)ar*; the other IE languages with an "*r*-middle" have only *-(n)tor*. The 3 pl. in *-ntro* presumably arose through the contamination of *-nto(r)* and *-ro*, though not in the sense imagined by Kurylowicz (1964:64 f.). My own early attempt to derive the Italic and Celtic forms, along with Toch -*(n)tär*, from *-(n)tri* (Jasanoff (1977)) is no longer tenable in the wake of Yoshida's demonstration (cf. Yoshida (1991)) that the -*i* of Hitt. -*(n)tari* is an Anatolian innovation.

[13] McCone seems to suggest (104) that given the phonological disagreement between Italic *-ā*- and Brittonic *-ase/o*-, it is *a priori* likelier that Old Irish goes back to *-ase/o*- than to *-ā*-. This would certainly be true if opting for *-ā*- in Irish required us to assume that *-ā*- was created twice, once in pre-Irish and once in Italic. But since Italic and Celtic are known to have made innovations in common, the choice is really between a scenario that places the creation of the *ā*-subjunctive in the Italic period, and another that places it in the period of "Italo-Celtic", whatever exactly we understand by this term. There is no general, abstract principle that can settle the question; we simply have to determine which approach yields the simpler, less *ad hoc* account of all the facts.

[14] Here and throughout, I follow a version of Cowgill's theory (cf. Cowgill (1975)) of the absolute and conjunct endings in Insular Celtic. The reconstruction *elaset* thus denotes an apocopated form of *elaseti*, with the PIE primary ending; the notation *-t(i)*, *-m(i)*, etc. indicates that the *i* in parentheses was apocopated in conjunct forms.

[15] The derivation of *oed* from *esāt*, originally due to Pedersen (1909:179), still offers, in my view, the only credible way to explain this form.

tion) 'valley', lit. 'water-way' < *dubro-sento-). Despite occasional efforts to bring secondary stress phenomena to bear on the problem, these cases cannot be explained in purely phonological terms. All are analogical, the result of a morphological resubstitution of *-s- for *-h- under the pressure of related forms. Thus, the *-ase/o- of the subjunctive regularly gave *-ahe/o- in early Brittonic, but this did not go on to yield *-a(i)e/o- and *-ā- (?), as might have been expected. Instead, it was analogically restored to its earlier form *-ase/o- under the influence of the "true" s-subjunctives in *(C)-se/o- (type ry-res, duch, etc.). Eventually, the reconstituted suffix *-ase/o- — we may write *-as$_2$e/o- — was converted to a new and relatively stable *-ahe/o- ("*-ah$_2$e/o-") by a second *-s- → *-h- rule, probably at the same time as the change of *s- to *h- in initial position. These developments were not confined to the subjunctive. In the superlative, *-isamos first yielded *-ihamos, which became *-is$_2$amos and then *-ih$_2$amos (> MW -haf) under the influence of forms like *treksamos 'strongest' (MW trechaf) and *ouksamos 'highest' (MW uchaf). In compounds, constituents of the type *-sento- (*dubro-sento-) acquired a secondary *-s$_2$- (*-s$_2$ento- > *-h$_2$ento- > -hynt) from the corresponding free-standing forms. An obvious typological parallel is provided by the *-s- of the sigmatic aorist in Greek, which first developed to *-h- in intervocalic position (*élū-s-m̥ > *ἔλυhα) and was then restored under the influence of forms of the type ἔδειξα, ἔγραψα, etc.[16]

If this account of the retention of *-h- is correct, McCone's 3 sg. conjunct *elaset ought regularly to have developed via phonological *elahet and analogical *elas$_2$et to pre-Brittonic *elah$_2$ed. The corresponding 3 pl. absolute would have been *elah$_2$onti; with the assignment of the Common Brittonic penultimate stress these two forms would have been realized as *eláh$_2$ed and *elah$_2$ónti, parallel to regular 3sg. *karáh$_2$ed 'may love' and 3 pl. *karah$_2$ónti. McCone claims that *eláh$_2$ed and *karáh$_2$ed (he writes *karahed) would have become *elhed and *karhed by syncope, whence *elh (> el) and *karh (> *car) by final syllable loss. Syncope, however, cannot have affected the stressed *-a- of the 3 sg. conjunct; *-a- was elided elsewhere in the subjunctive paradigm because the non-3 sg. forms, being of absolute origin, were accented on the thematic vowel. The development of 3 pl. *karahónti to carhont was thus completely regular, as was that, e.g., of 1 sg. *karah$_2$īμ(i) (< *karasūmi) to

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[16] An even closer parallel can be seen in the Laconian dialect, where the restored -σ- of Common Greek was converted to -h- by a late sound change (cf., e.g., ἐποίεhε = ἐποίησε 'made').

*kerhif (cf. Co. -yf, MBr. -if), later remodeled to carhwyf. But *eláh$_2$ed and *karáh$_2$ed could only have yielded *elah and *karah, which would in turn probably have given MW *ela and *cara. Neither form is attested, nor is there any early evidence for an analogically remade *elho, parallel to Common Brittonic analogical *karho for *kara(h) (see below). The only way to maintain McCone's derivation of el from a subjunctive in *-ase/o- would be to assume that PCelt. *elaset, after becoming *elahet by normal sound change, inexplicably failed to substitute *-s$_2$- for *-h- and instead contracted to *elāt in time to become el by final syllable loss. While there is no way to exclude this possibility in principle, it is completely ad hoc and incomparably less attractive than the standard derivation of el from an ā-subjunctive *elāt.

McCone's claim that subjunctives of the type *berase/o- arose under the influence of stems like *melase/o- (*melh$_2$sē/o-), where *-a- was an inherited laryngeal reflex, presupposes that subjunctives like *melase/o- were once a common type in Proto-Celtic. This is a very doubtful assumption. The s-aorist was not yet a fully productive category in late PIE, and the evidence for such aorists built to roots of the structure *TERH- (R = liquid or nasal) is surprisingly poor. Thus, in Tocharian, probably the most conservative IE language after Anatolian in its treatment of the s-aorist, there are no s-preterites (< s-aorist indicatives; type B 3 sg. preksa 'asked') or s-presents (< s-aorist subjunctives; type B preksäm 'asks') at all to laryngeal-final roots.[17] Even in the language of the Rigveda, where the sigmatic aorist has undergone considerable elaboration, the number of TERH-roots that form reliably old s-aorist (i.e., iṣ-aorist) indicatives is unimpressive, and of these only san- 'strive' has a subjunctive with the etymologically correct vocalism (3 sg. saniṣat).[18] Indeed, outside the 2 sg. and 3 sg. the iṣ-aorist subjunctive is a virtually non-existent category in Vedic — a fact underscored by the complete absence of si-imperatives of the type *saniṣi. Closer to home, Latin restricts the s-perfect to roots ending in an obstruent. No seṭ-roots make s-perfects in Latin (cf. molō moluī, etc.); neither, in fact, do roots of the structure *TER- (cf. uēnī, pepulī,

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[17] Thus, there are no class III preterites or class VIII presents in -ās- beside the normal forms in -s-. The few Toch. A presents in -ās- (e.g., wināsam 'I honor') are patently the replacements of presents in -āsk- (cf. B wināskau 'id.'), and are for that reason assigned to class IX by Krause and Thomas (1960:210 f.).

[18] Four other examples (2 sg. kániṣas (: kan- 'enjoy'), 3 sg. kárisat (: kr̥- 'commemorate'), tárisat (: tar- 'overcome'), párisat (: pr̥- (aniṭ!) 'take across') have the lengthened grade of the indicative and are doubtless secondary.

etc).[19] In Old Irish itself, the *t*-preterites (<*s*-aorist indicatives) of *TERH*-roots are modeled on those of *TER*-roots, so that the preterite of *mel*- (·*melt* < **mel-s-t*) simply follows that of *ber*- (·*bert* < **ber-s-t*).

These facts highlight the major shortcoming of McCone's account of the *ā*-subjunctives vis-à-vis Rix's. Rix's theory generates the sequence **-ase/o-* after liquids and nasals automatically, taking advantage of the fact that the laryngeal of the desiderative suffix **-(h₁)se/o-* was regularly vocalized after sonorants. McCone, by contrast, is obliged to explain the distribution of the *ā-* and *s*-subjunctives analogically, tracing **-ase/o-* to a subclass of *s*-aorist subjunctives that may never have existed. In fact, however, neither Rix nor McCone really goes to the heart of the problem. It is not the association of *TER-* and *TERH*-roots with *ā*-subjunctives that requires an explanation, but the fact that such roots fail to form *s*-subjunctives. This peculiarity can now be understood. The disinclination of *TERH*-roots to form *s*-aorists, and especially *s*-aorist subjunctives, was a PIE feature, which in Latin (cf. above) was extended to roots of the type **TER-*.[20] In Celtic the treatment of the inherited system was similar. Here *TERH*-roots, lacking inherited *s*-subjunctives, formed their subjunctives with the productive suffix **-ā-*. In due course the pattern **TERH-* : subj. **TERH-ā-* was extended to *TER*-roots as well, thus effectively establishing the rule that roots ending synchronically in a liquid or nasal form *ā*-subjunctives.[21] The opposite course was followed in the *s*-aorist indicative (*t*-preterite), where the pattern of *TER*-roots was generalized to roots of the type **TERH-*.

It must be concluded, then, that the Italic and Celtic *ā*-subjunctives are, as traditionally assumed, cognate formations; that the *ā*-subjunctive survives unaltered in MW 3 sg. *el*; and that the distribution of the *ā*- and *s*-subjunctives in Old Irish rests on an inherited distributional peculiarity of the *s*-aorist in PIE. The subjunctive in **-ase/o-* is an innovation proper to Brittonic.

The process that gave rise to the mood sign **-ase/o-* was in fact probably quite simple. Weak verbs, consisting chiefly of old presents

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[19] The late and rare *mansī* (: *maneō* 'I remain') is hardly a serious exception.

[20] Only in the indicative, of course; there is no reflex of the *s*-aorist subjunctive in Latin.

[21] Even before the regularization of the new pattern, of course, *TER*-roots without inherited *s*-aorists, such as **men-* 'think' (Oir. subj. ·*menathar*) and **gʷem-* 'come' (Lat. -*uenat*) would have formed *ā*-subjunctives. In the system of Jasanoff (1983), the modal stems **men-ā-* and **gʷem-ā-* were originally preterites in **-e-h₂-* built to the root aorist subjunctives **men-e/o-* and **gʷem-e/o-*.

in **-āi̯e/o-* (> **-ā-*) and **-ei̯e/o-* (> **-ē-* > **-ī-*), originally formed *ā*-subjunctives in Celtic (cf. OIr. ·*marba* < **-āt-* < **-āi̯āt*; ·*léicea* < **-ii̯āt* < **-ei̯āt*), as was apparently also the case in Italic (cf. Lat. *moneat* < **-ei̯āt*). This state of affairs eventually proved inconvenient in the *ā*-verbs, where the present and subjunctive stems became completely identical following the loss of intervocalic **-i̯-*. Old Irish preserved the homophony of the two categories unchanged (subj. ·*marba* = ind. ·*marba*); the remaining languages, however, resorted to *ad hoc* ways of distinguishing them. Italic introduced the much-discussed first conjugation present subjunctive in **-aē-* (> Osc. -*a(h)í-*, Lat -*ē-*), the origin of which need not concern us here. Brittonic adopted a different, though typologically similar, strategy. Here the awkward forms in **-ā-* were recharacterized by the addition of the unambiguous **-se/o-* of the *s*-subjunctive, thus giving rise to a new subjunctive type in **-āse/o-*. But the replacement of **-ā-* by **-āse/o-* entailed a reanalysis at the synchronic level: subjunctive stems of the type **karāse/o-*, though etymologically based on inherited *ā*-subjunctives of the type **karā-* (<**-āi̯ā-*), were henceforth perceived as containing the **-ā-* (< **-āi̯e/o-*) of the present stem. The result was a further analogical change. *ā*-verbs in Celtic formed their preterites, which were sigmatic, by adding the tense sign **-ss-* to a *shortened* form of the present stem (cf. OIr. 3 sg. *(ro)·marb* '(has) died' < **mar-wăs(s)*, MW 1sg. **kereis* < **karassī* < **-ăssū*, 3 pl. *carăssont*).[22] It was thus a natural step for the synchronic shortening rule to be extended from the preterite to the subjunctive, leading to the replacement of **karāse/o-* by **karăse/o-*.[23] Once established in the weak *ā*-verbs, the new **-ăse/o-* was propagated as a general substitute for **-ā-*, virtually eliminating the earlier suffix. A variant of this scenario is considered by McCone, who dismisses it with the remark that "no ver-

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[22] The model for this pattern probably came from the pre-Celtic presents in **-ē-* (later **-ī-*) < **-ei̯e/o-*, which made their preterites and past participles in **-ēs(s)-* (cf. MW pret. 3 sg. -*es*) and **-ěto-* (cf. MW impers. -*et*), respectively. Non-presential forms in **-ě-* are also found in the second conjugation in Italic (cf. Lat. -*ēre* : -*uī* (< **-ewai*) : -*itus* (< **-etos*); the starting point in both branches was probably a shared false segmentation of **-ei̯e/o-* as **-e-i̯e/o-*. There is thus no reason to trace Insular Celtic **-ăs(s)-* to a class of *s*-aorists in **-H-s-*; the few forms that might suggest such an analysis (e.g., MW *gwelas* 'saw', impers. *gwelat*) can as easily be regarded as back-formations from the corresponding past participles in **-ato-* < **-H-to-*.

[23] Alternatively, the switch from **karā-* (subj.) to **karăse/o-* could have occurred without the intervening stage **karāse/o-*: speakers might simply have added **-se/o-* directly to **kară-*, the synchronic combining form of the present stem.

sion of this hypothesis is able to account for the basic Celtic dichotomy between -R-ā(se/o)- and -T-se/o-" (p. 105). We have seen, however, that this is not the case; the rationale for the distribution of the two Celtic subjunctives is ultimately to be found in late PIE itself.

The subsequent development of the subjunctive in *-ase/o- was for the most part perfectly regular. As noted above, the -h- of the Middle Welsh and Middle Breton forms is not the phonological continuation of original *-s-, but presupposes a secondary *-s- ("*-s₂-") which replaced the "correct" reflex of *-s- within the history of Brittonic. With the exception of the 3 sg., the entire Brittonic subjunctive paradigm rests on the ancient absolute inflection. The plural is generally unproblematic; minor details aside, MW 1 pl. car(h)om (cf. MBr. -homp) and 3 pl. car(h)ont (cf. Co. -ons) point to Common Brittonic *karasóme(s) and *karasónti, respectively.[24] In the 2 pl., MW car(h)och and Co. gallough are patently secondary vis-à-vis MBr. guelhet < *-aséte, which preserves the the original ending. Similarly, the MW 2 sg. ker(h)ych (cf. Co., MBr. -y) is, apart from its somewhat mysterious added -ch, regular for *karahíi̯i < *-asisi < *-asesi.[25] The only two forms that require extended attention are the MW 1 sg. in -(h)wyf and the general Brittonic 3 sg. in *-ho.

The 1 sg. subj. in *-asúmi regularly gave Brittonic *-hīμ, which is directly reflected in Cornish and Middle Breton. In Middle Welsh, however, the place of *kerhif is occupied by car(h)wyf, with an ending borrowed from bwyf, the 1 sg. subj. of the verb 'to be'. The origin of this form, and of the whole subjunctive paradigm of 'to be', is a matter of some importance. The old view that Insular Celtic retained a subjunctive stem *bā- < *bwā- has been effectively demolished by McCone (89, 115 ff.), who has shown that all the relevant Old Irish forms, including the 3 sg. and 3 pl. of both the substantive verb (3 sg. absol. beith, conj. ·bé, -b; 3 pl. beit, ·bet) and the copula (3 sg. ba < *be, 3 pl. bat < *bet) are based on a historical stem *be-. McCone refers this *be-, along with the Gaulish 3 sg. buetid (Chamalières) to an earlier *bwe/o-, which he convincingly compares with the Vedic root aorist subjunctive bhúvat, bhúvan, etc. and the Latin future auxiliary -bō, -bis, -bit. It is thus a priori likely that the stem *bwe/o-

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[24] The Co. 1 pl. in -yn and MBr. 3 pl. in -hint show the vocalism of the corresponding 1 sg. forms (Co. -yf, MBr. -if). Brittonic *-hont would regularly have given *-(h)wnt in Middle Welsh by the normal sound laws; the analogical retention of the -o- is discussed by Rasmussen (1992:49).

[25] I cannot follow Hamp (1980:86, with note 4) in taking -ch from *-sesi via *-hhi.

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was inherited in the subjunctive of the verb 'to be' in Brittonic as well. To the extent that forms like MW 3 pl. bont and 1 pl. bom are not simply analogical to car(h)ont and car(h)om, they are best referred directly to *b(w)onti and *b(w)ome(s).[26]

In the 1 sg., however, McCone's analysis breaks down. There is nothing inherently problematic about the Old Irish 1 sg. subj. beu (conj. ·béo), which, though not deriveable from the predicted 1 sg. *bū < *b(w)ō, can straightforwardly be analyzed into *be + analogical -u. But MW bwyf cannot be taken from *bū either, and a comparison of the two forms makes it clear that both must go back to an original *besū, remade in Brittonic to besūmi (> *behīmi > *bei̯imi > *bei-μ(i)). The reconstruction *besū is not altogether new. A 1 sg. of this shape was set up to account for OIr. beu, ·béo by Thurneysen (1946: 482)[27] as part of an unsuccesful effort to derive the entire Irish subjunctive paradigm from a stem *bese/o-. Thurneysen took *bese/o- to be the subjunctive of PIE *h₁es- 'be' (cf. Ved. 3 sg. ásat(i), 3 pl. ásan; Lat erō, -is) with the secondary prefixation of *b-, as, e.g., in OHG bim 'I am' < *b- + *esmi. Although the subjunctive as a whole cannot be explained in this way, the hypothesis of such a form for the 1 sg. is instantly appealing. Generalized in Insular Celtic as a substitute for the overshort *bū, *besū took on a life of its own in Brittonic. In the context of *besū(mi) as 1 sg., the 2 sg. *besi (i.e., *be- + -si) was reinterpreted as a shortened or haplologized variant of the fuller form *besisi, and was accordingly reconstituted as such. *besūmi and the new *besisi then jointly triggered the creation of an analogical 3 sg. *beseti, conj. *beset, which eventually became the source, via the intermediate stages *bei̯et and *bei̯, of the Old Welsh 3 sg. subj. boi (cf. MW oe[d] < *esāt). From *bei̯ was also created an analogical 3 pl. *bei̯nt, the source of OBr. boint and MW 3 pl. boent beside bont. Whether the stem *bese/o- itself was ever extended to the plural is not now determinable.[28]

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[26] The Common Brittonic plural forms of the subjunctive of 'to be' are in fact quite uncertain; see below.

[27] References henceforth to "Thurneysen" are to this work.

[28]The OW variant 3 sg. boit (MW boet) can be explained as a back-formation from boint, presumably influenced by the fact that a form *boit (MW boet) served as the 3 sg. counterpart to *boint (MW boent) 'sunto' in the imperative. No attempt can or will be made here to discuss the immensely complex system of the verb 'to be' as a whole, in which phonological and analogical changes have combined to produce an exceptionally confusing picture. It should not go unremarked, however, that just as the Middle Welsh diphthongal subjunctive forms in bwy- and boe- appear to go back to *bese/o-, the diphthongal indicative forms wyf (1 sg.)

The replacement of *-(h)if by *-(h)wyf in Middle Welsh did not result in the complete elimination of the older ending. The 1 sg. forms *bydif* 'I will be' (BT 57. 12) and *kuynhiw* 'I will lament' (BBC 100. 15) have future value, no doubt continuing an older modal sense. From a crosslinguistic point of view the evolution of subjunctives to futures is very common, as is well known from such examples as Lat. *erō* and Gk. ἔδομαι 'I will eat'. In Middle Welsh, however, there was a very particular fact that favoured the assignment of future meaning to the discarded subjunctive ending -(h)if, namely, the existence of the future tense as a vestigial but undeniable grammatical category of the language. The characteristic sign of the Middle Welsh future, which is otherwise confined to the third person, is -(h)aw-. Forms cited by Evans (1964:119 ff.) include 3 sg. *gunahaud* 'will make', *reddaud* 'will run', *llettaud* 'will spread', *kymerawd* 'will take', *parahawt* 'will last', *bydhawt* 'will be', *gyrhawt* 'will drive'; 3 pl. *cuinhaunt* (OW) 'will lament', *gwnahawnt* 'will make', *bydawnt* 'will be', *pebyllyawnt* 'will encamp'; impers. *talhaur* 'will be paid', *ffohawr* 'will be put to flight', *dialawr* 'will be avenged', *agorawr* 'will be opened', *yscarhawr* 'will be separated'. These forms are not mere variants of the subjunctive, as once thought by Watkins (1962:153), nor is there any reason to believe with McCone (100) that they are old *ā*-presents which have acquired an analogical -h- and taken on future meaning. The future in -haw- is clearly an archaic category on the verge of disappearing; there is no way that it could have arisen within the history of Welsh itself. Despite the limited character of the evidence, therefore, we have no choice but to recognize the existence of a Common Brittonic future in *-asā-, the origin of which will be explored below.[29] The corresponding 1 sg. in Middle Welsh must once have ended in *-hawf; it was this ending that was replaced by -hif when the latter was ousted by -hwyf from its position in the subjunctive. A curiously exact parallel is provided by the Latin third conjugation future in -am, -ēs, -et.

We are now in a position to consider the evolution of the 3 sg. subj. in -ho. As seen above, the pre-Brittonic 3 sg. conjunct *karáhed (< *karáset) was accented on the *-a- of the subjunctive suffix and consequently escaped the operation of the normal pretonic syncope rule. The essential problem thus becomes to explain how and why *kara <

and (OW) *hitt-oi* (3 sg.) can be attractively taken from thematized preforms *esū[mi]* and *eset(i)*, respectively.

[29] Possible further evidence for this category, *pace* McCone (*ibid.*), comes from the isolated Old Breton forms *crihot* 'uibrat', *fleriot* 'redolet' and *cospitiot* 'titubauerit' (Lewis-Pedersen (1937:279)).

karah, the expected reflex of *karáhed*, was remade to Common Brittonic *karho*. It is not hard to surmise what must have happened, at least in outline. Since every other ending in the subjunctive paradigm began with *-h- (e.g., 1 sg. *-hīμ < *asúmi, 3 sg. absol. *-hed < *-aséti 3 pl. *-hont < *-asónti), *-h- would very naturally have been inserted into *kara, yielding the more tractable 3 sg. *karha. This was followed, apparently, by the remodeling of *karha to *karho, with *-o- taken from the 3 pl. in *-hont and 1 pl. in *-hom. But it is not at all obvious why the *-a of *karha should have been unable to hold its own, or why the vowel that replaced it was *-o rather than the *-e- of the 3 sg. absolute (*karhed < *-aséti), 2 pl. (*karhed < *-aséte) and impersonal (*karher (cf. MW *carher*) < *-aséri).

The reasons for the change of *karha to *karho can best be appreciated against the background of the history of the future in *-asā-. PCelt. *-ā- became *-ǭ- (whence MW -aw-) by regular sound change in Brittonic, resulting in the creation of post-syncope future forms of the type 1 sg. *karhǭμ < *karasámi, 3 sg. absol. *karhǭd < *karasáti and 3 pl. *karhǭnt < *karasánti. Here too the 3 sg. conjunct form would have stood apart, since the regular reflex of *karásāt, like that of its subjunctive counterpart *karáset, would have been *kara. It is probably safe to assume that *kara (fut.), like *kara (subj.), would initially have been remade to *karha. But it is also likely that the homophony of *karha (fut.) and *karha (subj.) would have led to the further replacement of *karha (fut.) by *karhǭ, with generalization of the *-ǭ- that characterized every other form in the future paradigm. Once established in the future, *karhǭ would have provided a strong incentive for the replacement of *karha by *karho in the subjunctive. The subjunctive paradigm, it must be recalled, was a singularly disparate array, with no fewer than five different vowels in its seven active endings (*-a- in the 3 sg. conj., *-e- in the 2 pl. and 3 sg. absol., *-o- in the 1 pl. and 3 pl., *-i- in the 2 sg., *-ī- in the 1 sg.). In the 1 pl. (*karhom) and 3 pl. (*karhont), the *-o- of the subjunctive endings was synchronically interpretable as as shortened version of the *-ǭ- that appeared in the similarly structured 1 pl. (*karhǭm) and 3 pl. (*karhǭnt) of the future. Favored by the morphological opacity of the subjunctive paradigm as a whole and by the isolation of the form *karha in particular, the *ǭ : *o pattern was extended to the 3 sg. via the proportion

fut. *karhǭnt, *karhǭm : subj. *karhont, *karhom :: fut. *karhǭ : subj. X,

where X was solved as *karho. It is not unlikely that the 3 sg. absolute

form of the subjunctive was remade from *karhed* to *karhod* in the same way. The inconveniently close phonetic resemblance of the subjunctives *karhod* and *karho* to the futures *karhọd* and *karhọ* probably explains why only the conjunct form of the subjunctive (MW -(h)o), and only the absolute form of the future (MW -(h)awd), were preserved in the historical period.

In addition to the normal 3 sg. subjunctive in -(h)o, Middle Welsh shows competing forms in -(h)oe (*creddoe* 'may believe') and -hwy (*gwelhvy* 'may see', *rodwy* 'may give', *crettwy* 'may trust', etc.), as well as a certain number of 3 pl. forms on -(h)oent and -(h)wynt (cf. Evans (1964:129)). Such forms are found in Old Breton as well (cf. Fleuriot (1964:305)). In the absence of a proper philological evaluation of the evidence, it is probably best to accept McCone's judgment (101) that these variants reflect the influence of the verb 'to be' (3 sg. *boe[t]* → 3 sg. *creddoe*), with -oe subsequently giving -wy by a Middle Welsh sound law in polysyllabic words. Further research, however, may make it necessary to modify this conclusion.

It remains to consider the origin of the future in *-asā-*. Neither *-asā-* nor *-sā-* is explainable in PIE or Common Celtic terms; it is unlikely, for example, that a form like MW *reddaud* 'will run' goes back to an *ā*-subjunctive based on an *s*-desiderative, or to an ancient denominative present based on a desiderative noun in *-sā* (type Ved. *bhikṣā* 'hunger'). The most promising strategy, therefore, would be to look for related forms closer to home, especially in the verbal system of Old Irish. Here, in fact, there are two unexplained future formations, both with stems in *-ā-*, that arouse suspicion — the future of the verb 'to be' (3 sg. ·bia, *bieid* (subst. vb.), *bid* (cop.)) and the *f*-future of weak verbs (type ·móirfea (·mórfa), móirfid (mórfaid) 'will praise').

The problem posed by OIr. ·bia, etc., lies not in the difficulty of finding a plausible source for the pre-Irish stem *bi(i)ā-*, but in the difficulty of choosing from among a number of apparently viable alternatives. The most obvious comparison, reported somewhat diffidently by Thurneysen (482 f.), is with the Latin subjunctive *fiam, fiās*, etc.[30] Certainly there can be no *a priori* objection to deriving ·bia from a displaced *ā*-subjunctive of the present *bu̯e/o*; on the other hand, there is nothing especially archaic about Lat. *fiā-* and no independent

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[30] The possibility apparently preferred by Thurneysen — that ·bia is simply the consuetudinal present of the substantive verb with secondary *ā*-inflection — is much less plausible. There is no reason to believe that a language in which the future was as deeply entrenched as it was in Insular Celtic would have lacked a distinct future of the verb 'to be'.

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evidence that such a stem ever existed in Celtic. Another "subjunctive" analysis of ·bia, the advantages of which will appear below, might start from an underlying stem *besā-*, i.e., a *b*-prefixed form of the "Italo-Celtic" modal and preterital stem *esā-* (> Lat. *erat* and MW *oed*).[31] It is also possible, with appropriate analogical assumptions, to take ·bia directly from an inherited future. McCone (124) sets up a stem *biwā-se/o-* < *bibwāse/o*, which he explains as a transformation of the inherited desiderative *bibūse/o-*.[32] A case could probably also be made for *bisāse/o-*, i.e., an unreduplicated *s*-future *bi-s(e/o)-* with *-āse/o-* added from the future type *kiklāseti* (> OIr. *célaid*).

The *f*-future is probably the least well understood verbal formation of Old Irish.[33] In many respects it recalls the originally periphrastic *b*-future and *b*-imperfect of Latin, to which it has often been compared. At the most superficial level, the future sign *-fā-* bears a striking phonetic resemblance — sometimes discounted but never denied — to the -b- of the Latin forms, and especially to the -bā- of the imperfect. There is also a noteworthy distributional overlap: the *f*-future is largely restricted to weak, i.e., non-primary, verbs that lacked futures of desiderative origin, in the same way that the Latin future in -bō — though not the imperfect in -bam — is confined to the derivative conjugations in -ā-, -ē- and (optionally) -ī-. A less obvious point of contact appears in the tendency of all weak verbs, including those in *-ā-* (Thurneysen's class A I), to show root-final palatalization before the tense sign, as, e.g., in 3 sg. ·móirfea, móirfid beside ·mórfa, mórfaid. As has been suggested elsewhere (cf. Jasanoff (1988:304 f., with note 18)), this feature probably had its starting point in A I verbs like *anaid* 'stays' and *scaraid* 'separates', which were originally strong and, as such, interposed an *-ē-* (> Celt *-ī-*) between the root and the tense sign (cf. Lat. *dūc-ē-bam* 'I was leading', etc.). A similar *-ē-* is inserted after the root in the periphrastic imperfect of Slavic (cf. OCS *ved-ĕ-axъ*

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[31] To be sure, this stem is not attested with modal value in either Italic or Celtic. But the twofold function of the parallel stem *bh(u)u̯ā-* (cf. OIr. 1 sg. *bá*, ·bá 'I was', Lat. -bam, -bās, etc.; Lat. pres. subj. *fuam, -ās*, etc.), together with the fact that *esā-* is manifestly based on the present subjunctive *ese/o-* (> Lat. *erō*; cf. note 21), leave little doubt that the absence of a modal *esāt* 'may be' is fortuitous or secondary.

[32] Telling against McCone's assumption of a replacement *-ūseti* → *-wāseti* is the failure of the parallel sequence *-īseti* to become *-iāseti* in futures of the type OIr. 3 sg. ·riri (not *·rire) < *rirīset(i).

[33] Compare the review of the problem by McCone (176 ff.).

'dūcēbam'); the phenomenon is of PIE date.[34]

Despite these parallels, however, conventional attempts to derive the *f*-future from a periphrastic construction in *-b(w)-* invariably encounter a seemingly insurmountable phonological obstacle. Common Celtic intervocalic *-b-*, including *-b-* from *-bw-*, gave Old Irish *-β-*, a voiced segment that contrasted in most environments with the voiceless fricative *-f-*. OIr. *-f-* is the regular reflex of earlier *-hw-* < *-sw-*, but not of original *-b-*.[35] Many ingenious attempts have been made to resolve this difficulty, some by inventing novel periphrastic constructions (e.g., Bammesberger (1979), Jasanoff (*ibid.*)), others by abandoning the connection with the Latin *b*-tenses entirely (e.g., Watkins (1966), McCone (180 f.)).[36] It is probably safe to say that no proposed solution has met with a wide degree of acceptance.

It is thus far from obvious that OIr. *·bia* and the *-fā-* of the *f*-future have any connection with each other, to say nothing of their possible relationship to the Brittonic future. But there is indeed a way that all three formations can be explained together, and the resulting picture of the Insular Celtic verb is sufficiently attractive to warrant a short account here. Let us assume, for reasons that will emerge directly, that the ambiguous future of the verb 'to be' in pre-Irish, and in Insular Celtic, was in fact based on the stem **besā-* (i.e., **b-* + **esā-*; cf. above). OIr. *·bia* and *bieid* would then go back to 3 sg. **besāt(i)* 'will be'; the same preform would also neatly explain the Old Welsh gloss *hac-boi* 'erit', if this is not simply a specialization of the subjunctive *boi* < **beset(i)*. The mere juxtaposition of the preforms **besāt(i)* 'will be' and **beset(i)* 'may be' suggests the probable source of the future in **-asā-*. For if, as here posited, the inventory of Brittonic copular forms included both **besā-* and **bese/o-*, it would

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[34] The origin of this morpheme is discussed in Jasanoff (1978:120 ff.), where it is argued that *dūcē-* and *vedē-* go back to instrumental case forms employed predicatively. The syntagma is described by Hoffmann (1952/1956).

[35] The details of the distribution of *-f-* and (less frequent) *-b-* in the *f*-future are given by Thurneysen (396 ff.).

[36] Bammesberger argues for a periphrasis with the present participle in *-nts* (nom. sg.), a category not found in Insular Celtic. My own earlier discussion of the *f*-future implausibly assumes the presence of a particle **s* between the verbal stem and the *b*-element. Watkins sets up a class of desiderative presents in **-sw-ā-* based on an adjectival formation (the type Ved. *jigīṣú-* 'desiring to conquer') unknown outside Indo-Iranian. McCone's theory makes the whole *f*-future analogical to a hypothetical forerunner of the single form *soifid* 'will turn'. Other scarcely credible initiatives include Sommerfelt's suggestion (1926) that Celtic **-bw-* gave **-ww-*, whence *-f-* in Old Irish, and Quin's attempt (1978) to show that the *b*-spellings in the Glosses are more archaic than those with *-f-*.

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have been a simple matter for speakers to establish a proportion

*beset(i) 'may be' : **besāt(i)* 'will be' :: **karaset(i)* 'may love' : X,

where X was solved as **karasāt(i)* 'will love'. The Brittonic future in **-asā-* can thus be regarded as an analogical extension of the future of the verb 'to be'.

The hypothesis of an Insular Celtic **besāt(i)* 'will be' also affords an insight into the problem of the *f*-future. Let us suppose that Common Celtic inherited the same periphrastic construction as the one which underlies the Latin *b*-tenses. In effect, this is equivalent to the assumption that a verb like PCelt. **an-* 'stay' formed its future — or a paraphrase of its future — by adding the appropriate forms of the verb 'to be' to the extended stem **an-ī-* (< **an-ē-*). While it is impossible to be sure of the identity of the copular form in this construction, it is obvious that in Insular Celtic, at least, the stem **besā-*, which supplied the free-standing future of the verb 'to be', would have been a strong candidate. It is worth considering, therefore, how the hypothetical sequence **anī-besāt(i)*, literally, 'will be staying', would have been treated in Old Irish. After lenition, the change of internal **-e-* to **-i-* before **-s-*, and the change of medial **-s-* to **-h-*, **anībesāt(i)* would have given pre-Irish **anīβihāθ(i)*. Under the normal sound laws this would in turn have given OIr. **ainbid* (absol.) and **·ainbea* (conj.), with voiced **-b-* rather than the *-f-* of the actual forms *ainfid* and *·ainfea*. But it must be remembered in this connection that periphrastic verbal forms, and especially long ones, are notoriously subject to "irregular" shortenings of various kinds. Familiar examples are quotable from the history of the Romance future (cf., e.g., Ital. *canteremo* 'we will sing' for **canteravemo*, Fr. *chanterons* for **chanteravons*); other cases include colloquial Eng. *I'm gonna* for *I'm going to* and the Lithuanian conditional, where forms like 1 pl. *bė́gtume* 'we would run' rest on a periphrastic construction with an old optative of the verb 'to be' (*bė́gtumbime*). In the hypothetical 3 sg. **anīβihāθ(i)*, the **-ī-* of the third syllable was a short high front vowel, prone to syncope on typological grounds and situated in an open syllable between two long syllables. Moreover, in other futures of the same type the sequence **-βi-* would have constituted the fourth, or even the fifth, syllable of a still longer phonological word (e.g., **soδiohaγīβihāθro*, corresponding to OIr. *·suidigfethar* 'will put'). Under the circumstances, it is tempting to speculate that the group **-βih-* was precociously syncopated to **-β'h-* in pre-Irish, which in turn yielded **-f-* by assimilatory devoicing. **anīβihāθ(i)* would thus have developed

via *aníβ'hāθ(i) and *anífāθ(i) to the regular f-future ainfid, -fea.[37]

The assumption of an Insular Celtic future *besā-, then, confers a number of advantages. First of all, it provides a direct explanation for the future of the verb 'to be' in Old Irish (·bia, bieid, etc.) and perhaps in Old Welsh (hac-boi). *besā- is not unique in this respect; reconstructing a stem *biiā-, for example, would account for ·bia (and -boi) just as easily. But *besā-, by also furnishing a coherent account of the Brittonic future in *-asā- and the notoriously recalcitrant Old Irish future in *-fā-, accomplishes a great deal more than any of its potential rivals. Indeed, it permits a major enlargement in our understanding of the Insular Celtic verbal system, the relevant portion of which can now be displayed as follows:

	subjunctive	future
strong verbs	1) s-subj. (< s-aor. subj.) 2) ā-subj. (= Lat. ā-subj.)	strong futures in *-(ā)se/o- (< desid.'s in *-(h₁se/o-)

weak verbs	ā-subj. (< *-āiā-, *-eiā-,
	   *-iiā-, etc.)
		periphrastic future in
		   *-ī-besā-, *-ā-besā-

'to be'	*b(w)e/o- (< root aor. subj.); 1 sg. *besū (< *b- + *esō)	*besā- (< *b- + *esā-)

This system was preserved with few alterations in Old Irish. In Brittonic, however, both the subjunctive and the future were subject to far-reaching changes:

1) In the *subjunctive*, the weak verbs with presents in *-ā- remade their subjunctives in *-ā- (< *-āiā-) to *-āse/o-. The new sequence *-āse/o-, analogically shortened to *-ăse/o-, subsequently spread at the expense of the s- and ā-subjunctives, leaving only a few relic forms like MW gwnech, gwares, etc. and el. At the same time, the subjunctive of the verb 'to be' was partly or wholly remade to *-bese/o-.

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[37] A scenario very close to this one was clearly considered by Thurneysen, who rejected it as follows: "Nor are there any parallel instances which would support the assumption that at an earlier period Irish had forms with -bes(ā)-, whence *-βehā-, and that -e- was syncopated before h (from s) had become silent, so that βh gave f" (398). Our discussion here has sought to show that the stem *besā- is independently well-motivated in Celtic, and that the proposed early syncope to *-βh-, while unique in Irish, can be supported by abundant typological parallels from other languages.

2) in the *future*, the pattern *bese/o- : *besā- induced the analogical creation of a class of futures in *-asā- beside the subjunctives in *-ase/o-. The new forms in *-asā- eventually replaced the reduplicated strong futures and the phonetically similar, but more unwieldy, periphrastic futures in *-besā-.

Thus, in virtually every case where the Irish and Brittonic systems diverge, it is Brittonic which can be shown to have innovated.

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