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The Indo-European Origins of the Old Irish Nasal Presents, Subjunctives and Futures

Innsbruck 1991

In the present work an attempt has been made to provide a reasonably up to date and comprehensive review of the main approaches to each of the major topics considered. In the subjunctive and desiderative-future sphere especially the literature is so vast and the range of divergent or conflicting opinions so wide that picking one's way through the maze has proved particularly difficult and significant contributions may have escaped attention. Whereas many of the views on the nasal-infix presents expressed in chapters one to three differ quite markedly from those in the Oxford paper, the latter's conclusions about the Old Irish subjunctive formations have been broadly retained with some significant differences of detail in chapters four and five. Chapter six is concerned with a problem not touched upon in Oxford, and the main innovations in the seventh relate to the vexed question of the shape of the PIE desiderative suffix after resonants.

Length marks have been placed over Latin vowels only where this seemed likely to clarify an argument, and for convenience the diacritics have been omitted from the Hittite sounds usually transcribed *ḫ* and *š*.

Finally, I wish to thank Professor Wolfgang Meid and his helpers in Innsbruck for their remarkable speed and efficiency in getting this into print and Dr. Damian McManus of Trinity College, Dublin, for reading the typescript and drawing upon his unrivalled knowledge of primitive Irish phonology to make a number of helpful suggestions and corrections. For remaining errors and inaccuracies I alone am to blame.

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CHAPTER ONE

Celtic treatment of the vocalic sonant before and the laryngeal after the infix of PIE nasal presents *ultimae laryngalis*

1. The present investigation will take as its starting point roots with an erstwhile final laryngeal and a shape C(R)ṚH in the zero grade. The Old Irish reflexes of these are mostly to be found in Thurneysen's B IV and B V classes (McCone's S 3). Apart from the deponent -*cluinethar* "hears" and a few cases of post-syncope palatalization such as prot. -*fuibnim* vs. deut. *fo:benaim* "I cut off", both categories typically display non-palatal -*n*(-) throughout the present stem only (*GOI* 356-7; *EIV* 32). As a rule the nasal formans is directly preceded by *i*, which remains unaltered in B V but is lowered to *e* in B IV. Often enough this seems to continue a PIE *i* (*GOI* 356), e. g. 3sg. conj. -*ben* (OBr. *et-binam* gl. 'lanio') "beats" < **bina*- < *b^hi-n-h_2- (pass. -*bíth* < *b^hih_2-to*-; cf. OCS. *bi-ti*, Lat. *per-fines* 'perfringas'), -*cren* (MW. *pryn-u*) "buys" < *k^wri-n-h_2- (*críth* "purchase" < *k^wrih_2-tu*-; cf. OInd. *krīṇāti*, Gk. aor. mid. ἐπρίατο), -*fen* "weaves, fences" < **wi-n-h_2*- (past pple. *fíthe* "woven, wattle" < **wī-tyo*- < **wih_2-t*-; cf. OInd. *váyati*, Lat. *viet*, OCS. *vi-ti*), -*len* "sticks to" < *h_2li-n-h_2- (Skt. *liṇāti* "clings", Lat. *linit*, Gk. ἀλῑνει "smears"), -*glen* "sticks" (MW. *glyn-u*) < **gli-n-h_2*- (OHG. *chlinu* "stick, smear", Gk. γλοιός "gum", Lith. *gliẽ-ti* "smear"). There is no obvious reason why a similar derivation should not apply to the etymologically obscure *tinaid* "melts".

As Joseph points out (1982, 45-7), there are some good examples in British especially of stems with a shape C*ar/l-n*- that can hardly be other than the reflex of a zero-grade nasal-infix present C*ṛ/ḷ-n*-H-, e. g. W. *sarn-u* "strew, trample" < **sṭṛ-n-h_3*-. Similarly W. *pall-u* "come to an end, cease, fail, refuse", which I would derive from *$k^wḷ$-n-h_2- (cf. OInd. *cárati* "moves", aor. *acārīt*, vbal. adj. *caritá*- etc., Lat. *colit* "(moves around), inhabits, cultivates" etc.). W. *aball-u* "die" ultimately continues (**ad* +) *$g^wḷ$-n-h_1*- like secondarily thematised Gk. βάλλει "throws" (vbal. adj. βλητός < *$g^wḷh_1$-tos*), on which see Strunk (1967, 43-4).

Finally, W. *barn-u* "judge" is best traced back to *$g^wṛ$-n-h*- (cf. W. *brawd*, OIr. *bráth* "judgement" < *$g^wṛh$-tu*-) and compared with OInd. *gṛṇáti* "pronounces, praises", as convincingly argued by Wagner (1961,

240-1). An Irish relic is the rare and apparently deverbative glossary word of unknown declension *barn* "(a) judge", which is presumably cognate with W. and Br. *barn* "judge(ment)" (cf. Joseph, ibid., 48, and for the semantics W. *gwlad* "land, kingdom", OIr. *flaith* (fem.) "sovereignty" and then "sovereign, king, lord"). Hamp's (1976) invention of a seṭ root *$*b^herh$-* "say" otherwise prone to fall together with well attested aniṭ *$*b^her$* "bear" in order to account for these forms is quite arbitrary, as is de Bernardo Stempel's (1987, 88) compromise explanation of W. *barnu brawd* "judge/give a judgement" as *$*b^hr̥$-n-* plus *$*g^wr̥h$-tu-*.

As should become clear in chapter 5,7, a nasal present **barnaid* or **bernaid* meaning "pronounce (judgement)" would normally have developed an *a*-subjunctive **-bera*, a *t*-preterite **-bert* and a preterite passive **-breth* in Old Irish, thus falling together with *berid*, *-beir* "bears" everywhere outside the present stem. Whether originally an old verbal adjective (later pret. pass.) of **ber-* "bear", as surmised by Wagner (1961, 240-1), or a later reshaping of the same category belonging to **be/arn-*, as I am inclined to believe, the OIr. nominalization *breth* "judgement" < **bri-tā* presumably replaced *bráth* as the verbal noun. One might then suggest that the expression *birt brith* etc., originally a *figura etymologica* meaning "judged a judgement", was eventually reinterpreted as "bore a judgement" with the result that the present became *berid brith* instead of the **barnaid* (**bernaid*?) *brith* (earlier *bráth*) corresponding to W. *barnu brawd*.

2. Old Irish *a-t:baill* "dies" (lit. "throws it [own life] over", pl. *a-t:ballat*) is, of course, cognate with W. *aball-u*. Secondary thematization to **bal-ne/o-* is a phonetically obvious explanation for the palatal *-ll* in the 3sg. conj., but its inapplicability to the essentially similar BV verbs below constitutes a major morphological disadvantage. As has long been realised (e. g. *VKG* II 339), BIV inflection of the type 3sg. *-cren*, pl. *-crenat* presupposes an earlier *$*k^wri$-na-t(i)*, *$*k^wri$-na-nt(i)*. This will have superseded *$*k^wrinā$ti*, *$*k^wrinanti$*, the expected outcome of PIE *$*k^wrinéh_2$-ti*, *$*k^wrinh_2$-énti*, through straightforward inner-paradigmatic generalization of the short-vowel plural form *-na-*, now resegmented as a suffix (cf. Sjoestedt, 1926, 4, and ch. 5, 7). As I have argued elsewhere (1986, 226-7), PIE 3sg. *$*g^wl̥néh_1$-ti*, 2pl. *$g^wl̥nh_1$-té*, 3pl. *$*g^wl̥nh_1$-énti* should have yielded Celtic **balnī-ti*, **balna-te*, **balne-nti*, a stage probably followed by homogenization of the plural to produce 3pl. **balna-nti*. The stem vocalism of most BV presents and certain otherwise problematic categories such as the Insular Celtic *á-* and *t*-preterites (see ch. 4, 4) can be neatly accounted for on the assumption that, apart from *ē/i* (< *ey/i*), paradigmatic ablaut alternations of length plus quality were initially simplified in Proto-Celtic to ones of length only on the basis of the (3)sg. vocalism (McCone, 1986, 228-9, 231, 236-7). In the present instance this implies **balna-te*, **balna(/e)-nti* > **balni-te*, **balni-nti* on the strength of **balnī-ti* etc. Generalization of the short-vowel plural variant in the normal way then gives 3sg. **bal-ni-t(i)*, 3pl. **bal-ni-nt(i)* (see McCone, 1979, on abs. **-(n)ti(-E)* < **-(n)ti-E* vs. conj. **-(n)t* < **-(n)ti*), whence OIr. *-baill*, *-ballat*. Nom. sg. *athair* 'father' < **atīr* might provide a parallel for the non-palatalization between *a* and retained *i*, but could be analogical to, say, acc. sg. *athair* < **aterem*. Greene's (1973) doctrine that retained *i*, unlike *e*, did cause palatalization of a single consonant in this environment need not have applied to **balli-*, if the *-ll-* < **-ln-* was a double consonant at this stage.

The traditional explanation (e. g. *VKG* II 339, *GOI* 357) of the lack of lowering *i* > *e* in BV presents such as *ar-a:chrin* "perishes", *do:lin* "floods" involves a *-nu-* present suffix of the type well-known in Hittite (as a causative), Greek, Indo-Iranian and Armenian. This is morphologically dubious because the roots in question had a final laryngeal strictly compatible only with an infixing C(R)R̥-*n*-H- nasal present. In this connection its is indeed, as Puhvel suspected (1960, 40), "significant that the rare instances (apart from A^w verbs) where other IE languages show a *-neu-* formation as against an infixed 9th. class verb in Sanskrit entail E" (i. e. h_1 in the notation preferred here).

Suffixed **-nu-* could only have replaced the resultant **-na-* or **-ni-* if it was productive in Celtic. Given that the only OIr. examples of such a *-nu-* suffix with tolerably convincing cognates elsewhere are *-men* below and the probably deverbative noun *cin*, gen *cinad* "fault" < *$*k^wi$-nu-t-* (cf. Gk. τίνυται "punishes" and perhaps OInd. *cinóti* "accumulates"), this possibility can be firmly rejected. Indeed, so unproductive was *-nu-* that it seems, even when due to infixing in the root *$*klew$* "hear", to have been replaced by **-ni-* in the OIr. deponent *-cluinethar* "hears" instead of the expected outcome **-calnathar* or **-clinathar* of PIE *$*kl̥-n-u-tór$* (OInd. act. *śr̥nóti*, mid. *śr̥nuté*; see McCone, 1986, 238-40 on the late prehistoric Irish use of divergent syncope patterns to differentiate third person deponent from passive forms). The obvious explanation for this is the simultaneous regularization of anomalous root and suffix shapes by inversion of inherited **kli-nu-tor* (see below) to **klu-ni-tor* (cf. pret. pass. *-cloth* "was heard" < **klu-to-*, pres. **bal-ni-* etc.), whence OIr. *-cluinethar* straightforwardly enough.

The morphologically obvious derivation of BV presents of the shape C(R)*in*(-) from C(R)*i-ni-* < C(R)R̥-*n-h*$_1$- in exactly the same way as *-baill*

above becomes phonetically unproblematical too, if we posit a late prehistoric depalatalization of their *n* under the influence of the similarly inflected but larger BIV class *-cren* etc, e. g. *(ara)-chrin* < **-chrin'* < **-kri-ni-*. However, OIr. *do:dimen* (later *do:uidmen*), *-tuidmen* "fixes" may well be a compound of **to* + **dī* with a cognate of OInd. *minóti* "fixes", as suggested by Marstrander (1924, 11-13). If so, *-men* presumably either represents the regular unstressed outcome of **-min* (with depalatalized *n*) < **-min'* < **-mi-ni-*, with *-ni-* replacing *-nu-* in tandem with **kli-nu-* > **klu-ni-*, or a rather later remodelling of **-mi(u)n* < **mi-nu-*. At all events it would seem that, whereas the nucleus of BIV comprises old nasal-infix presents to C(R)R̥h_2 roots, in BV it consists rather of an otherwise identical formation based on C(R)R̥h_1.

Although the majority of attestations are fairly late and display a typical Middle Irish regularization of the paradigm from the present stem to give forms like the *ro*-augmented *s*-pret. *ro:den* "sucked" (*EIV* 228-33), *-den* "sucks" was clearly BIV in Old Irish on the strength of two examples of its original reduplicated preterite, namely 3sg. abs. *dith* = *did* and rel. *dide*. Although showing an innovatory *s*-preterite with erstwhile deponent ending (*EIV* 236-7) linked to the present stem, *ro:dinastar* glossing *dith* is hardly serious evidence for BV *-din*, despite *DIL*'s curious decision to list the verb as *dinid*. Rather it is a Middle Irish hybrid between old *ro:did* and new *ro:den* that has a precise parallel in the augmented *s*-pret. *ro:lin* "has clung" (Ml. 54^{d}7) of BIV *-len*, a form likewise mid-way between original *ro:lil* and fully regularized *ro:len* (*EIV* 233). Given, then, that OIr. *-den* was BIV and undoubtedly based on a PIE root containing h_1, it might appear to contradict the above rule whereby the nasal presents of roots with erstwhile *-h_1* became BV and not BIV in Old Irish.

However, the PIE root in question was not straightforward **d^heyh_1* but rather an unusual type opposing full grade **$d^h\bar{e}$* (e. g. Lat. *fē-mina*) to zero grade **$d^h\bar{\imath}$* (e. g. Lat. *fī-lius*) that was first recognised by Schulze (1885) and later analysed by Benveniste (1935, 169) as **$d^heh_1(y)$*. Although the whole matter remains problematical (cf. Lindeman, 1987, 71-5), the zero grade **$d^h\bar{\imath}$* is now usually explained as < **d^hih_1* < **d^hh_1i* through a metathesis of laryngeal and syllabic semivowel (cf. Mayrhofer, 1986, 175) that also has other uses.

At an rate, since OIr. *-den* is the only nasal present attested from a root whose shape was quite unsuited to such a formation in PIE, it rather obviously constitutes a Goedelic or (Insular?) Celtic innovation, Sjoestedt even regarding it as "une de ces racines qui ne fournissent de présents qu'à l'aide de suffixes de dérivation ou d'élargissements variant d'une langue à l'autre, en l'absence d'un présent ancien" (1926, 33). Since both full and zero grade would have become **dī-* in Celtic, there would have been no shortage of similarities with the BIV or BV type outside the present, e. g. subj. **-dia* < **diy-ase-t(i)* by the expected remodelling (see ch. 5, 7) of **dī-se-ti* < **d^heh_1-s-e-ti*, pret. *did* probably < **didi-* with generalized zero grade like *-lil* < **-li-li-* etc., fut. **-didi* < **di-dī-se-t(i)* < **d^hi-d^hih_1-se-ti* like *-lili* < **li-lī-se-t(i)* etc. and pret. pass. **-díth* < **d^hih_1-to-* (cf. OInd. vbal. adj. *dhītá-* of *dhāyati* "sucks"). Consequently it is easy to motivate the analogical creation of a new nasal present by means of *-na-*, which was preferred to *-ni-* for the simple reason that it was the commoner of the two. An obvious proportion would be supplied by the preterite passive (or verbal adjective) and present stems, whence, say, **$k^wr\bar{\imath}$-to-* : **k^wri-na-ti* = **dī-to-* : *x* (*x* = **di-na-ti*). That, of course, means that, as a relatively late prehistoric innovation, *-den* does not contravene the rule predicting a BV outcome in Old Irish for old nasal presents to roots with final h_1.

3. The nasals *n* and *m* occupy an ambiguous position with regard to the well-known dual Proto-Celtic treatment of *r̥/l̥* which yielded *ri/li* before stops but otherwise *ar/al*. Since the *ri/li* treatment before *m* is demonstrated by OIr. *cruim*, W. *pryf* "worm" < **k^wrimis* < **$k^wr̥mis$* (OInd. *kr̥miḥ*, Lith. *kirmìs*), it was natural for scholars such as Pedersen (*VKG* I 42-5), Marstrander (1924) and Watkins (1958, 90-1) to assume a similar reflex before *n* on the strength of equations like OIr. *-tlen* "removes" (< **tli-na-t(i)*), Lat. *tollit* "raises, removes" < **tl̥-n-h_2-* and OIr. *ar-a:chrin* "perishes" (< **kri-ni-t(i)*), Skt. *śr̥nāti* "destroys" < **kr̥-n-h_1-*. However, identity of treatment before *n* and *m* is hardly inevitable, and forms such as OIr. *a-t:baill*, W. *aball-u*, *pall-u*, *sarn-u*, *barn-u* above provide strong evidence for Proto-Celtic *r̥/l̥* > *ar/al* before *n* under certain circumstances at least. A further Old Irish example of this development is *-mairn* "betrays", which inflects like *a-t:baill* and will have been remodelled from **-marn* (< **marna-* < **mr̥-n-h_2-*) under its influence if, as seems probable, cognate with Gk. μάρναται "fights (with)", OInd. *mr̥ṇáti* "seizes, robs" (cf. Thieme, 1939; Wagner, 1961b, 4; 1967). Watkins' suggestion (1958, 90) that the *ar*, *al* in W. *sarn-u*, OIr. *-baill* and *-mairn* may be a "morphological zero-grade" replacing older *ri*, *li* can hardly be accepted in the absence of a plausible source of pressure in these or similar paradigms towards such reshaping.

There is also much to be said for Joseph's idea (1982, 48) that OIr. *-follnathar* "rules" is remodelled from an older **-fallathar* < **-wal-na-tor*

< *$w\dot{l}$-n-h_2-tor, a nasal-infix present to the root seen in Toch. A *wäl*, B *walo* "king" < *$w\dot{l}h_2$-ont-s*, obl. A *lānt*, B *lānte* < *$w\dot{l}h_2$-nt-* and OIr. *flaith* "lord(ship)", MW. *gwlad* "land". The latter word's vocalism is probably due to generalization of a new synchronically regular zero grade **wla-* (replacing expected **wlā-*, or perhaps rather **wula-* in the light of McCone, 1985) to an inherited full-grade alternant **wela-* in an originally proterokinetic paradigm (nsg. **wélh₂-ti-s*, gsg. **$w\dot{l}h_2$-téy-s* etc.). If **(w)ulna-* rather than **walna-* was the regular Proto-Celtic outcome of **$w\dot{l}nh$-* (cf. OIr. *olann*, W. *gwlan* "wool" < **(w)ulanā* < **$h_{2/3}w\dot{l}h_1neh_2$*, on which see Peters, 1987), the latter could have replaced the former as a match for subj. **wel-ase-* on the model of **mar-na-*, **bal-ni-* vs. subj. **mer-ase-*, **bel-ase-* etc. In any case OIr. *-foll(n)athar* can be ascribed to a late prehistoric **wa-* > **wo-* parallel to the well-known **k^wa-* > **k^wo-* seen in *corgus* "Lent" < Lat. *quadragesima* etc. and potentially useful for explaining correspondences like OIr. *foss* "youth, servant" vs. MW. *gwas*, Gaul. *uasso-* (cf. *GOI* 50).

Rightly rejecting Thurneysen's implausible explanation of *-follnathar* as originally denominative to *follán* "sound", Joseph (ibid.) nevertheless suggests that the remodelling was triggered by a later connection of the verb with that adjective. Since the well attested assimilation of an *ln* syncopated from *lVn* to *ll* in the Old Irish glosses was countered by a tendency to retain *ln* in writing and, probably, educated speech (McCone, 1985b, 85-6), hypercorrection of **-follathar* to *-follnathar* under the influence of *follán* and the pattern seen in *-comallathar* for *-comalnathar* "fulfils", denominative to *comlann* "complete", seems likely enough. The weak inflection of *-foll(n)athar* is no obstacle to this explanation since, as Watkins points out (1962, 190), the old pre-syncope assimilation of *-na-* to a directly preceding *-l-* caused resegmentation as *-ll-* plus *-a-*. The resultant forms then shared the fate of primary *a*-verbs like *anaid* "stays" or *scaraid* "separates" and went over to the weak *a*-inflection, a development that will be discussed in ch. 5, 8. In the present instance this implies **wal-na-* > **wall-a-* with subsequent modification to **wall-ā-* in the present and spread of **wall-a-* to the other stems in place of inherited **wela-* < **welh₂-* etc. (cf. pres. *-scara* as the basis for subj. *-scara*, pret. *-scar* instead of historically regular **-scera*, **-scer*).

This array of examples encouraged Joseph (ibid., 46-7), now followed by de Bernardo Stempel (1987, 25, 32 and 39), to take up a suggestion of Hamp's (1965, 227, n. 5) and argue that *ṛ/ḷ* > *ar/al* had been regular before *n* in Proto-Celtic. On the other hand, "I tentatively suggest that the certain cases are best explained by positing *ṛ*, *ḷ* > *ri*, *li* before *n*

unless they were preceded by *s* (including < *st-*) or a labial (excluding *p*, which had already been lost, but including *b* < *g^w* by a still earlier change. . ..), in which case *ar*, *al* resulted" (McCone, 1986, 225). In addition to being suspiciously *ad hoc* overall, the latter formulation is certainly too narrow, since the *ṛ/ḷ* > *ar/al* before *n* is convincingly documented after *s(t)*, *b* (< *g^w*), *w*, *k^w*, *m* and seems unlikely to postdate the demonstrably late Proto-Celtic loss of *p* (McCone, forthcoming). Moreover, a reformulation as *ṛ/ḷn* > *ar/ln* except after dental or guttural (but not labiovelar) stops, where > *r/lin*, seems to be excluded by MW. *darn-u* "tear up". This, as Joseph (ibid., 48-9) points out, shows **dṛn-* > *darn-* regardless of whether the root in question was seṭ **derh* or aniṭ **der* "tear", since the former implies an old present **dṛ-n-h-* (OInd. *dṛṇāti*) and the latter a denominative to *darn* "bit" < **dṛ-no-*. It thus seems highly desirable to posit phonetically unconditioned *ṛ/ḷ* > *ar/al* before *n* in Proto-Celtic with Joseph, but that still leaves a few apparent instances of a *ri/li* reflex to be accounted for by other means.

Joseph (ibid., 46) discounts *ar-a:chrin* "perishes" on the grounds that OIr. *crín* (W. *crin*) "decrepit" is morphologically more likely to be from zero-grade **ḱrih-no-* than full-grade **ḱreh₁-no-*. This casts doubts upon the standard comparison with OInd. *śṛṇāti*, the aorist (*aśarīt*) of which in any case implies full grade **ḱerh* not **ḱreh*, and the root involved may well be **ḱrih₁* rather than **ḱṛh₁*. The problem of transitive meaning for *śṛṇāti* "destroys" versus intransitive for *ar-a:chrin* "perishes" can be resolved by invoking the latter's regular neuter infix pronoun to give an original meaning "destroys it [own life], snuffs it" (cf. *a-t:baill* "(chucks it =) dies" above). Nonetheless, **ḱrih₁* has the advantage of a likely British congener in the shape of W. *go-gryn-u* "sift, cleanse, riddle". This compound of **wo* (< **upo*) with a present **kri-n*V- is obviously cognate with Gk. κρῑ́νει "separates, determines" (< **krin-ye-*), Lat. *cernit* "sifts, separates, discerns" (< **krineti*). Whereas aniṭ forms of this root such as Gk. κριτός, Lat. *certus* (< **kritos*) could easily have introduced the vocalism inherited in pres. **kri-n-* (cf. the reverse process in OInd. vbal. adj. *krītáḥ* < **k^wrih_2-tós* and then pres. *krī-ṇá-ti* for **kri-ṇáti* < **k^wri-né-h_2-ti*), seṭ forms such as Lat. *discrīmen* are not so susceptible to analogical explanation. This consideration plus the secure attestation of a nasal present in at least three branches indicates a PIE root **ḱr(e)ih*.

That being so, we may eliminate *ar-a:chrin* "perishes" (lit. "sifts it [own life]", i. e. "sets it aside"?) as a secure example of *krini-* < **ḱṛ-n-h_1-* by positing a plausible alternative derivation < **kri-ni-* < **ḱri-n-h_1-*. *Crín* "decrepit", if from **ḱrih₁-no-* and not a full-grade form **ḱreh₁-no-*

cognate with OInd. *śṛṇāti*, might then originally have meant something like "riddled" along the lines of Modern English "put through the mill". A further argument for underlying **ḱr(e)ih₁* rather than **ḱr(e)h₁* or **ḱ(e)rh₁* is provided by this verb's *i*-future (see *EIV* 45-6) 3sg. *-chíuri* presupposing **ḱi-ḱrih₁-se-ti* rather than **ḱi-ḱṛh₁-se-ti* (> **-chíura*). However, the form could be analogical to that of other verbs with this OIr. root shape and anyway is attested in a manuscript too late for spelling confusion between *-a* and *-(a)i* (*EIV* 222) to be definitely ruled out. The preterite (*-chíuir*) and subjunctive (*-chria*), on the other hand, seem impossible to derive from forms with "state I" **ḱerh₁*, but "state II" **ḱreh₁* could resolve these difficulties. The latter, of course, can hardly be posited without abandoning the traditional but semantically problematical equation of *(do)-tuit*'s suppletive preterite *(do)-cer* "fell" with OInd. *aśarīt* "destroyed" < **(e-)ḱerh-t* (e. g. *VKG* II 378; de Bernardo Stempel, 1987, 75).

Do:lin "flows, abounds", used to gloss Latin *manare*, *pullulare*, *pollere* and *pollucere*, has been compared with OInd. *pṛṇāti* "fills" (e. g. *VKG* II 566), and can now be derived direct from **pl̥-n-h₁-* (cf. Lat. *im-plet*, *-plere*, *-plevit*, *-pletum* etc.) instead of an inexplicable **pl̥-n-u-*. A possible alternative to this etymology would be **li-n-h₁-*, a solution supported by the hapax fut. *do:lili* glossing 'appendat' at Ml. 30c13, if it really does belong here as suggested by Pedersen (ibid.). This form reflects an old desiderative **li-lih-se-t(i)*, whereas the expected future of a *-lin* from **pl̥-n-h₁-* would be **-lebla* < **pi-plā-se-t(i)* < **pi-pl̥h₁-se-ti*. However, *do:lili* seems more likely to be based upon a nonce compound of *-len* "adheres to" with fut. *-lili* < **li-(h₂)lih₂-se-t(i)*. Be that as it may, a derivation *-lin* < **li-n-h₁-* raises the possibility of an etymological connection with OInd. *riṇáti* "releases, lets flow". However, the intransitive/transitive discrepancy is problematical, as is this etymology's incompatibility with the **h₃ri-n-h-* presupposed by Rix's (1965) cogent argument for a connection between *riṇáti* and Gk. ὀρίνει (< **orin-ye-*), not to mention OIr. *riathar* "torrent", W. *rhaeadr* "waterfall" < **reyatro-* < **h₃reyh-tro-*. As we shall see later, a preferable solution is available.

4. The most serious obstacle confronting the hypothesis of a general Proto-Celtic development *ṛ, ḷ* > *ar, al* / ___*n* is the comparison of OIr. *-tlen* "removes" with Lat. *tollit* "raises, removes" < **tl̥-n-h₂-*. Joseph himself recognises it as "the only undisputed counter-example to the proposed sound law" (1982, 46) without further explanation, while de Bernardo Stempel (1987, 147) shares Hamp's doubts as to whether the two

presents can be directly compared and suggests that *-tlen* may be due to late remodelling from (-)*tli/e*(-) outside the present and/or the *-cren* class. Certainly the equation seems too good to be lightly abandoned and, if we really are dealing with a sound law, it seems legitimate to seek a morphological motivation for this otherwise embarrassing exception to it.

As will emerge in chapter 5, OIr. *t*-preterites such as *-melt* "ground", *(at)-belt* "died", *-sert* "arranged", *-mert* "betrayed" point to earlier *s*-aorists of the shape **mĕla-s-*, **bĕla-s-*, **stĕra-s-*, **mĕra-s-*. These in turn are probably based upon old root aorists of the type 3sg./pl. **mélh-t/*mḷh-ént*, **gʷélh₁-t/*gʷḷh₁-ént*, **stérh₃-t/*stṛh₃-ént*, **mérh₂-t/*mṛh₂-ént*, the tendency of nasal-infix presents to correlate with such formations in PIE having been established by Strunk (1967). That the strong form of these roots displayed full grade I CERH rather than II CREH receives internal confirmation from the OIr. *a*-subjunctives *-mela* < **melāþ* < **mel-ase-t(i)* < *s*-aor. subj. **mélh-s-e-t(i)*, *-bela* < **gʷélh₁-s-e-ti*, *-sera* < **stérh₃-s-eti*, *-mera* < **mérh₂-s-e-ti* as well as by *-ern*'s subj. *-era* < **pérh₂-s-e-ti* in accordance with an analysis that will be justified in chapter 5. This is further corroborated outside Celtic by forms such as Gk. them. aor. 3sg. ἔζελε (Arcadian), 3pl. ἔβαλον "threw" (< **é-gʷelh₁-t*, **é-gʷḷh₁-ent*, but see ch. 2, 4), OInd. root aor. *astarīt* "strewed" (< **é-sterh₃-t*, see Jamison, 1988). In the case of W. *pall-u* "come to an end", *barn-u* "judge" and, if seṭ rather than aniṭ (see Strunk, 1967, 63), *darn-u* "tear up" the lack of good inner-Celtic evidence for a CERH full grade is compensated for by forms such as OInd. vbal. adj. *cari-tá-* "moved", fut. *cari-ṣyati* "will move", *gari-ṣyati* (of doubtful significance as rather late and isolated) and (aniṭ) aor. *á-dar* "ripped", Gk. pres. δέρει "flays".

It thus looks as if Insular Celtic nasal presents with the shape CV*r/l-n*V- regularly corresponded to full grade I C*er/la-* in the old aorist indicative and subjunctive: OIr. *-ern* "gives" (pres. **p(e)r-n-h₂-*, aor. **perh₂(-s)-*), OIr. *-sern*, W. *sarn-u* "strew(s)" (pres. **st(e)r-n-h₃-*, aor. **sterh₃(-s)-*), OIr. *-cella* "goes (around)", W. *pall-u* "come to an end" (pres. **kʷ(e)l-n-h₂-*, aor. **kʷelh₂(-s)-*), OIr. *-ella* "approaches" (pres. **p(e)l-n-h₂-*, aor. **pelh₂(-s)-*); see ch. 2, 3), OIr. *(at)-baill*, W. *(a)ball-u* "die(s)" (pres. **gʷḷ-n-h₁-*, aor. **gʷelh₁(-s)-*), OIr. *-mairn* "betrays" (pres. **mṛ-n-h₂-*, aor. **merh₂(-s)-*), W. *barn-u* "judge" (pres. **gʷ(e?)r-n-h-*, aor. **gʷerh(-s)-*), and perhaps W. *darn-u* "tear up" (pres. **d(e?)r-n-h-*, aor. **derh(-s)-*?), OIr. *-foll(n)athar* "rules" (pres. **w(e?)l-n-h₂-*, aor. **welh₂(-s)-*?).

We can now return to the question of OIr. *-tlen* "removes" = Lat. *tollit* "raises, removes" < **tl̥-n-h₂-*. Despite Anttila's unsubstantiated suspicion that a zero grade **tl̥h₂-* might rather be involved (1969, 77),

normal full grade II **tleh₂-* is indicated not only by the Greek cognate's root aorist ἔτλᾱ (Doric) or ἔτλη (Attic-Ionic) "sustained, endured" (so Strunk, 1967, 54) but also by the OIr. verb's *a*-subj. 3sg. pass. *-tlethar*, unstr. act. *fo-da:ro-thla* and probable suffixless pret. 3sg. *-t(hí)uil* (< **ti-tl*V). If Meiser (1986, 164-6) is right to explain Umbrian *tendu* as < **tel-n-h-tod* cognate with Lat. *tollit* < **tl̥nh₂-*, we have a conflict between Italic and Celtic reflexes of full grade I **telh₂* and II **tleh₂* respectively, the Greek being compatible with either but most obviously explained in terms of PIE **tleh₂*. However, for present purposes it does not much matter whether a Proto-Celtic full grade **tlā-* was inherited or innovatory, as long as it had been established by the time *r̥/l̥* became *ar/l* or *r/li*.

Whereas a full grade I **telh₂-* should have resulted in *a*-subj. **-tela-*, *t*-pret. **-telt* in the light of the brief anticipation of ch. 5, 7 above, these forms conform instead to the C*r/l*V- pattern seen in *-cren* "buys" (< **kʷri-na-* < **kʷri-n-h₂-*) with subj. 3sg. act. stressed *-cria*, unstressed *-chrae*, pass. *-crether* (< **kʷriya-* < **kʷrey-ase-* < **kʷreyh₂-s-e-*), pret. *-ciuir* (< **kʷi-kʷr*V). Clearly the match between present *-tlen* < **tli-na-t(i)* and *-cren* < **kʷri-na-t(i)* etc. could have triggered the remodelling of subjunctive **-tlá* < **tlāset(i)* (< **tleh₂-s-e-ti*) to *-tlia* or **tle/iyaset(i)* (cf. ch. 2, 4 end) at virtually any stage, if only we can get from pres. **tl̥-n-h₂-* to **tli-na-* in the first place. The obvious answer would be that in Proto-Celtic *r̥* and *l̥* became *ar* and *al* before *n* under normal circumstances but *ri* and *li* under the influence of corresponding "state II" C*r/l*V- full grades elsewhere, notably in the aorist system. Thus **tl̥-n-* > **tli-n-* through pressure from aorist (ind. and subj.) **tlā-* as opposed to, say, **bl̥-n-* > **bal-n-* alongside aorist **bela-*.

The standard equation of OIr. *ar-a:chrin* with OInd. *śr̥ṇā́ti* could, of course, be justified along similar lines, since it leaves little choice but to derive *crín* "decrepit" < **ḱreh₁-no-* with the full grade II likewise implied (3 above) by the CRV sequences in subj. 3pl. *-aur-chriat*, fut. 3sg. *-air-chiuri*, *ro*-perf. *ar-a:rui-chiuir* (< **ki-kr*V). Consequently, regardless of whether the full grade I **ḱerh₁* indicated by Old Indic or the type II **ḱreh₁* supported by Celtic was the older, the non-present full grade **krī* (< **krē* < **ḱreh₁*) established for the latter would suffice to condition present **kr̥-n-* > **kri-n-*.

It has been suggested earlier that the obvious derivation of OIr. *(ro)-cluinethar* "hears" is from a **-klu-ni-tor* resulting from morphologically motivated metathesis of **-kli-nu-tor* < **ḱl̥-n-u-tór*. The requisite remodelling is, *pace* de Bernardo Stempel (1987, 137), a good deal harder to envisage if we start from a **-kal-nu-tor* < **ḱl̥-n-u-tór*. However, **kli-nu-tor* is in any case the outcome predicted by the hypothesis just advanced, since the normal PIE full grade of this root was indisputably the type II **ḱlew* (cf. Strunk, 1967, 28, esp. n. 22) evinced, for example, by the OIr. *a*-subj. *-cloathar* < **klow-ase-tor* replacing **klow-s-e-tor* < **ḱlew-s-e-tor* through a process to be described in ch. 5, 7.

As the cautious Anttila concedes (1969, 77), full grade II is well attested for **pleh₁* (e. g. OInd. *s*-aor. *aprās* "filled" < **é-plēh₁-s-t*, Gk. redup. pres. πί(μ)-πλη-μι "I fill" < **pí-pleh₁-mi*, Lat. *im-plet* "fills") and includes OIr. *lín* "fill, (full) number" (< **pleh₁-nu-*). Consequently, the morphological principle established on the basis of *-tlen* makes it possible to justify the traditional derivation of *do:lin* "flows, abounds" from **pl̥-n-h₁-*. This would be facilitated by the reconstruction of an old intransitive meaning "be full" alongside the transitive "make full" (OInd. *pr̥ṇā́ti* "fills" etc.) through taking Lat. *pollet* "is full (of), abounds (in), is strong" as a precise equivalent of OIr. *-lin* < **pl̥n(e)h₁-*. Indeed, if Lat. *-pleo*, *-plet*, *-plent* etc. could derive with some straightforward remodelling from a root present **pléh₁-mi*, **pléh₁-ti*, **pl̥h₁-énti*, there would be no formal objection to tracing *polleo*, *pollet*, *pollent* etc. back to an old nasal present **pl̥néh₁-mi*, **pl̥néh₁-ti*, **pl̥nh₁-énti*, and the resultant close formal and semantic match with OIr. *-lin* speaks quite strongly for such a solution. In this case, then, we can posit pres. **pl̥-n-* > **pli-n-* > **li-n-* in Proto-Celtic through pressure from aor. **plē-* > **(p)lī-*.

5. A significant advantage of this hypothesis of morphological conditioning is that it leads to a reasonable explanation of the hitherto intractable OIr.*(ad)-gnin* "recognises, knows". It is clear that this form somehow continues the PIE nasal-infix present **ĝn̥-n-h₃-* underlying OInd. *jānā́ti* "recognises, knows" (cf. *VKG* II 547), which reflects the influence of pple. **jāta-* "known" (< **ĝn̥h₃-to-* > Gk. γνωτο- "known", OIr. *gnáth* "known, customary", W. *gnawd*) upon **janā́ti* < **ĝn̥neh₃-ti* (cf. Strunk, 1967, 37-8, who compares *krīṇā́ti* "buys" for **kriṇā́ti* through pple. *krīta-*). However, no good reason could be given for the OIr. outcome *-gnin* rather than expected **-genn*. That this root had a full grade II **ĝneh₃* is, of course, quite certain on the strength of forms like OCS. *zna-ti* "to know", OInd. root aor. *ajñāt* (implied by opt. 2sg. *jñeyās*), perf. *jajñau* (< **ĝe-ĝnō(w)* < **ĝe-ĝnoh₃-e*), Gk. root aor. ἔ-γνω (cf. Strunk, ibid., and Anttila, 1969, 77).

Furthermore, this verb has a suffixless (*-géuin* < **ge-gn*V) rather than a *t*-preterite in Old Irish as well as an old subjunctive 3sg. pass. *asa:gnoither* "may be understood" that seems best explained as < **gnow-*

ase-tor < **gnuw-ase-tor* replacing **gnū-s-e-tor* (cf. **klow-ase-tor* for **klow-s-e-tor* above), if we can assume replacement of full-grade *gnā* by *gnū* throughout this verb (see below). Be that as it may, *-gnoither* is certainly based upon "state II" **ĝneh*$_3$- and not "state I" **ĝenh*$_3$-. If **tlā-* and perhaps **plī-* could trigger pres. **tli-n-* and **pli-n-* instead of otherwise regular **tal-n-* and **pal-n-*, presumably **gnā-/***gnū-* (non-final/final syllables respectively) could likewise cause pres. **gn̥-n-* > **gni-n-* rather than > **gan-n-* in accordance with the otherwise general Proto-Celtic change *n̥*, *m̥* > *an*, *am* (cf. McCone, forthcoming, and Cowgill as reported by Ringe, 1988, 430).

Had an absolute/conjunct distinction already existed in Proto-Celtic we could posit 3sg. **ĝn̥neh*$_3$*ti* > **gn̥nōt(i)* > **gnināti*, **gninūt* with later levelling to **gninūt(i)*. Since, however, it almost certainly did not (e. g. Cowgill, 1975, and McCone, 1979), we must rather assume that pres. sg. **gnināti* etc. was altered to **gninūti* etc. on the model of forms such as ipf. **gninūt*, aor. **gnūt*, perf. **ge-gnū* (< **gegnō* < **ĝeĝnoh*$_3$*e* like Lepontic TETU = /*dedū*/ < **dedō* < **d*^{h}*ed*^{h}*oh*$_1$*e*? If so, OIr. *-géuin* is from a later analogical replacement **gegne* or the like).

Once we are past this obstacle, the rest is fairly plain sailing. It has already been suggested that verbal paradigmatic ablauts entailing both vowel length and quality were regularly reduced in Celtic to ones of length only on the basis of the (3)sg. In the present instance this implies 2pl. **gninate* (< **ĝn̥nh*$_3$*-te*), 3pl. **gnina(/o)nti* (cf. 2 above on **balna(/e)nti*) > **gninute*, **gninunt(i)* in conformity with 3sg. **gninūt(i)*. Eradication of paradigmatic ablaut in favour of the plural variant then produces 3sg. **gni-nu-t(i)*, 3pl. **gni-nu-nt(i)* etc. in the usual way. Replacement of the rare present suffix *-nu-* by commoner *-ni-* can then be posited as in the already discussed case of *(ro)-cluinethar* "hears" (**kli-nu-* > **klu-ni-* under the influence of pret. pass. **klu-to-*), but this time without inversion of root and suffix vocalism owing to the lack of other *gnu-* forms (elsewhere only **gnū-* or **gnā-*, e. g. vbal. adj./pret. pass. **gnā-to-*, OIr. *gnáth* "(recognized,) customary"). We thus arrive at **gni-ni-t(i)* etc. and can get to OIr. *-gnin* precisely as with **kri-ni-t(i)* > *(ara)-chrin* "perishes" etc. in 2 above. Alternatively, in the absence of a precise trigger for inversion **gni-nu-* might have survived here to give a 3sg. *-*gniun*, 3pl. *-*gninut* soon reshaped to OIr. *-gnin*, *-gninat* in conformity with *-lin*, *-linat* and *-chrin*, *-chrinat*.

It would appear from the foregoing that the OIr. outcome of PIE nasal-infix presents was typically [illegible] from old CER*h*$_3$ or CRE*h*$_3$ [illegible] BIV [illegible] from CER*h*$_2$ or CRE*h*$_2$, with a split between BIV

from CER*h*$_3$ (**st(e)r-na-t(i)* corresponding to **stera-*) and BV from CRE*h*$_3$ (**gni-nu-t(i)* corresponding to **gnū-*). Moreover, where R̥ was a liquid or a nasal, we have good evidence for a Proto-Celtic correlation of present CR*i*-*n*-V- < CR̥-*n*-H- with aorist CRV- < full grade II CR*e*H- and of present C*a*R-*n*-V- < CR̥-*n*-H- with aorist C*e*RV- < full grade I C*e*RH-. This is reminiscent of the situation in Greek, where ρα, λα would seem to have been the normal reflexes of *r̥*, *l̥* except after a laryngeal (e. g. κραδίη 'heart' < **k̑r̥d-*) but αρ, αλ can arise under the influence of a corresponding V*r* full grade (e. g. καρδία after κῆρ 'heart' < **k̑erd*; Rix 1970, 81). However, whereas there is no problem with the postulate of *r̥* > *ra* subsequently metathesised to *ar* under appropriate morphological conditions in Greek, the *r/li* for normal *ar/l* before *n* in Celtic involves more than mere metathesis. Consequently morphological conditioning of VR, RV in the finely poised position before *n* is best regarded as simultaneous with the Proto-Celtic resolution of *r̥/l̥* as *ar/l* or *r/li* according to environemt. This seems neater than de Bernardo Stempel's (1987, 40 etc.) various attempts to explain OIr. examples of CR*i*-*n*- < CR̥-*n*- as late analogical remodellings of regular C*a*R-*n*- under the influence of CR*i*-*n*-presents to CR*(e)i*- roots and/or the relevant verbs' non-present CRV forms, given that the latter largely presuppose old "state II" CREH anyway. That said, both approaches entail recognition of the match in stem shapes just indicated and of *ar*, *al* as the normal Celtic reflexes of PIE *r̥*, *l̥* before *n*, the *ri*, *li* (and even *ni*) variant being due to paradigm-specific morphological pressures.

CHAPTER TWO

Irish and British evidence for the segmentation and accentuation of PIE nasal presents with stem-final laryngeal

1. The forms attested in the daughter languages leave no doubt that the Proto-Indo-European nasal-infix present commonly displayed an accentual pattern of the type act. 3sg. C(R)Ṛ*né*C-*ti*, 3pl. C(R)Ṛ*n*C-*énti*. However, there is disagreement concerning both the segmentation of this formation and its claim to be the sole accentual type in the parent language. De Saussure's (1879, 239-44) segmentation CṚ-*n(é)*-C- with invariably zero-grade root and ablauting infix has found widespread favour, not least among Indo-Europeanists with Celtic interests or *vice versa* (e. g. Marstrander, 1924; Sjoestedt, 1926, 3; Watkins, 1958, 90-1; Cowgill, 1963, 251-2; McCone, 1986, 225-8 and 235), and implies a regular Proto-Indo-European "hysterokinetic" pattern with accentual mobility confined to suffix/infix and ending. Although perhaps somewhat less popular overall, Benveniste's (1935, 159-63) alternative analysis as CṚ-*n-(é)*C- with originally ablauting "state II" root and invariably zero-grade infix has also enjoyed appreciable support (e. g. Kuiper, 1937; Puhvel, 1960; Strunk, 1967).

Strunk's book first raised the possibility of a less common PIE variant C*é*R-*n*-C-*ti*, CṚ-*n*-C-*énti* characterized by an "amphikinetic" accentual alternation between "state I" root and ending: "Ai. *stṛṇā́ti* aus **stṛ-n-eə-ti* passt nicht in dem angenommenen Sinne zu *astarīs* aus **e-sterə-s*. Aber da wir einmal bei Überlegungen theoretischer Art sind: eine mit dem ai. Wurzelaorist des AV. im Ablaut übereinstimmende Nasalpräsensstammform dieses Verbums bietet sich in lat. *sternit* "breitet, streckt hin", air. *sernaid* "ds." an. Nach traditioneller Auffassung entspricht die Vollstufe in lat. *ster-n-*, air. *ser-n-* nicht der ablautgerechten Stammbildung eines Nasalpräsens. Sie musste deshalb aus sekundären Umständen erklärt werden. So deutete Marstrander sowohl die lat. als auch die keltische Gestalt der ersten Silbe aus Übertragung vom Aoristkonjunktiv **sterā-*. Diese immer noch geltende Hilfsthese wird aber entbehrlich, wenn man in Erwägung zieht, dass das italo-keltische Verbum gegenüber ved. *stṛṇā́ti* (aw. *frastərənāiti*) etwas Älteres bewahrt haben könnte. Das würde bedeuten, dass neben dem üblichen Präsenstyp **KṚ-n-eə-ti* (VS. II **KReə-*)

auch ein Typus **KeR-n-ə-ti* (VS. I **KeRə-*) existiert hätte; da die schwachen Stämme beider Typen die gleiche Struktur **KR̥-n-ə-* haben mussten, wäre im Indo-Iranischen unter Systemzwang der 9. Klasse zur schwachen Stammform ai. *stṛṇī-*, aw. *stərən-*, die zu ursprünglichem starkem **sternə-* gehören konnte, ein neuer Singular ai. *stṛṇāti*, aw. *stərənāiti* hinzugebildet worden" (1967, 53).

Following Anttila's (1969) investigation into so-called "Schwebeablaut" between "state I" C*é*RC and "state II" CR̥*é*C full grades of the same root, Benveniste's seductive reduction of such conglomerates to "triliteral" root plus suffix or "élargissement" with full grade in the former (C*e*R-C-), the latter (CR-*e*C-) or neither (CR̥-C-) but never both (no C*e*R-*e*C-) can no longer be upheld as a general principle of IE word formation (cf. Cowgill, 1963, 251; Penney, 1988). Although some longer roots do show traces of such origins, many more cannot be convincingly dissected in this way and seem to have had either CR*e*RC, C*e*RC or CR*e*C as a normal full grade rather than an alternation between the two (see Szemerényi, 1989, 101-3).

Taking account of this development, Strunk (1973, 67-8) argued that the C*é*R-*n*-C- type had become indispensable to the thesis of ablauting root and non-ablauting infix, since the analysis of a nasal present as **ḱl-n-ew-* (OInd. *śṛṇo-* "hear") or **pl̥-n-eh₁-* (OInd. *pṛṇā-* "fill") on the strength of root aorist **ḱlew-* (OInd. *śro-*) or **pleh₁-* (OInd. *prā-*) obviously implied a type **ster-n-h₃-* (Lat. *sterni-*, OIr. *sern(a)i-* "strew, spread"), **sper-n-h-* (Lat. *sperni-* "spurn") corresponding to root aorist **sterh₃-* (OInd. *starī-*), **sperh-* (OInd. *sparī-*) and so on. Accordingly Strunk himself (e. g. 1979, 1984, 1985) and others (e. g. K. T. Schmidt, 1982, 168-9; Pinault, 1984, 121; Isebaert, 1985) have set about accumulating further likely examples of the latter pattern in Greek, Latin, Old Irish and Tocharian above all.

Since several key correspondences along *sernaid/sternit* lines involve Old Irish examples, the Celtic evidence has a significant and as yet underexploited bearing upon the central question: can such attestations all be plausibly accounted for as analogical remodellings of the expected reflexes (e. g. OIr. **sarnaid*, Lat. **stornit*) of an inherited hysterokinetic formation **stṛ-n(é)-h₃-* etc. in the individual daughter languages concerned, as is commonly claimed (e. g. by Klingenschmitt, 1982, 176, n. 21)?

If they cannot, the reconstruction of a rarer divergent PIE formation with full grade I in the sg. act. would seem to be indicated. In that case three theoretically possible sources for the required C*é*R-*n*-C-*ti* are available, namely an "acrostatic" pattern with accent fixed on the root throughout (pl. C*é*R-*n*-C-*n̥ti*), a "proterokinetic" paradigm with accentual

shift between root and suffix/infix only (pl. CR̥-*né*-C-*n̥ti*) or the suffix/infix skipping amphikinetic one already described (pl. CR̥-*n*-C-*énti*). Insofar as it entails ablaut of both root and infix, the proterokinetic option deviates from both the "Saussurian" and the broadly "Benvenistian" positions. On the other hand, the amphikinetic alternative obviously implies a non-ablauting infix à la Benveniste/Strunk, whereas the acrostatic paradigm with unvarying C*é*R-*n*-C- tentatively mooted by Oettinger (1979, 169-70) and Klingenschmitt (ibid.) would be a logical concomitant of hysterokinetic CR̥-*n(é)*-C- à la de Saussure.

A further twist has now been imparted by Isebaert's recent argument (1985) for an ablauting acrostatic pattern C*é*R-*n*-C-*ti*, C*é*R-*n*-C-*n̥ti* correlating with amphikinetic C*é*R-*n*-C-*ti*, CR̥-*n*-C-*énti* in the same way as the PIE acrostatic root present (C*é*C(C)-*ti*, C*é*C(C)-*n̥ti*) discovered by Narten (1968) does with its commoner (amphi)kinetic counterpart (C*é*C(C)-*ti*, CC(C)-*énti*). Strunk (1985b) has now diagnosed the essence of that relationship as one of "Aufstufung" or upgrading (*e* for *Ø* conditioning *ē* for *e*, *ō* for *o*) of acrostatic vis à vis corresponding kinetic paradigms, and has also posited the existence of an acrostatic as well as a(n amphi)kinetic root aorist in PIE. In accordance with Strunk's theory of the basic relationship between nasal present and root aorist, an acrostatic pattern in the latter ought to be mirrored by the former, and Isebaert claims to have discovered a reflex of just such a correspondence in Greek. It remains to be seen what assistance the relevant Insular Celtic data can afford for a choice between these various alternatives.

2. All four Old Irish nasal presents dealt with at the end of the previous chapter are, of course, eminently compatible with segmentation **tl̥-n-(é)h₂-*, **ḱl̥-n-(é)u-*, **pl̥-n-(é)h₁-*, **ĝn̥-n-(é)h₃-* à la Benveniste/Strunk on the strength of "state II" **tl(é)h₂-*, **ḱl(é)u-*, **pl(é)h₁-*, **ĝn(é)h₃-*. However, the Saussurian alternative **tl̥-n(é)-h₂-*, **ḱl̥-n(é)-u-*, **pl̥-n(é)-h₁-*, **ĝn̥-n(é)-h₃-* based exclusively on the zero grade of the root can hardly be ruled out on those grounds alone.

The second correlation established earlier (ch. 1, 4) between C*ar/l-n-*V- and C*er/l*V- is also inconclusive because *ar/l* is merely the Proto-Celtic outcome of a zero-grade *r̥/l̥* compatible with either segmentation. However, Old Irish offers four potentially crucial examples of C*e*R-*n*-V- in this category, namely *-sern* "strews, arranges" contrasting with Welsh *sarn-u* "strews, tramples", *-ern* "gives", *-ella* "encounters, approaches, goes" (only in cpds. like *ad:ella* "visits"), and *-cella* "moves (round)" (only in cpds. like *do:im-chella* "goes round") contrasting with Welsh *pall-u* "come to an end

(i. e. full circle), cease". As already pointed out (ch. 1, 3), the weak *a*-inflection of *-ella* and *-cella* results from (C)V*l-na-* > (C)V*ll-a-*.

A hysterokinetic segmentation CR̥-*n(é)*-H- can only be sustained if the *e*-vocalism of these OIr. presents is due to fairly recent analogy from preterite and subjunctive reflexes of the corresponding full grade C*é*R-H- or derives from a non-ablauting PIE acrostatic C*é*R-*n*-H-. On the other hand, an origin as amphikinetic C*é*R-*n*-H-/CR̥-*n*-H-' or ablauting acrostatic C*é*R-*n*-C-/C*é*R-*n*-C- would clearly imply the segmentation advocated by Strunk and tip the scales decisively in favour of taking *-tlen* etc. above as reflexes of a counterpart CR̥-*n-(é)*H- formed from "state II" roots. A proterokinetic segmentation C*é*R-*n*-H-/CR̥-*né*-H- would, of course, accord with neither view.

The traditional approach to these Old Irish presents has been to argue that the *e*-vocalism is indeed secondary and due to analogical influence from the subjunctive and/or preterite. Thus for *sernaid* Marstrander (1924, 33-6) suggested alteration of inherited **srenaid* or more likely **sarnaid* on the analogy of subj. *-sera* and above all pret. *-sert*. Adhering more strictly to the view that *r̥/l̥* had given Celtic *ri/li* before *n*, Watkins (1958, 91) proposed that in this and the three similar cases the formations with full-grade C*eR(a)*- caused both metathesis and colouring of **sri-na-*, **k*^{w}*li-na-* etc. to **ser-na-*, **k*^{w}*el-na-*, whence OIr. *-sern*, *-cella* quite regularly, while "for *-ern* I suggest a development **(p)r̥-nō-ti* > **ri-nā-ti*, which was metathesized with the help of perfect **īre* (OIr. *-ír* 'granted') to **ir-nā-ti* for differentiation from the now identical present **ri-nā-ti* 'sells' (OIr. *renaid*) < **(p)r̥-nā-ti*, PIE root **perH*$_2$. Presumably *-ern* later triggered *-sern* from **-sarn*" (McCone, 1986, 226). Such metatheses can now be safely ruled out in the light of the previous chapter's demonstration that the zero grades in question will have been **s(t)ar-na-*, **k*^{w}*al-na-*, **(p)ar-na-* and **(p)al-na-*, the first two directly attested in Welsh *sarn-u*, *pall-u*, rather than **s(t)ri-na-*, **k*^{w}*li-na-*, **(p)ri-na-* and **(p)li-na-*.

That leaves Marstrander's notion that present *a* was changed to *e* under the influence of subjunctive and *t*-preterite. This is essentially the position maintained by de Bernardo Stempel, who argues that generalization of the full-grade singular form of the root à la Strunk runs counter to that of the nasal suffix's zero grade (*-na-*) otherwise (1987, 39 and 108) and also conflicts with a general bias towards the plural variant in prehistoric Irish levellings of verbal paradigmatic ablaut (ibid., 158). The possibility that Lat. *sternit* and OIr. *sernaid* might reflect an Italo-Celtic isogloss is then rejected on account of Welsh *sarnu* (ibid., cf. Wagner, 1967, 3). However, both the Welsh and Irish forms seem quite compatible with an originally amphikinetic (Insular?) Celtic paradigm opposing act. sg. **serna-* to pl. (and mid.) **sarna-* and later homogenised in opposite directions by Irish and British separately. Moreover, in such an ablauting paradigm the suffix *-na-* is regular in both singular and plural. This makes it a plausible and, given the large class of weak presents with an *-ā-* suffix, highly desirable trigger for the preference of *-na-* over its alternant *-nā-* elsewhere.

Strunk's approach to these Celtic presents is, of course, incompatible with Watkins' rule "that in every paradigm inherited from Indo-European which exhibited a functional alternation between full grade and zero grade, in other words paradigmatic Ablaut, Celtic has universally generalized the zero-grade. There are no exceptions to this; we may take it as given" (1962, 189). However, the absolute validity of this principle is open to serious doubt despite a recent attempt (McCone, 1986) to apply it with full rigour and not a little special pleading. For instance, reduplicated OIr. preterites like *lelaig* "licked" then have to be explained as ill motivated analogical reformations of **lilig* < zero-grade **li-lig-* instead of being directly and straightforwardly derived < full-grade **lí-loig-e* (ibid., 234-5), and the suppletive erstwhile root aorist *do:cer* "fell" becomes a barely credible late remodelling of **do:car* (ibid., 230-1) < zero-grade **-kara-* < **-k̑rh*$_2$*-V-* rather than a perfectly regular reflex of full-grade **-kera-* < **-k̑erh*$_2$-C.

On the whole, it is hard to see why weak stems should have been mechanically preferred over their strong counterparts in such paradigmatic homogenizations without regard to broader systemic pressures favouring one or the other in any given instance. For instance, if a C*a*R-*nă/a*- present could be remodelled to C*e*R-*na*- under the influence of subj. C*e*R-*ā*- as postulated by Marstrander and others, why could the same subjunctive forms not have determined a preference of inherited strong C*e*R-*na*- to weak C*a*R-*na*- in the first place? Pending a more detailed study of the whole question, it seems reasonable to frame the provisional hypothesis that, apart from the obvious case of well motivated thematizations from 3pl. **-ont(i)* (ibid., 227-9; see ch. 3, 1), eradication of verbal paradigmatic ablaut in Insular Celtic or prehistoric Irish did not invariably spread the plural stem but was conditioned by a relatively complex interparadigmatic interplay liable to vary from verb to verb or category to category.

The arguments raised by de Bernardo Stempel against Strunk's analysis thus seem less than compelling and in any case are largely inapplicable to the non-ablauting acrostatic C*é*R-*n*-H- (sg. and pl.) option. Neverthless, the theory advocated by her and Marstrander has the superficial attraction of being able to account for the discrepancy between what would then be inherited Welsh *sarn-*, *pall-* and innovatory

Irish *sern-*, *cell-* quite nicely. That said, a closer examination reveals difficulties.

To begin with, examples like OIr. pres. *-mainethar* "thinks", *-gainethar* "is born", *-mairn* "betrays" vs. subj. *-menathar*, *-genathar*, *-mera* show that such differences in vocalism were far from intolerable, at least as far as roots or stems with *-n* were concerned (*EIV* 38). Furthermore, where late analogical levelling of this kind can be securely inferred, it is the subjunctive or the *t*-preterite that tends to adopt the present stem's vocalism rather than the other way round. Thus pres. *-daim* "endures" (< **dṃh₂-ye-ti*), subj. *-dama* (for **-dema* < **demh₂-s-e-ti*, cf. Gk. δάμνημι etc.), pres. *-goin* (< **gʷan-e-ti*, W. *gwan-u*; see McCone, 1986, 228), subj. *-gona* (for **-gena* < **gʷen-(a)s-e-ti*), pres. *-dair* "mounts" (< **dʰr̥h₃-ye-ti*, cf. Gk. θρώσκει), pret. *-dart* (for *-dert* < **dir-(s)-t* replacing reflex of **dʰērh₃-s-t*; see ch. 5, 7). That makes either retention of **-(s)arn* (later **-(s)airn?*), *-(s)era* or levelling to **-(s)a(i?)rn*, **-(s)ara* a good deal more likely than levelling to *-(s)ern*, **-(s)era*.

An intractable problem is posed by the failure of *e* to penetrate the nasal presents *-mairn* vs. *-mera*, *-mert* and *a-t:baill* vs. *-bela*, *-belt* under almost identical conditions to those posited for **-sarn* etc. Since in Old Irish (-)*marn-* and (-)*ball-* with broad stem-final occurred in all but the (2 and?) 3sg. conjunct, an *ad hoc* rule restricting the analogical *e*-colouring to presents with invariably non-palatal *-rn*(-) or *-ll*(-) is singularly unappealing. Moreover, *-mairn* alongside *marnaid*, 3pl. *-marnat* almost certainly reflects a late remodelling of **-marn* < **mr̥-n-h₂-* (Gk. μάρναται, OInd. *mr̥ṇā́ti*) to the pattern seen in *-baill*, pl. *-ballat*, *canaid*, *-cain* "sings", pl. *-canat* or *maraid*, *-mair* "lasts", pl. *-marat* etc. (see *EIV* 31). Consequently, the divergent treatments of **mar-na-* on the one hand and **sar-na-* etc. on the other are quite inexplicable.

Finally, because acquisition of weak inflection by *-cella* and *-ella* inevitably entailed basing the other stems upon originally present (C)V*ll*-, any colouring of (C)*all-* to (C)*ell-* from strong subjunctive or preterite (C)*el(a)-* forms would have to predate a shift in inflectional type that demonstrably goes back at least as far as Insular Celtic (see 3 below). Anyway, even if **kʷalla-*, **alla-* > **kʷella-*, **ella-* could somehow be motivated for Goedelic only, there would be no obvious explanation for the failure of **walla-* (OIr. *-foll(n)athar*, see ch. 1, 3) to be similarly affected.

3. In short, it seems impossible to account for the vocalism of *-ern*, *-sern*, *-cella*, *-ella* in terms of relatively late prehistoric Irish analogies, and that leaves the option of an inherited type with full grade I. Indeed, an important further argument for the antiquity of these formations is provided by the fact that each of them has a likely CeR-*n*- cognate outside Celtic.

Mention has already been made of the correspondence between OIr. *sernaid*, *-sern* and Lat. *sternit* implying **st(e)rnh₃-*, whereas OInd. *str̥ṇā́ti* reflects **str̥n(e)h₃-*. Gk. στόρνῡσι "spreads" can be linked to the latter on the assumption that productive *-nū-/-nu-* (cf. Kimball, 1988, 247) replaced **-nō-/*-no-*. Cowgill (1965, 156-8) suggests the trigger of 1pl. **starnumen* regularly < **starnomen* (< **str̥nh₃-*) by a well-known Proto-Greek tendency to change *o* to *u* in certain labial environments. However, there seems to be no guarantee that the remodelled singular was **starnō-* (< **str̥neh₃-*) rather than **sterno-* (< **sternh₃-*). Indeed, the latter offers the bonus of a second trigger for *-nu-* in 1sg. **sternumi* < **sternomi*. This raises the possibility of a strong **ster-nu-*, weak **star-nu-* reshaped to στορ-νῡ-, στορ-νυ- as a means of normalizing the root and suffix vocalisms, the former probably on the analogy of fut., aor. στορε- (cf. Puhvel, 1960, 74, n. 39; Cowgill, 1965, 157; see Strunk, 1967, 74-6 for a general discussion and an alternative derivation of the Greek present from old **str̥-n-(e)u-*).

Thurneysen's initial equation (1927) of OIr. *ernaid*, *-ern* "gives" (note fut. *ebraid* < **pi-pr̥h₂-se-ti*) with Gk. περ-να- "sell" assumed analogical *e*-vocalism, but Vendryes (*LEIA* R 19-20) suggested a direct derivation of both from a PIE **per-n-h₂-*, a possibility also seriously considered by Strunk (1979, 93-4) with due regard for an alternative **per-n-h₃-* (Gk. aor. act. πόρε "bestowed" < **pérh₃-t* (or **pr̥h₃+e/o?*), perf. mid. πέπρωται "is ordained" < **pe-pr̥h₃-*).

OIr. *-cella* too may well have a hitherto unnoticed partner in Homeric Gk. περι-τέλλομαι "go round, pass by", which is attested in participial constructions relating to the passage of time, notably περιτελλομένων ἐνιαυτῶν and περιτελλομένου ἔτεος "as the year(s) pass by". The semantically plausible derivation from **kʷelh₂-* "move (in a circle)" is made into a certainty by the corresponding aorist περιπλομένων ἐνιαυτῶν "after the years had passed by" and is duly recognised (minus laryngeal) by Frisk (*GEW* 869), who suggests present **kʷel-ye/o-* alongside the thematised zero grade of an old root aorist. However, it seems preferable to take *telle/o-* as a thematization of nasal present **tella-* < **kʷ(e)l-n-h₂-* in the light of *balle/o-* < **gʷl̥-n-h₁-* and Strunk's (1967) ample demonstration of the tendency for root aorists to correlate with nasal presents in Indo-European. The *tell-* here would have been generalised from the sg. to the du. and pl. of the active that this verb presumably once had, and thence to

the middle and passive (cf. 3pl. act. περνᾶσι "they sell", ipf. pass. ἐπέρναντο). If so, the match with OIr. *-cella* is well nigh perfect.

Strunk has recently (1986, 453-4) argued that it is sounder to accept the Avestan hapax *parəṇti* "attacks" as a *lectio difficilior* than to emend it away, the result being a */parnti/* < **pél-n-h₂-ti*, the form also taken to underly Lat. *pellit* "encounters, beats against, drives away" and less certainly OIr. *ad:ella* "visits, approaches" (cf. Gk. aor. ἐπέλασ(σ)ε "approached" for full grade I **pelh₂-*). Meiser's recent (1986, 164-6) proposal to derive Umbr. *pendu* < **pel-n-h-tōd* obviously implies that the full-grade formation underlying its Lat. cognate *pellit* goes back at least as far as Italic.

Doubts about the formally and semantically unimpeachable association of the Irish form with this root are based upon Pedersen's alternative connection of OIr. *-ella* and the suppletive MW. subjunctive 3sg. *el*, 3pl. *el(h)ont* of *a* "goes" < **ag-e-t(i)* (arch. also *eyt*, OW. *agit*, *hegit* < **ag-e-ti(-)*) with Gk. ἐλαύνει "drives, makes for": "Ir. Ind. *-ella* verhält sich zum brit. Konjunktivstamm *el-* wie ir. *ad-baill* zu *at-bela* S. 350, d. h. der Ind. enthält ein präsensbildendes *-nā-*. Die Verwandschaft mit gr. ἐλαύνω 'treibe, fahre', arm. *ela-nem* "komme heraus, steige hinauf", *ela-nim* 'werde' (*-l-* aus *-ln-*, KZ XXXIX 424) liegt auf der Hand" (*VKG* II 353). However, Pedersen failed to mention another germane form that speaks decisively for **pel(-n-)h₂-*. As pointed out by Pokorny (1920) and Klingenschmitt (1982, 176-7, n. 21), this is the suppletive future *eblaid*, *-ebla* of OIr. *agid*, *-aig* "drives", which continues PIE desiderative **pi-plh₂-se-ti* quite regularly (cf. *GOI* 403). Although it is true that an *eb-* reduplicator seems to have been generalized in the OIr. *a*-future of strong roots with the shape V*l*/*r* (*GOI* 403-4; *EIV* 47), one will hardly wish to jettison the only other form apart from *ebraid* capable of providing a historically regular starting point for this.

Indeed, OIr. pres. *-ella*, MW. subj. *el(h-)* and OIr. fut. *-ebla* obviously once belonged to a single Proto-Celtic paradigm (cf. Marstrander, 1920) as **el-na-ti* (< **pél-n-h₂-ti*), **el-ase-ti* (< **pélh₂-s-e-ti*) (see ch. 5, 7-8, and McCone, 1986, 247-8) and **ibl-āse-ti* (< **pi-plh₂-se-ti*) respectively. However, adaptation of pres. **ella-ti* to the weak *ā*-conjugation as **ellāti* entailed a whole new set of *a*-subj. (see ch. 7, 13 on *f*-fut.), *s*-pret. act. and pret. pass. forms based upon *ell(a)-*, thus cutting the inherited formations adrift. Whereas the old preterite forms simply disappeared, the displaced subjunctive **elase-* and future/desiderative **iblāse-* gravitated towards the semantically close **ag-* "drive, make for" (> Brit. "go"). The suppletive non-present forms associated with this root in some other IE

branches too indicate its the lack of a PIE aorist (cf. Specht *KZ* 63, 1936, 270; Wagner, 1961b, 11; Watkins 1962, 174; Jasanoff, 1983, 67) capable of generating an old *s-* subjunctive. If this attractive motivation for the suppletion is valid, the verb's new subj. and fut. were presumably already in place when **ag-* acquired the *s*-aorist **ax-s-t* underlying the *t*-preterites MW. *aeth* "went", OIr. *-acht* "drove" (see ch. 4, 4) in (Insular?) Celtic, since this should have easily been capable of generating a subj. **ax-se-t(i)* to fill the gap.

Since this highly circumstantial set of developments must have occurred prior to the separation of Irish and British, so too must its trigger, the transfer of **ella-* (and presumably **cella-*) to the weak *ā*-conjugation. The stem **iblāse-* did not survive in British for the simple reason that a formally distinct future category was either lost there or else not developed from a desiderative doomed to disappear. In Old Irish, on the other hand, subj. **el-ā-* (< **el-ase-* etc.) gave way to **ag-ā-* with the same stem as the present, the result being *-aig*'s status as the only strong verb with root-final guttural and an *a-* (*-aga-*, *-agat*) rather than an *s-* (**-á-*, **-assat*) subjunctive. However, *-ebla* survived because the usual requirement that a fut. stem differ formally from the corresponding subj. militated against a similarly neat regularization.

At all events, OIr. *-ella* certainly continues **pel-n-h₂-* not **h₁el-n-h₂-* and may be confidently compared with Lat. *pellit*, Umbr. *pendu*, Av. *parəṇti*. If Gk. ἐλαύνει (fut. ἐλᾰ́ arguably < **h₁elh₂-s-e-*) has a Celtic cognate at all, the best bet seems to be the OIr. suppletive resultative-potential to *fo:ceird*, *-cuirethar* "sets in motion, puts, throws", namely *ro:lá* (*EIV* 142-3). The forms of this would square nicely with a type II full grade **h₁lch₂-* vs. the type I **h₁elh₂-* underlying the Greek forms (cf. the **ĝneh₁-* on which OIr. *gniid* "(produces), makes, does" is apparently based vs. widespread reflexes of **ĝenh₁-* "gives birth (to)" in OIr. and elsewhere?).

However that may be, we arrive at a total of four OIr. nasal presents with a "state I" *e*-grade of the root plausibly connected with strikingly similar formations outside Celtic in Latin, Greek and quite likely Iranian too. More or less *ad hoc* explanations of this *e* as a late analogical transfer from other parts of the paradigm have proved unworkable for Goedelic, and in any case strain credulity when this has to be applied independently to three or even four separate branches in the face of lexical correspondences such as *-sern*/Lat. *sternit*, *-ern*/Gk. περνα-, *-ella*/Lat. *pellit*/Umbr. *pendu*/Av. *parəṇti*, *-cella*/Gk. τελλο- (see Strunk, 1973, 69 for a just criticism of the desperate invention of a prehistoric Latin subjunctive **sterā-* to 'explain' alleged remodelling of pres. *stern-* from **storn-* there).

4. The Old Irish evidence not only provides powerful support for the alternative CéR-*n*-H- PIE nasal-infix type first recognised by Strunk but also appears to be in substantial agreement with the basic relationship he has posited between the PIE nasal present and root aorist. Thus of the ten or eleven secure OIr. examples involving an Ṛ other than *i* (no attestations with *u*), four of those with a full grade I CeRH- show a parallel nasal-infix structure CeR-*n*-H- (*-sern*, *-ern*, *-ella*, *-cella*), while the four with a "state II" CR*ew*/H- have nasal presents fully compatible with a corresponding CṚ-*n-(e)w*/H- (*-tlen*, *-lin*, *-gnin*, *-cluinethar*).

The three exceptions (*-mairn*, *-baill*, *-foll(n)athar*) oppose a reflex of zero-grade CṚ-*n*-H- to an attested or inferred full grade I CeR-H-. Of these the deponent *-foll(n)athar* is inconclusive because, as a presumably old Celtic or even pre-Celtic *medium tantum*, it would have had unchallenged zero grade throughout the present indicative, e. g. 3sg. < **wl̥-n-h₂-tór*, 3pl. < **wl̥-n-h₂-n̥tór*. However, the contrast between the *-sern* type on the one hand and *at:baill*, *-mairn* reflecting pres. CṚ-*n*-H- vs. aor. (subj. and ind.) CeRH- on the other clearly implies different prototypes. From this it would follow that the latter pair is based upon old hysterokinetic CṚ-*n(e)*-H- unaligned with the normal aorist full grade. Since the foregoing indicates that those old CeR-*n*-H- presents surviving into Old Irish retained the resultant (C)eR-*n(a*-), OIr. *-baill* seems hard to square with Strunk's (1979, 96-100) otherwise attractive suggestion that the Greek dialect doublets Arcadian pres. δέλλει or ζέλλει, aor. ἔζελε and Attic-Ionic pres. βάλλει "throws", aor. ἔβαλε "threw" reflect contrary generalizations (plus thematization) of the full and zero grades respectively of ablauting Proto-Greek paradigms continuing PIE pres. **gʷél-n-h₁-ti*, pl. **gʷl̥-n-h₁-énti*, aor. **gʷélh₁-t*, **gʷl̥h₁-ént*. The overall evidence now seems rather to indicate a dialectal skew in the aorist only and the subsequent resolution of an exceptional divergence in consonance as well as vocalism by remodelling present **ball-* upon aorist δελ- in Arcadian. Alternatively, if Beekes (1969, 216-26; cf. Ruijgh, 1988, 451-2) is right in suggesting Gk. Ṛ > *e/a/o*R before $h_{1/2/3}$ respectively, aor. δελε- could be due to a standard thematization of the reflex of act. pl. **gʷl̥h₁*-. This would entail a skew between pres. βαλλ- and aor. δελ- generally resolved in favour of the former (new aor. βαλ-), but in favour of the latter in Arcadian (new pres. δελλ-). At any rate, the balance of probability here favours asymmetrical PIE pres. **gʷl̥-n(é)-h₁*-, **mṛ-n(é)-h₂*- vs. aor. **gʷ(é)lh₁*-, **m(é)rh₂*-.

The present investigation began by listing nasal-infix presents to roots with zero-grade C(R)*i*H-, a typical instance accompanied by particularly serviceable comparative data being OIr. *-cren* "buys" < **kʷri-n-h₂*- with subj. *-cria* < **kʷrey-ase-* < **kʷreyh₂-s-e-* (cf. OInd. pres. *krīṇāti*, fut. *kreṣyati*), fut. *-ciura(i?)* < **kʷi-kʷrih₂-se-* (see *EIV* 45-6). This type, then, could well comprise further instances of pres. C(R)*i-n(é)*-H- out of step with aor. C(R)*(é)i*H-. On the other hand, even if the full-grade singular had been a symmetrical "state I" such as **kʷrē-na-* < **kʷrey-n-h₂*-, the eradication of inner-paradigmatic ablaut might well have gone in favour of the zero-grade plural present alternant **kʷri-na-* < **kʷri-n-h₂*- through pressure from **kʷrī*- forms elsewhere (e. g. fut. **kʷi-kʷrī*-, pret. pass. **kʷrī-to-* < **kʷrih₂-tó-*), especially if subj. **kʷrey-a-* had already become **kʷriy-a-*, as seems quite likely in the light of *VKG* I 66-7: "idg. *ij* (womit idg. *is*- S. 73 und wohl auch idg. *ip*- vor Vokalen sowie idg. *ej* zusammengefallen sind) erscheint in nicht-letzter Silbe (bes. vor *a*) als c. *ae, au, ai* (mc. *ay*). . . ac. *gaem* nc. *gauaf*. . . gall. *Giamillus* MN, *Giamon.* abgekürzter Monatsname: lat *hiems* 'Winter' gr. χίων 'Schnee'. . ... ir. *riathor* gl. torrens ac. *realir* gl. torrentium nc. *rhaiadr* 'Wasserfall'; lat. *rī-uus* 'Bach' asl. *ri-nąti sę* russ. *rínuti* 'schnell fliessen' skr. *riṇāti* 'läßt fließen'" (see end of ch. 1, 3 on *riathar*, *rhaeadr* < **reyatro-* < **h₃reyh-tro-*).

The evidence of the *-cren* type is, then, best regarded as inconclusive. Indeed, if we assume that at least some BIV verbs originally opposed strong C(R)*ey-n-h-* to weak C(R)*i-n-h-*, the result will have been a *-na-* suffix throughout regardless of the laryngeal, thus obviating the need to reconstruct *-h₂* in the absence of further evidence (e. g. *-len* < *h₂l(é)inh-* rather than **h₂lin(é)h₂*-). On the other hand, the explanation of BV advanced in ch. 1, 2 demands a full grade *Crinī/ū-* (< C(R)Ṛ*neh₁/₃*-) to account for the colouring of the corresponding zero grade *Crina-* (< C(R)Ṛ*nh₁/₃*-) to *Crini/u-*. Since, however, all three verbs in question, namely *-gnin*, *do:lin* and *ar-a:chrin* have a certain (**ĝneh₃*) or arguable (**pleh₁*, **ḱreh₁*) full grade II, a segmentation of the underlying PIE nasal-infix presents as **ĝn̥-n-(é)h₃*-, **pl̥-n-(é)h₁*-, **ḱr̥-n-(é)h₁*- can be defended in each case (see ch. 1, 3-4).

5. There remains the crucial question of the accentual type to which the CéR-*n*-H- formation originally belonged. To the best of my knowledge, no one has yet tried to account for the *sernaid/sternit* type in terms of an opposition between hysterokinetic CṚ-*né*-H-*ti*, CṚ-*n*-H-*énti* and proterokinetic CéR-*n*-H-*ti*, CṚ-*né*-H-*nti* analogous to that reconstructed for *n*-stems and so on in the PIE nominal system. Nor is this surprising in view of a lack of positive advantages over its rivals and the absence of evidence for such a proterokinetic pattern elsewhere in the verbal system

(e. g. optative hysterokinetic C(R̥)C-*yéh₁-t*, C(R̥)C-*ih₁-ént* or static Cé(R)C(*o*)-*ih₁-t*/-*n̥t*, but not proterokinetic Cé(R)C-*ih₁-t*, C(R̥)C-*yéh₁-nt*). While a derivation of Goedelic **ser-na-ti*, **ser-na-nti* from a presumed **s(t)er-na-ti*, **s(t)ar-nā-nti* through the latter's regular shortening (see ch. 3, 4) to **s(t)ar-na-nti* seems viable, mere feasibility at this level seems insufficient grounds for reconstructing such an inflectional novelty for the protolanguage. Moreover, it is hard to understand why this and the following type should have been so prone to replacement by the hysterokinetic pattern in Indo-Iranian and elsewhere in the absence of a formal overlap in either the weak or the strong forms.

The non-ablauting acrostatic option is a good deal more attractive insofar as it implies for the nasal-infix present a contrast between a static CéR-*n*-H-*ti*, CéR-*n*-H-*n̥ti* and a kinetic CR̥-*né*-H-*ti*, CR̥-*n*-H-*énti* type similar to that obtaining among root presents (e. g. static *CéRC-*ti*, CéRC-*n̥ti* vs. kinetic CéRC-*ti*, CR̥C-*énti*; see Narten, 1968) and arguably also root aorists (Strunk, 1985b, 500-3). On the other hand, it would also seem to imply the possibility of an as yet unsupported CR̥-*n*-éH-*ti*, CR̥-*n*-éH-*nti* to a root with "state 2" full grade, and is in any case a doubtful asset to the Saussurian side since it breaches the fundamental principle of infixation in an invariably zero-grade root.

An obvious advantage of the acrostatic hypothesis as applied to OIr. *-sern*, *-cella* etc. is the fact that it gives full-grade root throughout the inflection from the first and thus avoids the need to postulate an arguably unusual (but see 2 above) preference of singular over plural form in the elimination of inner-paradigmatic ablaut during the prehistory of Irish and British. Of course, if corresponding acrostatic root aorists could be posited, the ablauting alternative CéR-*n*-H-*ti*, CéR-*n*-H-*n̥ti* linked to the amphikinetic thesis (see end of 1 above) would do just as well here. This would yield Proto-Celtic (C)*īr/lna-ti*, (C)*er/lna-nti* for the four verbs in question, whence regular ablaut readjustments to (C)*īr/lna-ti*, (C)*ir/lna-nti* and then (C)*ir/lna-ti*, (C)*ir/lna-nti* (see ch. 1, 2), the OIr. outcome of which would be (C)*ern*(-) or (C)*ell*(-). However, this does not really matter, since in both cases this advantage is heavily outweighed by the serious problem posed by divergences of the kind noted by Strunk (1979, 89-93) between full-grade περνα- and zero-grade πορνα- in different dialects of ancient Greek, there being nowhere for the latter to arise in an acrostatic paradigm.

Insular Celtic, of course, offers a similar contrast between OIr. full-grade *-sern*, *-cella* and W. zero-grade *-sarn*, *-pall*. The acrostatic hypothesis entails derivation of both variants from a **s(t)erna-l(i)*/*-nl(i)* and **k*^{w}*ella-l(i)*/*-nl(i)* or the like prior to the separation of Goedelic and British. While it is just about conceivable that **s(t)erna-l(i)* was subsequently changed to **s(t)arna-l(i)* in British in conformity with the *Carn*- reflexes of old hysterokinetics, a similar explanation of W. *-pall* is ruled out by the earlier demonstration (3 above) that **ella*- and, therefore, also **k*^{w}*ella*- had developed weak inflection before the separation of Goedelic from British, i. e. at a time when an old acrostatic present must still have displayed **ella*-, **k*^{w}*ella*- throughout. That being so, the result would have been separation from the nasal class accompanied by the introduction of unvarying **k*^{w}*ellă*- into all tenses and moods. It is hard to envisage a later motive or mechanism in British for replacing such a coherent set of weak **pell*- forms by *pall*-.

That leaves the third option of an amphikinetic paradigm CéR-*n*-C-*ti*, CR̥-*n*-C-*énti* for "state I" and CR̥-*n*-éC-*ti*, CR̥-*n*-C-*énti* for "state II" roots. This time, likely reflexes of both predicted variants are actually attested, as should have emerged clearly from the previous discussion, and erosion by the hysterokinetic type in Proto-Indo-European and the later dialects can be neatly motivated by the formal coincidence of both types outside the singular active (Strunk, 1967, 53). If we turn to Celtic specifically, the contrast of OIr. *-sern*, *-cella* with W. *sarn-u*, *pall-u* is easy enough to explain in terms of shared prototypes with ablaut inherited from an amphikinetic pattern, namely **s(t)er-na-l(i)*, **s(t)ar-na-nl(i)* and **k*^{w}*ella-l(i)*, **k*^{w}*alla-nl(i)*. We then merely need to posit that, whereas British generalized the plural variant **s(t)ar-na*- on the model of the **mar-na*- type (4 above), in Goedelic **s(t)er-na*- was preferred under the influence of subj. **s(t)er-ase*-. The probable generalization of pret. **ker-a*- over **kar-a*- to give OIr. *do:cer* "fell" (see 2 above) can be regarded as a close parallel.

In the case of **ella-l(i)*, **k*^{w}*ella-l(i)* vs. **alla-nl(i)*, **k*^{w}*alla-nl(i)* it seems reasonable to suppose that the Insular Celtic development of weak inflection generated the redundant doublets **ellāl(i)* and **allāl(i)*, **k*^{w}*ellāl(i)* and **k*^{w}*allāl(i)* by skewing, Irish subsequently opting for the *e* and British for the *a* variants. Needless to say, the **wallā*- probably underlying OIr. *-foll(n)athar* does not contradict this assumption, since this verb would have inherited no present **wella*- by virtue of being an old *medium tantum* with weak stem only (4 above). All in all, then, the amphikinetic hypothesis appears to have significant practical advantages over the other theoretical possibilities.

6. Various versions of a skew between CeR*n*- and CR̥*n*- have also been invoked to explain the OIr. pair *-ern* "gives" and *-ren* "sells". The essential notion goes back to Thurneysen (1927), who sought to derive both

from an original hysterokinetic **pr̥-né-h₂-ti*, **pr̥-n-h₂-énti* on the assumption that this regularly gave **ri-na-* "give, sell" in Celtic: in the second meaning this retained its old present (> OIr. *-ren*) under the influence of its antonym **kᵘri-na-* > OIr. *-cren* "buys", upon the model of which it then created a whole set of non-present stems, whereas in the first by contrast the non-present stems, notably the subjunctive (OIr. *-era*), triggered pres. **ri-na-* > **er-na-*. Puhvel merely noted "Aeol. πορνάμεν· πωλεῖν (Hes.) < **pr̥n-*; Ion. πέρνημι; cf. aor. ἐπέρασσα, pre. πιπράσκω, OIr. *renaid* 'sell'" along with "*ernaid* 'bestow' (with analogical vocalism), cf. Gk. πέρνημι" (1960, 23 and 28). Watkins (1958, 91 with n. 2) cited Thurneysen's explanation with approval while leaving open the possibility that **ri-na-* "sell" and **ri-na-* "give" first became homonyms in Celtic. In this connection the present writer has suggested **pr̥-n-h₃-* "give" and **pr̥-n-h₂-* "sell" as dual sources for Celtic **ri-na-*, the former undergoing metathesis to **ir-na-* "with the help of perfect **īre* (OIr. *-ir*)" to give OIr. *-ern* and the latter proceeding directly to *-ren* (McCone, 1986, 226).

All of these explanations share the assumption that *-ren* via **ri-na-* represents the regular outcome of **pr̥-n-h-*, whereas *-ern* has undergone analogical remodelling, and de Bernardo Stempel (1987, 108-9) even categorises both present stems as analogical innovations. On the other hand, Vendryes, Lambert and Strunk take *-ern* to be the regular outcome of full-grade **per-n-h-* while continuing to derive *-ren* from zero-grade **pr̥-n-h-*. For Vendryes (*LEIA* R 19-20) and Strunk (1979, 93-4) these would be the strong and weak stems respectively of the nasal present to "state I" **perh₂* and as such closely analogous to the Greek περνα-/πορνα- doublets, but Lambert (1979, 211-2) makes the remarkable suggestion that *-ern* continues **per-n-h₃-* whereas **-ren* comes from an otherwise unattested **pr̥-n-h₁-*. It has, of course, been argued above that the theorem OIr. *-ern* = Gk. περνα- < **per-n-h₂-* is almost certainly correct, although *-ern* might possibly derive from **per-n-h₃-* instead. However, one essential feature of all the explanations just referred to, namely the assumption that OIr. *-ren* < **ri-na-* directly continues **pr̥-n-h-*, falls victim to the earlier demonstration that the normal Proto-Celtic outcome of **(p)r̥n-* was **(p)arn-* (cf. de Bernardo Stempel, 1987, 109), **(p)rin-* only being possible in the event of a corresponding "state II" **(h/p)réh-* full grade. Such an assumption would not only be empirically unfounded in the present instance but would also be incompatible with the actually attested "state I" subjunctive *-era*, the antiquity of which is so essential to those theories based upon a remodelling of **rina-* to **erna-*.

That by no means exhausts the problems posed by the conventional derivation of pres. *-ren* from **pr̥-n-h-* and use of Thurneysen's ill motivated skew to generate its remaining stems from imitation of *-cren*. These have been admirably expounded as follows by Lambert, albeit without drawing the obvious conclusion: "depuis Thurneysen, ZCP XVI 1926 p. 272 s., on sait que *ernaid* "il gratifie" et *renaid* "il rend" sont de la même racine *per-/pr̥-* (cf. Pokorny, IEW 816-7). Il est remarquable que les deux verbes ont différencié leurs formes par différents procédés: - variation de degrés, au présent (*ernaid* de **per-n-ə-ti* contre *renaid* de **pr̥-n-ə-ti*) au prétérit passiv (*-rath* de **prə-to-* contre *ríth* de **preə-to-*); - reformation tardive pour les formes de *renaid* au subjonctif (*ria*), au futur (*rir-*) et au prétérit (*-rir*), toutes supposant un radical simple *ri-* traité d'ailleurs de façon tout-à-fait parallèle avec le thème *cri-* de *crenaid* "il achète", en face des formes hérités de *ernaid*... Par consequent *ernaid* a monopolisé toutes les formations anciennes, tandis que *renaid*, verbe plus terre-à-terre, a reformé presque toute sa flexion" (1979, 211-2). Since **pr̥-n-h-* would almost certainly have produced OIr. **-a(i?)rn* not *-ren* under the circumstances envisaged and the derivation of pret. pass. *-rith* < **preh₁-to-* demands a morphologically irregular full grade of the root in addition to an etymologically unsupported h_1, "presque" can be dispensed with here. Put another way, regardless of whether h is taken as h_1, h_2 or h_3, a starting point **p(e)rh-* fails to account for even a single inflectional stem of *-ren*'s paradigm (cf. de Bernardo Stempel, 1987, 109, who nonetheless takes *renaid* to be "eine Neubildung nach dem Vorbild von *crenaid*"). The standard etymology based upon it is, then, quite literally useless.

Hamp's (1965, 227, n. 5) laconic remark that "*renaid* 'sells', traditionally compared with Gk. πέρνημι, might better be derived from **riṇāti* < **rēi-* (*IEW* 860)" could be justified by invoking a similar analogy to that proposed for *-den* earlier (ch. 1, 2), but only if the root in question were **reh₁(y)* and not the plain **reh₁* conclusively demonstrated by Szemerényi (1956). Otherwise the following eminently sensible suggestion of Marstrander's seems to constitute a hitherto lone voice of dissent: "étant donné que irl. *renaid* se conjugue exactement comme *crenaid*, aucune des langues celtiques ne décèle, entre les deux verbes, la moindre différence de formation. Nous avons donc affaire à un celt. **kᵘri-nā́* "achète" et à un celt. **ri-nā́* "vend, paie". L'étymologie de ce dernier nous est inconnue: il est très peu probable qu'il ait perdu un *p* initial, et soit originellement identique a gr. πέρνημι "exporte et vend". A mon avis, *renaid* est le verbe radical de *rím*, gall. *rhif* "nombre" (ags. *rím*) au sense fondamental de "décompter, compter, penser"." (1924, 60).

This etymology was dismissed by Thurneysen in 1927 and has been generally discounted since, the most recent statement to this effect being de Bernardo Stempel's "man wird mit Thurneysen. . . trotz der Bedenken Marstranders. . . an einer gemeinsamen Herkunft beider Verba aus der Wurzel idg. **per-* 'verkaufen, zuteilen' (*IEW* 817) festhalten" (1987, 108). Nevertheless, Marstrander's tentative proposal seems to me to be both formally and semantically attractive. The actually attested development from OHG. *zalōn*, MHG. *zaln* "count, reckon" to Modern German *zahlen* "pay (for)" involves a shift in designation from the act of counting or reckoning itself to a process in which it is commonly involved, namely the making of payment or a purchase. If **ri-na-* originally meant "count, reckon", we may posit a similar shift, only this time applied to the taking of payment or a sale since the converse was adequately covered by **k^{w}ri-na-*, to account for the attested meaning "sell, exchange" of OIr. *-ren*.

On the formal side, OIr. *rím* "counting, number", W. *rhif* "number", ON. *rīm* "reckoning", OE. *rīm* "number" and probably Lat. *rītē* "in orderly fashion, properly, duly", *rītus* "(ordered happening), rite" are to be connected with Gk. ἀρι- in ἀριθμός "number", νήριτος "countless" (< **n̥-$h_2$ri-*) or (Arcadian) ἐπ-άριτοι "picked (counted) ones" (*GEW* 139) on the assumption of an underlying PIE **h_2r(e)ih* "count". The short vowel of the Greek forms instead of regular **αρῑ(-το)- < *$h_2$rih(-tó)-* could presumably be analogical to that of an erstwhile nasal present **ari-n-* (cf. ch. 2, 3 on κρι-ν-, κρι-τός) that would be quite in character for such a root. In the likely enough event that the final laryngeal was h_2 or h_3, the **$h_2$ri-n-$h_{2/3}$-* thus implied yields Celtic **ri-na-* and then OIr. *-ren* quite straightforwardly (if *-h_3*, full-grade I **$h_2$reyh$_3$- > *reya-* would condition the *-na-* outcome rather than the *-nu-* underlying *-gnin* with its full grade II; see end of ch. 1). Indeed, if the full-grade present was originally **$h_2$rey-n-h-*, even *-h_1* would be possible (end of 4 above). At any rate, we no longer need improbable analogies or ablaut grades to explain forms like subj. *-ria* and pret. pass. *-ríth*, which can now be seen as the perfectly regular outcomes of **$h_2$réyh$_{2/3}$-s-e-* and **$h_2$rih$_{2/3}$-tó-* respectively.

OIr. *-ren* is thus lost as a likely skewed reflex of an originally amphikinetic paradigm's zero-grade **pr̥-n-h_2-* contrasting with the full-grade **pér-n-h_2-* seen in *-ern*. In view, however, of the virtually identical skew securely attested by OIr. *sern-*, W. *sarn-* and OIr. *cell-*, W. *pall-*, this scarcely diminishes the explanatory superiority of the amphikinetic model for the PIE nasal present type with C*é*R-*n*-H- full grade over its proterokinetic and acrostatic rivals.

CHAPTER THREE

The Old Irish outcome of PIE nasal presents with stem-final stop and some general conclusions

1. One category of Old Irish nasal-infix presents has not been mentioned so far, namely Thurneysen's B III type (*GOI* 355-6), e. g. *-ding* "presses, crushes" (or cpd. *con:u-taing* "builds") < **d^{h}i-n-g^{h}-* (Lat. *fingit* "moulds, fashions") based upon the "state I" root **d^{h}(e)ig^{h}-* (e. g. OInd. root pres. *degdhi*, pl. *dihanti* "smear(s)", Gk. τεῖχος "wall", Osc. *feihúss* 'muros' etc.). The forms here are most obviously taken to reflect a process widely attested in IE languages such as Latin with its likewise thematic cognate *fingit* (3pl. *fingunt*), namely replacement of the 3pl. ending *-ent(i)* by productive *-ont(i)*, which then became the base for a new zero-grade thematic paradigm (McCone, 1986, 227-8; cf. K. H. Schmidt, 1966b). Thus 3sg. **di-n-g-e-t(i)* replaces assumed **dinex-ti* (< **d^{h}i-né-g^{h}-*) on the model of the thematic-looking 3pl. **di-n-g-o-nt(i)* for earlier **di-n-g-enti* (< **d^{h}i-n-g^{h}-*). One may compare precisely the same development underlying Lat. *iungit* "yokes", pl. *iungunt* < **yu-n-g-e-ti*, **yu-n-g-o-nti* in relation to OInd. *yunák-ti* "joins" (later them. *yuñj-a-ti*), pl. *yuñj-ánti* < **yu-né-k̂-ti*, **yu-n-ĝ-énti* from "state I" **yéuĝ-* (e. g. OInd. inj. *yoj-am*, Gk. ἔζευξα "yoked").

It is generally assumed that the PIE nasal-infix presents to roots with a final stop or *s* invariably displayed the "hysterokinetic" pattern (C)R̥*n(é)*T-, whether the corresponding aorist full grade was type I C*e*RT or the rarer type II CR*e*T. According to Sjoestedt "en celtique, comme en italique, comme dans toutes les langues indo-européennes à part l'indo-iranien, la flexion thématique s'est généralisée dans les thèmes à infixe nasal" (1926, 7; defined by her as CR̥-*n*-T-). Strunk also noted that the (C)R̥*né*T-/(C)R̥*n*T- ablaut was attested in Indo-Iranian alone, whereas elsewhere, with the exception of Hittite, zero-grade thematics such as those just exemplified from Latin and Old Irish were the rule. Regarding this somewhat puzzling contrast with the behaviour of the types with final laryngeal or *u/w*, "fest steht lediglich, daß wurzelbezogene Präsens-Aoristparadigmen auf der Grundlage der normalen zweiten Wurzelvollstufe, die bestimmte Prototypen der 5. und 9. Klasse kennzeichen, bei der 7. Klasse nicht zu erkennen sind" (1967, 31).

In the highly probable event that Proto-Indo-European had a C*(é)*R*n*H- nasal-infix present alongside the apparently productive CR̥*n(é)*H- type, this must have been virtually eradicated in favour of the latter formation in Indo-Iranian (e. g. Lat. *sternit*, OIr. *-sern* < **stérnh₃-* vs. OInd. *stṛ́nāti* < **stṛnéh₃-*), arguably with the solitary exception of Av. *parə-nti*. That being so, the ubiquity of CR̥-*n(é)*-T- reflexes in Indo-Iranian hardly suffices to rule out the possibility of a C*(é)*R-*n*-T- alternative in Proto-Indo-European itself.

The antiquity of the CeRT-, CR̥-*ne*-T- scheme implied by Indo-Iranian has been persuasively advocated by Eichner (1982, 16-21) on the strength of etymologies for the half dozen Hittite verbs displaying *-ni(n)-* infix and root-final *-k* that involve nasal-infix presents elsewhere in at least four instances, e. g. *istarnik-* "make ill" (*istark-* "fall ill") = OInd. *tṛ́nah-* "crush" < PIE **stṛ-né-gʰ-* to root **stergʰ* (OInd. perf. *tatárha*) and *hunik-* "wound" (*huek-* "slaughter") = OInd. *vinak-* "separate out" < PIE **h₂wi-né-k-*, Lat. *vincit* "conquers" (OIr. non-nas. *-fich* "fights"). Although this would not affect the basic collocation of *-n(e)-* nasal present and "state I" root, the probability of Oettinger's (1979, 143) tentative connection of the first with Gk. στέργει "loves" might be increased by associating OIr. *serg* "wasting, sickness", often caused by love in the sagas, with the **sterg* thus implied rather than with Lith. *sergù* "am ill" < **swergʰ* (*IEW* 1051) or, more likely, **sergʰ* (Schindler, 1966, 68). However, the serious doubts raised by Strunk (1979b, 241-8) about the semantic compatibility of Hitt. *huek-* with Lat. *vincit* etc. are of considerably greater moment, leading as they do to a revival of Čop's equation of *huek-* with OP. *vaj-* "put out (eyes)" and the then almost inescapable conclusion that **hunik-* is a nasal-infix formation to the same root. This is reconstructed as a PIE "state II" **h₂wegʰ* or perhaps **h₂wegʷʰ* (ibid., 253-6) with a nasal-infix present now segmentable as **h₂u-n-egʷʰ-* and possibly a model for the creation of further members of this small class from invariably guttural-final roots in Hittite (ibid., 250-1).

In conclusion, although the evidence presented by Eichner creates a presumption that a CR̥-*n(é)*-T- present to a CeRT- root along Indo-Iranian lines was already a possibility in PIE, the sample involved is too small and, in part, uncertain to prove that this was the normal, let alone the sole, method of forming nasal-infix presents to such roots.

2. Old Irish offers four certain reflexes of nasal-infix presents to roots of the shape C*e*w*R*T. Despite the lack of a convincing etymology, the stem found in OIr. *fo:loing* "bears, endures", *in:loing* "imposes" is certainly of

this kind on account of subj. *-ló(s-)*, fut. *-lil(Vs-)*, pret. *-lolaig*, pret. pass. *-locht(-)*, which unambiguously continue Proto-Celtic **lewx-s-e-*, **li-lux-se-*, **lu-lowg-*, **lux-to/ā-* respectively.

Pres. *-boing* "breaks" displays equally revealing subj. *-bós-* < **bewx-s-e-*, fut. *-bib*(V)*s-* < **bi-bux-se-*, pret. *-bobaig* < **bu-bowg-*, pret. pass. *-bocht* < **bux-to/ā-*. When compounded with the preverbs **to* and **ate*, this root shows present forms with and without nasal infix, e. g. 1sg. *do:aithbiuch* (Sg. 22ᵇ2, gl. 'abrogo') vs. 3pl. *-tathbongat*, 3sg. pass. *taidbegar* vs. *tathbongar* "is broken up, dissolved". The non-nasal variant implies a full-grade thematic present **beg-e-ti* etc. easy enough to derive along with OInd. *bhájati* "divides, distributes, receives, enjoys" < PIE **bʰéǧ-e-ti*. The semantic range and development actually attested for OInd. *bhájati* makes it possible to equate OIr. *-boing* "breaks" with OInd. *bhunákti*, mid. *bhuñkté* "enjoys, uses, consumes" and Lat. *fungitur* "enjoys, performs" on the assumption that the intermediate meanings "divide, distribute, receive" simply disappeared in the last two branches. If so, OIr. pres. *-boing* would then correspond to OInd. pres. *bhu-ná-j-*, *bhu-ñ-j-* < **bʰu-né-ĝ-*, **bʰu-n-ĝ-* (aor. inj. *bhojam* < **bʰewĝ-*).

In view of the ease with which pretonic *as* and *ad* may be confused in Middle and even Old Irish (*EIV* 10 and 214-7), it seems unnecessary to recognise two separate compounds *ad:boind* "gives notice" and *as:boind* "refuses" with *VKG* II, 476 and *DIL*, since the latter meaning seems easy enough to derive from the former via usages such as *as:bonnar na dingabar* "notice is given that he be not removed" = "there is refusal to remove him" (see *DIL* under *as:boind*). That being so, the compound of **uxs* and **bewd* seen in OIr. *as:boind*, *-opaind* "gives notice/warning, refuses" with its *s*-subj. *-bós-* and its pret. *-bobuid* was linked by Pedersen in *VKG* II 476 "zu gr. πυ-ν-θ-άνομαι 'frage', got. *biudan* 'bieten', lit. *pa-bu-n-dù* 'erwache', OCS *bljuda* 'beobachte' (Kausativ *buditi* 'erwecken'), skr. *bodhati* 'erwacht, wird gewahr'". Consequently it combines with the Greek and Baltic attestations to indicate that the PIE root **bʰewdʰ* "take/give notice" had a nasal-infix present with zero-grade **bʰu-n-dʰ-*.

Finally, the OIr. verb *rondid* and its compound *fo:roind* "reddens, stains", pret. *fo:roraid* (Ml. 51ᵃ23; if for perf. *fo:ro-r'raid*, the neutral consonance still indicates syncopated *o* not *e*) < **ru-rowd-e-*, is obviously a nasal-infix present to the root **rewd* "red" (OIr. *rúad*) < PIE **h₁rewdʰ* (Lat. *rūfus*, zero grade in Lat. *ruber*, Gk. ἐρυθρός, OInd. *rudhiraḥ*). "Für das Nasalinfig. Verb sind allerdings außeririsch keine Parallelen belegt" in K. H. Schmidt's opinion (1967, 97, n. 1), but the OInd. nasal pres. *runáddhi* "checks, restrains, keeps back", aor. 1sg. *arodham*, is a formally

obvious comparandum if the semantics can be explained. In his *Wörterbuch zum Rigveda* Grassmann attributes the meaning "jemand [A.] von sich fern halten, verschmähen" to this verb when used with a person as object. Insofar as this suggests a plausible connection between restraint and the discouraging effects of shame or dishonour, *runáddhi* could well have originally meant "reddens, causes to blush" and hence "shames". Indeed, this is precisely the constellation of meanings actually attested in OIr. for a different verbal formation from the same root, namely *ruidid* "becomes red, blushes, is ashamed; makes red, causes to blush, shames, confounds" (perhaps cognate with Lat. stative *rubet* < **h₁rud*ʰ*eh₁-ti* but with a later partial shift of meaning; cf. Watkins, 1969, 170; K. H. Schmidt, 1966). This points to the possibility of OInd. *runáddhi* and OIr. *-roind* being descendants of an IE nasal present **h₁ru-n-d*ʰ- "reddens, shames".

3. In line with what was posited for *-ding* above, a derivation of these four OIr. presents from a zero-grade thematic formation extrapolated from the 3pl. looks obvious and implies *-loing* < **lu-n-g-e-t(i)* after 3pl. *-longat* < **lu-n-g-o-nt(i)* replacing **lu-n-g-enti* and similarly *-boing* < **bu-n-g-e-t(i)*, *-boind* < **bu-n-d-e-t(i)*, *-roind* < **ru-n-d-e-t(i)*. In that case one could assume that the ousted 3sg. athematic forms had been **lu-ne-x-ti*, **bu-ne-x-ti*, **bu-ne-s-si* (for **bu-ne-d-*), **ru-ne-s-si* (for **ru-ne-d-*) in full agreement with the corresponding Indo-Iranian structures. However, a basic difficulty confronting this explanation as a whole has been pinpointed by Marstrander with reference to *-boind* in particular: "il est difficile, pour des raisons phonétiques, de le rapprocher de πυνθάνομαι; les formes constatées indiquent celtique *bo-n-d*" (1924, 33).

This problem would not exist if faith could be placed in Pedersen's doctrine as neatly summarised by Thurneysen "that *i* and *u* in almost every position had fallen together with *e* and *o*, being retained only in those positions where original *e* and *o* have become *i* and *u*. . .; in particular, *i* and *u* do not remain before *e* in the following syllable. Should this view be correct, forms like nom. pl. *coin* (Gk. κύνες) would be quite regular, not analogical. For *i* there is no evidence: the assumption that voc. sg. **wire* first became **wiri* to give O. Ir. *fir*. . . has no support. As regards *u*, on the other hand, Pedersen's theory would explain the *-o-* in the 3sg. pres. ind. of verbs with radical *u*.. : *con:boing*, *fo:loing* etc." (*GOI* 46-7). However, voc. *fir* almost certainly continues **wire* directly, acc. sg. or nom. pl. *coin* can perfectly well be based upon the old strong stem **kwon-* rather than analogically spread weak **kun-* (Joseph, 1990, 110-4), and

-boing etc. is hardly conclusive. Accordingly Thurneysen is right to propose confusion of *i,e* and *u,o* only before following *a,o* (*i,u* > *e,o*) and *i,u* (*e,o* > *i,u*) but not before *e*, which caused neither raising nor lowering (see now Joseph, ibid., 115-6).

That being so, a generalized zero-grade C*u-n*-T-*e/o*- necessitates a hypothesis of some form of paradigmatic levelling. Consequently it has been proposed that "lowering of *i,u* to *e,o* before *a,o* would give prehistoric Irish **bundet(i)*, **bondont(i)* and it seems that, whereas *i/e* alternations were maintained (e. g. OIr. *con:rig*, *con:regat*), the rarer *u/o* type was levelled to give *bond-* etc. throughout" (McCone, 1986, 235). Since, however, alternations between *u*C′ and *o*C proved quite resilient in other parts of the OIr. grammatical system on the evidence of cases like nsg. *guin* vs. gsg. *gona* "wound(ing)" or nsg. *lond* "vehement, angry" vs. npl. *luind*, the consistent early occurrence of *o* in these presents obviously calls for a more precise explanation. One possibility would be that the pattern seen in 3pl. *orgait/-orgat*, 3sg. *orgaid/-oirg* produced 3sg. *bongaid/-boing* rather than inherited **buingid/***-buing* corresponding to 3pl. *bongait/-bongat* and so on (cf. Joseph, 1990, 122-4). Nevertheless, there is no obvious reason why this one present should have influenced four others rather than the other way round to produce **uirgid/***-uirg*. The odds might be improved by adding the thoroughly problematical *dlongaid*, *-dloing* "splits", *tongaid -toing* "swears", neither of which contained *u* on the evidence of the *e*-reduplication in pret. *-dedlaig*, perf. *tethaig*, but the very assumption of analogical interaction here is suspect anyway in view of the lack of similar influence by the major *-beir/-berat* type upon *-ling/-lengat*, *-ding/-dengat* etc.

To these reservations may be added the fact that prototonic *-opaind* "refuses", unless perhaps analogical to subj. **-o-bōs-* etc., reflects **-u(s)-bond-* rather than **-u(s)-bund-* prior to the lowering of *u* by a following back vowel. Finally, in the absence of firm evidence to the contrary, the non-lowering of *i* over *nd* shown by *find* "fair" < **windos/-ā* (*GOI* 46) should be taken to have applied to *u* too, in which case there would be no place for *o* in the present paradigms of *-boind*, *-bondat* or *-roind*, *-rondat* if derived from **bunde/o-* and **runde/o-* respectively. Certainly the examples of pre-Classical OIr. *-buind*, *-buing* etc. alleged by Joseph (1990, 121-2) are from manuscripts far too late to support any such inference.

Marstrander's difficulty thus remains and must be squared with the etymological and, above all, purely formal indications that the four roots in question once contained *(e)u*. The problem can be resolved by positing

PIE nasal presents with "state I" full grades *b^hew-n-d^h-, *h_1rew-n-d^h-, *b^hew-n-$\hat{g}$- and *lew-n-$g^{(h)}$- corresponding to the clearly attested non-infixed *b^hewd^h, *h_1rewd^h, *$b^hew\hat{g}$, *$lewg^{(h)}$. These would have developed regularly via *bow-n-d- etc. > *$b\bar{o}nd$-, *$r\bar{o}nd$-, *$b\bar{o}ng$-, *$l\bar{o}ng$- in Insular Celtic. Thereafter one merely needs an Osthoff-style shortening before nasal as before liquid plus stop (see 4 below and Greene, 1952, 214-5; cf. the OIr. a-prets. *fo:caird* "put", *-scaird* "stripped" vs. *-gáid* "prayed", *-táich* "fled", *-ráith* "ran" etc.; McCone, 1986, 235-8; *EIV* 54) to arrive at the *$bond$-, *$rond$-, *$bong$-, *$long$- from which the OIr. presents can be derived without the slightest phonetic difficulty.

However, a morphological difficulty is presented by the fact that the paradigms in question have been secondarily thematised, presumably from the 3pl. with *$-ont(i)$ in place of *$-ent(i)$ (see 1 above). This trigger implies generalization of the plural stem (see ch. 2, 2), but K. H. Schmidt's (1967) location of this development after lowering of 3pl. *$bundont(i)$ > *$bond$-$ont(i)$ etc. is fatally gainsaid by cases like 3sg. *-ding* vs. 3pl. *-dengat* rather than the *$-deing$ expected if a 3pl. *$dengont(i)$ already lowered from *$dingont(i)$ had become the basis for a new thematic paradigm *$denget(i)$ etc. Consequently the process seems best understood in terms of Insular Celtic modification of an inherited opposition between, for example, sg. *$b\bar{o}nd$- (< *$bownd$- < *b^hewnd^h-) and pl. *$bund$- to one of length only, whence sg. *$b\bar{o}nd$- versus pl. *$bond$-. This would be parallel to the suggestion, probably no longer necessary in the light of doubts about Watkins' rule (ch. 2, 2), that in the preterite of this and similar verbs "Insular Celtic sg. *$bub\bar{o}d$-/pl. *$bubud$- etc. became *$bub\bar{o}d$-/*$bubod$- on the analogy of patterns like *$k^wrin\bar{a}$-/*k^wrina-, *$krin\bar{\imath}$-/*$krini$-, a productive type of Celtic ablaut already discussed, and then *$bubod$- throughout when paradigmatic ablaut was eradicated in favour of the plural variant" (McCone, 1986, 235). Whether or not sg. *$b\bar{o}nd$- had already undergone "Osthoff" shortening to *$bond$- when 3pl. *$bond$-$ont(i)$ became the base for a new thematic paradigm, the upshot would still be thematic *$bonde/o$- etc. throughout the present of these verbs.

It is, of course, true that normal assumptions about PIE syllabification imply *$b^hew\eta d^h$- etc., but the possibility of breaching these either in PIE itself or later is indicated by a derivation such as Toch. A *want*, B *yente* "wind" < *$h_2weh_1\eta to$- rather than *$h_2weh_1n\eta to$- (so Beekes, 1988, 87; see below) and the closely parallel *$sternh_3$- etc. rather than *$ster\eta h_3$-. It seems legitimate to argue that morphological pressure from zero-grade *b^hund^h- etc. could have produced a full-grade sequence with non-syllabic

n either in PIE itself or subsequently, as long as this had taken place by the time of Proto-Celtic η, ηn > *an*, *am* (cf. McCone, 1991). Furthermore, the zero-grade Cu-n-T- of this class unanimously implied for PIE itself by the forms widely attested in various daughter languages is itself at variance with the Cw-η-T- expected in accordance with normal PIE rules for the syllabification of a sequence of two sonants before a stop (Strunk, 1967, 101; Schindler, 1977, 56). That being so, it seems reasonable to assume that the morphological pressure towards invariably non-syllabic n of the infix would have applied to the full grade as well as the zero-grade stem in the parent language.

Since the attested OIr. preterite (-)*drebraing* of *-dring* "climbs, advances" (W. *dring-o* "climb, clamber") is obviously analogical to *-ling* "leaps", pret. (-)*leblaing* (*VKG* II 368; *GOI* 426), it constitutes no good argument against the original restriction of the nasal to the present stem. In that case considerable plausibility attaches to Pokorny's (*IEW* 254; cf. *VKG* II 509; Sjoestedt, 1926, 9) proposed connection with Skt. *dṛṁhati*, Av. *drənjaiti* "makes firm" by means of a basic meaning "holds on to, grips (tight)" still apparent in the perf. mid. pple. *dādṛhāna-* at RV I 30, 4. Whether or not Pokorny is right to posit two separate roots, apparently rather prone to confusion later, with palatal $\hat{g}^h$ and velar g^h respectively, forms like Av. *dražaite* "hold (on)" point to PIE full grade II for one of them at least, and this would become a virtual certainty if Gk. τρέχει "runs", τροχός (= OIr. *droch*) "wheel" could be attached via the notion of movement (onwards or upwards) by gripping implicit in the Celtic meaning "climb, clamber" and then in OIr. simply "advance". At all events, it seems likely enough that we have a nasal present *d^hr-n-$(\acute{e})\hat{g}^h$- to "state II" *$d^hr(\acute{e})\hat{g}^h$ and a Proto-Celtic development *$d\eta n$- > *$drin$- for that reason (cf. OIr. s-subj. *dress-* and ch. 1, 4).

4. Given that Proto-Celtic e had already developed a fronted allophone $\imath$ intermediate between it and i before nasal plus obstruent (cf. Watkins, 1954, 516-7) and that this sound had fallen together with i as i in Old Irish but $\imath$ (MW. y) in British, even a form like OIr. *-ding* "presses" above could be derived < *$ding$- (phonemically *$deng$-) < *$d\bar{e}ng$- < *d^hey-n-$\hat{g}^h$- rather than directly from zero-grade *d^hi-n-$\hat{g}^h$-. In this case, of course, the former explanation would have no formal advantages over the latter, but OIr. *léicid/-léici* "leaves, abandons" merits consideration in this regard.

Primary verbs with the unusual shape C$\bar{e}g$ seem to have gone over to a weak inflectional pattern by the time of the earliest OIr. records on the

evidence of *léicid* itself, *con:téici* "congeals" (< **tenk-e-ti* < **tank-* < **tn̥-n-k-*, or perhaps < **ten-n-k-*; cf. OInd. *tanák-ti* "coagulates" < **tn̥-n(é)-k-*) and *tréicid* "(pushes away?,) abandons" (< **trank-e-ti* < **trn̥k-*, cf. MW. *-treing* "(passes away,) perishes" and, with full-grade **trenk-*, Lith. *trenk-ti* "rush (upon), push", Goth. *þreihan*, OE. *þringan*, OHG. *dringan* "press, push etc."; cf. Sjoestedt, 1926, 20-1). Thus Sjoestedt includes *léicid* and *tréicid* in "une série de verbes qui ne présentent, dès le debut de la tradition, qu'une flexion normalisée: verbes dont la nasale était tombée phonétiquement. . ... Ces verbes ont un subjonctif en *-a-*, un futur en *-f-*, un prétérit sigmatique, selon le type normal du verbe faible irlandais: ils généralisent la nasale de formation de présent" (ibid., 51).

Once this late prehistoric development is recognised, no major obstacle remains in the way of the semantically and otherwise formally obvious connection (e. g. *VKG* II 567; Sjoestedt, 1926, 20; K. H. Schmidt, 1967) with the PIE "state I" root **leyk^{w}* (e. g. Gk. pres. λείπει, perf. λέλοιπε, OInd. perf. *riréca*) and its well attested nasal present seen in OInd. *ri-ná-k-ti*, *ri-ñ-j-ánti* "leave(s)". Generalization of the zero grade with accompanying thematization would produce **li-n-k^{w}-e/o-* as in the case of Lat. *linquit*, *linquunt*, and this might be expected to yield OIr. *léc-* quite regularly.

However, if both *in* (including < *īn*) and *ın* (including < *en* and < *an*; see McCone, 1991) plus voiceless stop yielded *é* plus voiced stop in prehistoric Irish, it is hard to see how the verb *-ic*, pl. *-ecat* "arrive(s)" attested in many OIr. compounds can be explained.

The OIr. *ā*-stem *fet* "whistle, hiss" may provide a clue to the likely development here. The standard etymology < **swizd-ā* (*VKG* II 627), derived from the root seen in semantically close W. *chwythu* "blow, blast" < **swizd-* and OIr. *air-fitiud* "playing music", is formally impossible because of the initial *f*. This involves taking the earliest attestation *ind fet* (Sg. 3^{a}7) as lenited **set* after the fem. article (*s-* < **sw-*, see *GOI* 84-5), the implication presumably being that the invariable *fet* of later sources is due to generalization of the lenited form. This entirely *ad hoc* explanation is at variance with good evidence (see McManus, 1983, 52-3) that one or the other of two means, based upon the unlenited and the lenited form respectively, was regularly employed to resolve the synchronic anomaly of *s-* in non-leniting vs. *f-* in leniting contexts. The first was the introduction of a normal *s-/h-* (written *s-* or *ś-*) alternation, e. g. *seir* "heel", *di phuirid* "two heels", later *dá seirith*. The second entailed the creation of a likewise normal *p-/f-* pattern, e. g. *ar:peiti* "blows, plays music" replacing **ar:seiti* (< **swedd-* < **swēdd-* < **sweyzd-*) in relation to prototonic

-airfiti (cf. vn. *airfitiud* above). That being so, the extrapolation of a *fet* from *ind fet* cannot be morphophonemically justified, and we need an etymology with initial *w-* (> OIr. *f-*, lenited *Ø*) on the assumption that Sg. *ind fet* merely reflects the still usual way of writing */ind ed/* (see *EIV* 268).

A semantically and formally hopeful possibility is presented by W. *gwynt* (Co. *gwyns*, Br. *gwent*), Lat. *ventus*, Goth. *winds*, Toch. A *want*, B *yente*, OInd. *vāta-*, Av. *vāta-*, all meaning "wind" and explicable (see Darms, 1978, 396 with further refs.) in terms of a PIE "vr̥ddhi"-derivative **h$_2$uh$_1$-ént-* "blowing" behind **h$_2$wéh$_1$n̥to-* "wind" of the present participle Hitt. *hu̯ant-* "wind" (cf. OInd. *vā́ti*, Gk. ἄησι "blows" < **h$_2$wéh$_1$-ti*). Since they represent contractions of a dissyllabic *vaata-* still sometimes metrically determinable in the Rig Veda and Gathas (e. g. Mayrhofer, 1982, 187), the Indo-Iranian forms obviously continue **h$_2$weh$_1$n̥to-*. The Tocharian cognates, on the other hand, must go back to a **wēnto-* suggesting an earlier syllabification **h$_2$weh$_1$nto-* (see above). The British, Latin and Germanic forms also seem to be formally compatible with an intermediate **wēnto-*. However, Hoffmann (1975-6, II 383, n. 13) has argued that "Osthoff" shortening can be dispensed with in Germanic by simply positing VhnC > VnC there for forms like Goth. *winds* (now < **wento-* < **hwehn̥to-* without intervening **wēnto-*) and *juggs* "young" (now < **yunko-* < **hyuhn̥ko-* instead of < **yūnga-* < **yuwunga-* < **yuwn̥ko-* < **hyuhn̥kó-*). Presumably a similar formulation could be invoked for W. *gwynt* and Lat. *ventus* (Mayrhofer, ibid.), but this time excluding uhnC, which obviously developed to uwnC there on the evidence of Lat. *iuuencus* "bullock", Gaul. *Iouinc-illus* (personal name), OCo. *iouenc*, W. *ieuanc*, OIr. *oac* "young".

Since the applicability of Osthoff's Law to Germanic is thus placed in doubt rather than positively disproved, the above considerations leave us with a toss-up between the PIE **h$_2$wéh$_1$nto-* indicated by Indo-Iranian and the **h$_2$wéh$_1$nto-* implied via **wēnto-* by Tocharian. If we associate OIr. *fet* "whistle, hiss" with these forms, the matter can be resolved as far as Celtic at least is concerned, since **hwehn̥to-* > **wento-* there would have produced **wnto-*, whence OIr. **fét*. On the other hand, **h$_2$weh$_1$nto-* > **wēnto-* (or perhaps **h$_2$weh$_1$n̥to-* > **wen̥to-* > **wēnto-* with compensatory lengthening?) > **wīnto-* > **winto-*, which at some stage developed (into?) a fem. **wintā* in Goedelic, opens up the possibility of a development to **widā*, from which the OIr. nsg. *fet* derives quite regularly by lowering. Since the acc. sg. (probably **-en* < **-an* < **-ām* as suggested by Cowgill, 1975, 49) of OIr. *ā*-stems did not cause raising (see *VKG* I 363 on

sg. n. *tol* "will", a. *toil* but g. *tuile*, d. *tuil*, rarely *toil*, in Wb.), **wid-* is proved by what is obviously the oldest asg. of this word, namely *fil* (see *DIL*; the better attested asg. (and dsg.!) *feil* merely reflects a common tendency to spread the nsg. vocalism in such cases, as in *breth* "bearing, judgement" < **britā* < **bʰṛ-tā*, asg. and dsg. *brith* or *breith*).

Thus armed with reason to believe with *GOI* 126 that, unlike *mt* (> OIr. */ēd/*, written *ét*), *int* (in this case < Proto-Celtic *īnt* by "Osthoff" shortening) gave OIr. *id* (written *it*) liable to be lowered to *ed* (*et*), we may return to the problem of OIr. *-ic*, *-ecat*. The latter's irregular preterite *-ánaic* "arrived" agrees precisely with OInd. *ānaṁśa*, 3pl. *ānaśur* "reached", both presupposing a reduplicated PIE perfect **h₂e-h₂nonḱ-e*, pl. **h₂e-h₂nn̥ḱ-* remodelled from **h₂e-h₂noḱ-e*, pl. **h₂e-h₂n̥ḱ-* under the influence of pres. **h₂enḱ-* etc. Zero-grade **ānank-* may well have been generalized in (Insular?) Celtic (cf. Lindeman, 1987, 58; however, *-anecc-* in the non-*prima manus* Wb. 14c40 hardly offers direct evidence for this). At any rate, it is difficult to split the **h₂enḱ*/**h₂neḱ* quite certainly underlying OIr. *-ic* and OInd. *naś-* "reach" from Hitt. *hinkzi* "apportions" < **h₂ēnḱ-ti* (see Oettinger, 1979, 174 for an admittedly sceptical appraisal of the "give or take" semantics involved, and cf. OIr. *do:beir* "gives, brings, takes" etc.). On the vexed question as to whether the suppletive Greek aorist ἐνεγκ- (with initial *e-* pointing to *h₁-*; cf. Strunk, 1988, 571-6, esp. n. 41) of φέρει "bears, brings" belongs here I share Beekes' (1979, 18) negative opinion, but the matter is of no great consequence for present purposes.

The Hittite form has been taken to imply an old acrostatic root-present with 3sg. *h₂ḗnḱ-ti*, 3pl. **h₂énḱ-n̥ti* (see Oettinger, 1979, 172-4), and the same starting point is required to account for OIr. *-ic* according to Mayrhofer (1982, 191, n. 51). The latter's proposal has been vigorously criticised by Lindeman as follows: "Mayrhofer, *Festschrift Neumann*, p. 191, note 51, referring to Pokorny, *IF* 35 (1915), p. 340, teaches that OIr. *(ro-)icc* 'comes, reaches' ultimately goes back to a lengthened grade present **ēnḱ'ti* < **H₂ēnḱ'ti* = Hitt. /hēnk/ 'darreichen'. Pokorny had suggested that *-icc* be regarded as a 'transformation' of an earlier athematic **ēnḱ'-ti*. As this 'transformation' cannot have taken place *in Celtic* (where **ēnḱ'ti* would have given **inchti*), Pokorny was forced to posit a pre-Celtic **ēnḱ'-e-t* of which there is *no other vestige* in any other IE. language. Pokorny's *ad hoc* construction is rightly ignored in Celtic studies. The Britannic languages point to an Insular Celtic zero grade **ank-* (< **n̥ḱ'-*), e. g. MIW. *ranc* in *ranc bod* 'satisfy', and I see nothing wrong with Thurneysen's explanation of OIr. *-iccu* (< **-ank-yū*, *Grammar of Old Irish*, p. 130)" (1987, 58).

The establishment of a precise formal correspondence between the Hitt. and OIr. presents would help counter Lindeman's objection that "most of the examples - including Hittite *mehur* - quoted in Mayrhofer's *IdgGr* 1, 132 f. in support of Eichner's claim that */ē/* was not affected by an adjacent **H₂*, are essentially typical 'root etymologies'" (ibid., 57). Assuming the validity of Eichner's Law, the expected Proto-Celtic outcome of a PIE **h₂ēnḱ-ti*, **h₂enḱ-n̥ti* would be **īnx-ti*, **ank-anti*. This would then be remodelled to **īnx-ti*, **ink-onti* by the type of ablaut levelling and spread of 3pl. **-onti* at the expense of **-enti* or an **-(a)nti* unsegmentable as **-a-nti* already exemplified (cf. 1 above and ch. 1, 2; McCone, 1986, 228). Well established thematization from the 3pl. then results in the **ink-e-t(i)*, **ink-o-nt(i)* leading to OIr. *-ic*, *-ecat* quite straightforwardly, and the pivotal role of the 3pl. in this process circumvents Lindeman's contention that generalization of **inx-* would inevitably have ensued within Celtic.

As a (verbal) noun, W. *rhanc* "meeting", *rhanc bodd* "necessity" belongs with MW. *kyfranc*, OIr. *comrac* "meeting, encounter" (verbal noun of *con:r-ic*), all forms reflecting a Celtic nominal **r(o)-anko-* < **h₂enḱ-o-* or **h₂n̥ḱ-o-* and accordingly irrelevant to the vocalism of the corresponding present. The finite verb *ranc* seen in the *i*-affected MW. 3sg. *reinc (bod)* "pleases" and so on could easily be based upon the verbal noun's stem, while the byform W. *rhyngu bodd* "please" may well display an original present vocalism identical with that of OIr. *-icc*. In that case we may posit a British skew between pres. **rynk-* and vn. *rank* to produce two separate but semantically close verbs (see Holmer, 1948, for a fuller discussion and rather different view of these British forms). Finally, there is a good deal wrong with Thurneysen's derivation of *-ic(-)* < **ank-ye/o-*, which could only have yielded OIr. **-éic(-)* (cf. Holmer, ibid., 262, who posits an extraordinary 'unstressed shortening' in an attempt to get out of the difficulty). We may compare the relationship between OIr. gen. sg. *mís* "of a month", OC. *mis* (< **mins-*?) < **mīns-* < **mēns-* < **meh₁ns-* and OIr. *géis* "swan" < **gins-* < **gʰans-* (*VKG* I 86). In short, if OIr. *-ic*, *-ecat* is not based on an old acrostatic root present, it defies explanation.

However, according to the derivation just proposed for *fet*, *fil* and *-ic*, *-ecat*, **li-n-kʷ-* would have resulted in OIr. **lic-*; **lec-* not *léic-*. K. H. Schmidt's (1967) attempt to get out of this by proposing lowering of 3pl. **linkʷont(i)* to **lenkʷont(i)* prior to the generalization of the 3pl. stem along with thematization, whence **lenkʷe/o-* > *léic(-)*, is invalidated by *fet* and *-ic*, *-ecat* (not **fét*, **é(i)c(-)*) as well as the *-ding*, *-dengat* already mentioned (3 above). That being so, *léic(-)* might rather be derived <

lnk^w*- (phonemically *lenk^w*-) < **lēnk^w*- < **léy-n-k^w*- in contrast to the **li-n(é)-k^w*- underlying the OInd. form. The difficulty is that the ablaut *ē/i* did not undergo partial homogenization to *ē/e*, to judge from cases like OIr. *-lig, -legat* "lick(s)" < **lig-e-t(i), *lig-o-nt(i)* in place of older **lēx-ti, *lig-onti* (earlier **lig-enti*). The obvious explanation is that it was still *ey/i* when ablauts involving long and short vowels were modified in this way in Proto-Celtic. Consequently an alternation sg. **lēnk^w*- (> **lnk^w*-), pl. **link^w*- should have been levelled in favour of the variant appearing in the 3pl. base of the new thematic paradigm, namely **link^w-ont(i)*. Accordingly it might be preferable to assume Proto-Celtic *i* as well as *e* > *ı* before *n* plus stop, whence zero-grade **link^w*- > **lnk^w*- > OIr. *léic-*. In that case only an *i* later shortened (winto/ā-*) or analogically generated (pl. **ink-*) from *ī* will have failed to become *ı* before *n*T, whence OIr. *fet, -ic*. However, if *i* had already been phonemically neutralized to *ı* before *n*T, one might expect the occasional *i* arising secondarily in this environment to be adapted to the same pattern, whence **-éic, *fét* rather than actually attested *-ic, fet*. The least problematical approach may accordingly be to posit a pre-thematization levelling of sg. **lnk^w*- (< **lenk^w*- < **lēnk^w*-), pl. **link^w*- in favour of the former with its commoner *ın*T sequence.

Be that as it may, the Old Irish evidence suggests that Proto-Indo-European CERT roots may have behaved much like their CERH counterparts in the matter of nasal presents, both C*é*R-*n*-T- and C$\underset{\cdot}{\text{R}}$-*né*-T- types of which can be reconstructed along the same lines as C*é*R-*n*-H- beside C$\underset{\cdot}{\text{R}}$-*né*-H- in chapter 2.

5. The net result of the previous considerations and arguments is that PIE knew two main types of nasal-infix present to C(R)ERC roots. Apart from primary endings, only a non-ablauting nasal infix differentiated the amphikinetic variety with strong C(R)*é*R-*n*-C- vs. weak C(R)$\underset{\cdot}{\text{R}}$-*n*-C-′ from the corresponding root aorist structure C(R)*é*RC- vs. C(R)$\underset{\cdot}{\text{R}}$C-′. Although indistinguishable in the weak stem, the hysterokinetic alternative had an aberrant full grade in the strong, ascribed to C(R)$\underset{\cdot}{\text{R}}$-*né*-C- with zero-grade root and ablauting infix by the de Saussure school but to (strictly amphikinetic) C(R)$\underset{\cdot}{\text{R}}$-*n-é*C- with full grade II of the root by Benveniste and his adherents. Benveniste's doctrine that nasal infixation automatically entailed a full grade II is invalidated by the first type with full grade I, as is the Saussurian claim that the nasal was infixed into an invariably zero-grade root. Conversely, the second type contradicts the notion that non-ablauting *n* was always inserted directly after the penultimate indispensible constituent (R) of the root in its grammatically preconditioned zero- or normal full-grade form, i. e. C$\underset{\cdot}{\text{R}}$C, C*e*RC or CR*e*C as the case might be.

We are thus confronted with two apparently incompatible views, neither of which fully fits the available evidence. On the one hand, Benveniste's theory as necessarily modified by Strunk elegantly transforms root (amphi)kinetic C(R)(*e*)RC- and CR(*e*)C- into C(R)(*e*)R-*n*-C- and C$\underset{\cdot}{\text{R}}$-*n*-(*e*)C- respectively by infixation, to which should now be added the possibility of root acrostatic C(R)*ē/e*RC- to infixed C(R)*ē/e*R-*n*-C- (see ch. 2, 1 end). On the other, de Saussure's widely accepted approach equally neatly modifies C(R)$\underset{\cdot}{\text{R}}$C- to C(R)$\underset{\cdot}{\text{R}}$-*n(e)*-C-.

The only way out of this impasse seems to be Strunk's recent (1984, 159-60) suggestion that both analyses be combined into a two-tier historical development. The earlier stage was characterized by insertion of non-ablauting *n* into a grammatically predetermined root shape, full grade I C(R)*é*RC- (plus acrostatic C(R)*é*RC- with lengthened grade?) or II CR*é*C- as applicable in the strong stem and zero grade C(R)$\underset{\cdot}{\text{R}}$C- (plus acrostatic full grade C(R)*é*RC- ?) in the weak forms. This postulate has the advantage of conforming to the characteristic behaviour pattern of of PIE tense/aspect affixes described as follows by Jasanoff (1983, 64-5), albeit with a rider (n. 21) rather arbitrarily excepting **-n(é)-* on the grounds that it was not a suffix but an infix: "true apophonic suffixes are surprisingly rare in IE verbal morphology, and unknown within the system of reconstructed tense and aspect markers. The only certain example of a morpheme of this kind is the athematic optative suffix **-yeh$_1$-/*-ih$_1$-* (cf. OLat. *siem* : *sīmus*)". At any rate, the upshot of this nasal infixation was act. sg. C(R)*é*R-*n*-C- (or C(R)*ē*R-*n*-C- ?) or C$\underset{\cdot}{\text{R}}$-*n-é*C- versus C(R)$\underset{\cdot}{\text{R}}$-*n*-C- (or C(R)*é*R-*n*-C- ?) elsewhere, e. g. **k^{w}él-n-h$_2$-ti*, **k$^w\underset{\cdot}{\text{l}}$-n-h$_2$-énti* "move(s) round" (I **k^w(é)lh$_2$*) vs. **ĝn̥-n-éh$_3$-ti*, **ĝn̥-n-h$_3$-énti* "know(s)" (II **ĝn(é)h$_3$*).

However, at a later stage type II would have been resegmented as C$\underset{\cdot}{\text{R}}$-*né*-C-/C$\underset{\cdot}{\text{R}}$-*n*-C-, whence full-grade **ĝn̥-né-h$_3$-ti*, and become productive with the result that roots with full grade C(R)*e*RC- also began to base new nasal presents on the zero grade only in this manner. Finally, in the emergent IE dialects such as Indo-Iranian, and possibly even in late PIE itself, existing C(R)*e*R-*n*-C- strong forms could be replaced by C(R)$\underset{\cdot}{\text{R}}$-*né*-C- through the channel of a weak C(R)$\underset{\cdot}{\text{R}}$-*n*-C- alternant common to both types. As a consequence both of this and the post-PIE tendency to base new non-ablauting paradigms upon the weak stem, often by the trigger of thematization (Lat. *linquit*, *iungit* etc.), the C(R)*e*R-*n*-C- pattern survived no more than vestigially into the attested daughter languages, with the arguable exception of Old Irish.

There remains, of course, the question of motivation for the resegmentation of "state II" CR̥-*n*-*é*C- as CR̥-*né*-C- in the first place. Since this development is posited for an earlier stage of the protolanguage than is directly accessible through the comparative method, any answer proposed will inevitably be rather speculative and correspondingly tentative. The marked statistical preponderance of CERC over CREC as a normal full grade in the parent language is presumably due either to a still earlier PIE distributional principle, perhaps no longer recoverable, or to the former's encroachment upon the latter in the course of PIE prehistory. Either hypothesis implies pressure from type I upon type II and the possibility of individual shifts from the latter (CREC) to the former (CERC), Anttila for instance remarking that "often when we have schwebeablaut, it is the state two that is more convincingly original" (1969, 163). This process will have been assisted by the zero grade CR̥C shared by both and also by widespread alternations of the kind nom. *$g^{w}énh_2$, gen *$g^{w}néh_2$-*s* "woman" (OIr. *ben*, *mná* etc.), not all of which will have been synchronically obvious instances of root plus suffix.

At any rate, a shift from CR*é*C to C*é*RC in the full grade forms of a root aorist (say, *$g^{w}léh_1$-*t* > *$g^{w}élh_1$-*t* "threw" for the sake of argument) with once symmetrical nasal present CR̥-*n*-*é*C- (say, *$g^{w}l̥$-*n*-*éh*$_1$-*ti* "throws") would automatically entail resegmentation of the latter as CR̥-*né*-C- (so *$g^{w}l̥$-*né*-h_1-*ti*). A small nucleus of such instances would pave the way for the reanalysis of nasal presents corresponding to "state II" CR*é*C as CR̥-*né*-C- from the zero grade rather than CR̥-*n*-*é*C- from the full grade, whence *$pl̥$-*n*-*éh*$_1$-*ti* "fills, abounds" (*$pl(é)h_1$) > *$pl̥$-*né*-h_1-*ti*, *$k̂l̥$-*n*-*éw*-*ti* "hears" (*$kl(é)w$) > *$k̂l̥$-*né*-*w*-*ti* and so on. The productive derivational pattern CR̥C- > CR̥-*n(é)*-C- thus established was presumably applied to any new nasal presents created after this stage. For instance, assuming purely for argument's sake that *$m(é)rh_2$ "assault, rob, deceive" now acquired a nasal infix for the first time, the result would then be *$mr̥$-*né*-h_2-*ti* not *$mér$-*n*-h_2-*ti* as previously.

The final phase involved the adaptation of old C*é*R-*n*-C-/CR̥-*n*-C-′ presents to the rising CR̥-*né*-C-/CR̥-*n*-C-′ pattern according to the proportion *$g^{w}l̥$-*n*-h_1-*énti* : *$g^{w}l̥$-*né*-h_1-*ti* (*$g^{w}(é)lh_1$) = *$str̥$-*n*-h_3-*énti* : *x* (*$st(é)rh_3$), where *x* = *$str̥$-*né*-h_3-*ti* (OInd. *stṛṇắti*) in place of inherited *$stér$-*n*-h_3-*ti* (OIr. *-sern*, Lat. *sternit*). This last process appears to have been largely confined to the sub-PIE dialects on the evidence of Old Irish's reasonably close approximation to what seems to have been the original distributional pattern of C*é*R*n*C- corresponding to C*é*RC- and CR̥*né*C- to CR*é*C-.

CHAPTER FOUR

The Old Irish *s*-subjunctive: originally thematic or athematic?

1. The *s*-subjunctive typical of Old Irish strong verbs with a root-final dental or guttural is formed by adding a suffix *-s-* to the root, this then combining with the preceding *-d-*, *-g-* etc. to yield *-s(s)(-)*. Although it is clear that this *-s-* was followed by the thematic vowel in the 1 and 2sg. as well as all the pl. forms, in the 3sg. the personal ending appears to have been added direct to the *-s-* in athematic fashion. Thus the *s*-subjunctive of *guidid*, *-guid* "prays" < *$g^{w}ed$-*ye*-*t(i)* < *$g^{wh}ed^{h}$-*ye*-*ti* (see Cowgill, 1980, 49-54) shows forms such as 1sg. conj. *-gess* < *$g^{w}ed$-*s*-*ū*, 2sg. conj. *-geiss* < *$g^{w}ed$-*s*-*e*-*s(i)*, 3sg. abs. *geiss*, conj. *-gé* apparently < *$g^{w}ed$-*s*-*t(i)*, 1pl. conj. *-gessam* < *$g^{w}ed$-*s*-*o*-*mos(i)*, 2pl. conj. *-gessid* < *$g^{w}ed$-*s*-*e*-*te*, 3pl. abs. *gessait*, conj. *-gessat* < *$g^{w}ed$-*s*-*o*-*nt(i)*.

Not surprisingly, this apparent mixture of thematic and athematic forms has led to quite a variety of theories about Indo-European origins and subsequent developments, the three basic approaches as summarised by Thurneysen in 1946 being: "the thematic forms can be explained as old subjunctives of the *s*-aorist, like Homeric ἐρύσσομεν, τῖσετε, Skt. *darṣasi*, *neṣatha*. The non-thematic forms might be due to the influence of the *s*-preterite, where non-thematic flexion was original. But there remains the further possibility that they were originally forms identical with the aorist indicative, but used modally. Pedersen (Kgl. Danske Videnskabernes Selskab, Hist.-Fil. Middelelser III., 5, 1921, XIX. 3, 1933) has pointed out that in various languages, notably Italic and Lithuanian, stems in *s* with non-thematic endings appear as futures; e. g. Osc. Umbr. *fust* 'erit', Umbr. *ferest* 'feret', Osc. *pertemest* 'prohibebit', where a vowel (*-i*) seems to have been lost after the *-t* but none between *s* and *t*. This formation, if it is old (as Pedersen suggests), may also have had some influence on the flexion of the Irish *s*-subjunctive" (*GOI* 391).

Pedersen originally considered the Old Irish paradigm a mixture of thematic subjunctive and (in the 3sg. with traces in the 2sg.) athematic injunctive forms of the *s*-aorist, but could not explain how this had come about: "wie das Gemisch der beiden Bildungsweisen in der irischen Flexion aufgekommen ist, bleibt unsicher" (*VKG* II 355). Other scholars,

including Stang (e. g. 1942, 204), invoked an old so-called 'semi-thematic' paradigm combining both athematic and thematic forms, but this need concern us no further since the theory of a PIE semi-thematic conjugation developed by Brugmann and Meillet no longer seems tenable (cf. Jasanoff, 1975, 93). On the other hand, considerable support has been and continues to be enjoyed by variations upon the theme of an at least dialectal (P?)IE athematic *s*-modal or future, which was pioneered by Pedersen's short monograph (1921) chiefly on the strength of the Osco-Umbrian and Old Irish evidence in combination with questionable assumptions about Greek futures and Latin sigmatic formations.

For Pedersen (ibid., 9) the precise 1sg. fut. equation seen in Lith. *dúo-siu*, OInd. *dā-syā-mi* "I shall give" was still grounds for positing a dialectal (P?)IE **-sye/o-* future. However, W. P. Schmid (1963, 32-59; cf. Strunk, 1968, 301-4) and Jasanoff (1975) have now argued that this comparison is a mirage and that the Baltic future derives from an entirely athematic *s*-formation still apparent in the 3sg. (e. g. Lith. *duõs* "will give", *bùs* "will be") as in the case of the arguably comparable Old Irish and Osco-Umbrian *s*-futures. Schmid (ibid., 43-4) sees traces of a similar formation in Old Indic and argues that the OInd. *-sya-* future can accordingly be analysed as a *-ya-* extension of this athematic *s*-modal, while a secondary thematization of the same might underlie sigmatic Greek futures of the type πείσ-ο-μαι "I shall suffer" (< full-grade **pent*^{h}-) vs. pres. πάσχω, aor. ἔπαθον (both < zero-grade **pn̥t*^{h}-).

K. H. Schmidt (1966b) shows a still more extreme inclination to trace all unreduplicated subjunctive or future *s*-formations, whether at least partially athematic or fully thematic, in Old Indic, Greek, Baltic, Italic and Celtic to a PIE athematic *s*-modal vaguely connected with the *s*-aorist: "bei einer Bestimmung des Kernes der *s*-Konjunktive bzw. Futura sollte man allerdings zwei extreme Positionen vermeiden: (1) ihre Rückführung auf Aoristkonjunktive, (2) ihre Bestimmung als alte sigmatische Aoriste" (ibid., 22). As regards the forms in question, "funktional dienen sie zur Wiedergabe von Futura oder Konjunktiven, formal sind sie vom Aoriststamm unmittelbar unabhängig. Ihre Flexion ist athematisch, thematisch oder gemischt" (ibid., 23). In Schmidt's opinion (ibid.) a thematic *s*-aorist subjunctive arose at a post-PIE date in some dialects on the analogy of the inherited relationship between an athematic present like **h*$_1$*és-ti* (e. g. OInd. *ásti*, Lat. *est*) and a thematic subjunctive *h*$_1$*és-e-t(i)* (e. g. OInd. *ásat(i)*, Lat. fut. *erit*). The original Celtic state of affairs with an undifferentiated athematic subjunctive-future is supposedly reflected by a handful of OIr. verbs with identical *s*-subjunctive and (unreduplicated) future, e. g. *les(s)-* "may/will lie" (**leg-*), but elsewhere a core of old reduplicated desideratives or, in the case of weak verbs, the historically obscure *f*-formation became productive as distinctive futures, thus confining the older formations to subjunctive function.

For Meid (1977, 120) both the *a-* and *s*-subjunctives originate in PIE aorist indicatives or injunctives not yet properly differentiated as to mood and tense. Moreover, of late Kortlandt (1984), with Hamp's terse but enthusiastic support (1987), has launched a particularly uncompromising advocacy of athematic *s*-modal origins for not only the *s-* but also the *a*-subjunctives and futures of Old Irish, the latter being incorporated with the help of a significantly modified version of Rix's recent theory (1977; see 2 below). According to Kortlandt "the athematic *s*-subjunctive of Old Irish is not isolated in Indo-European: it is also found in Baltic, Italic and Tocharian" (ibid., 180). Moreover, "the assumption of a thematic aorist subjunctive is based on the Indo-Iranian and Greek material. There is no reason to suppose that such a formation ever existed in the western Indo-European languages. More probably the Latin forms must be identified with the athematic *s*-subjunctive of Celtic and Baltic" (181; cf. K. H. Schmidt, 1966b, 24). This is then equated with the Vedic *s*-aorist injunctive, and "the same formation is reflected in the Tocharian *s*-present, which adapted thematic endings, e. g. B *pakṣäṃ*, *pakṣtär* 'ripens, boils' < **pek*^{w}*se-*, *tsakṣäṃ*, *tsakṣtär* 'burns' < **dheg*^{w}*hse-*, which correspond to Lith. *kèps* 'will bake', *dègs* 'will burn'. The original athematic flexion of this class is reflected in the corresponding transitive root subjunctive, where the **-s-* was lost between two obstruents" (ibid.).

Finally, Rasmussen (1985) has tentatively proposed a distinct future-like inflectional category for the parent language, which he terms a 'prospective' and endows with *e-*/zero-grade ablaut alternation, *-s-* suffix and athematic inflection. While sceptical about the athematic origins of the Oso-Umbrian formation seen in Osc. 3sg. *fust* etc. for the good reason that Osco-Umbrian syncope rules are too uncertain for earlier **-set* to be ruled out (ibid., 385, n. 4), Rasmussen sees firm evidence for the postulated paradigm in the Baltic future, the comparability of Vedic 2sg. *-si* imperatives with the sigmatic OIr. type *at:ré* "arise!" < **-reg-s-s* (386-7), and the half dozen or so OIr. unreduplicated *s*-futures (389-90). As far as Old Irish is concerned, the *s*-subjunctives are to be derived from a PIE thematic *s*-aorist subjunctive, the reduplicated *s*-future from a reduplicated *s*-desiderative well attested in Indo-Iranian (see ch. 7), and the rarer unreduplicated formation along with the handful of originally sigmatic imperatives from the newly recognised 'prospective' (388-90).

According to Rasmussen (ibid., 387) the relationship between OIr. 2sg. ipv. *-gé* (implied by *aic(c)* "acknowledge!" from *ad:guid*) and subj. *-geiss* < athematic **g^{w}ed-s-s* and thematic **g^{w}ed-s-e-s* respectively matches that between Ved. 2sg. ipv. *dar-ṣi* (< **-s-si*) and subj. *darṣ-asi*, for example. More or less simultaneously Jasanoff (1986) has emphasized essentially the same connection, arguing that, whatever its precise origin and analysis, a 2sg. **-si* imperative can be posited for PIE with the help of the Insular Celtic apocope of **-i* established by Cowgill (1975; cf. McCone, 1978 and 1979). This makes it possible to derive a 2sg. ipv. like OIr. *tair(i)* "come!" < (**to+*are+*) **ink-s* < **ink-si* precisely comparable with OInd. forms like *yak-ṣi* "sacrifice!" (*yaj-*). While reconstructing a thematic **-se/o-* subjunctive and somehow associated **-si* imperative for PIE, Jasanoff doubts whether the former regularly corresponded to an *s*-aorist indicative in the parent language: "as I shall show elsewhere, there is in fact considerable reason to believe that the subjunctive of the sigmatic aorist - and with it probably the imperative in *-si* as well - was at least partly independent of the corresponding indicative in late PIE times" (ibid., 138; cf. G. Schmidt, 1986, 58).

The range of Old Irish imperative, subjunctive or future *s*-formations exploited by the studies just referred to varies considerably. Nevertheless, for all their diversity, they share an assumption that Old Irish offers at least some support for the reconstruction of a PIE athematic *s*-modal. This may or may not be connected with the *s*-aorist injunctive or taken to preclude the coexistence of a thematic *s*-aorist subjunctive, but is to be distinguished from the *s*-aorist indicative in any event.

Although his advocacy of an originally athematic paradigm for the Old Irish and British *s*-subjunctives has proved particularly influential, Watkins' approach (1962, 124-45) differs in at least one major respect from those above: it ascribes both formations to an internal Celtic displacement of old *s*-aorist indicatives to the modal plain under pressure from originally perfect formations assuming general preterital value. For example, perfect **bu-bowge* became the preterite underlying OIr. *(-)bobaig* "broke", and thus left the now redundant aorist indicative **bowx-s-* free to become the subjunctive underlying OIr. *bóss-* "may break" (OIr. pres. *bongid* "breaks"). On the other hand, where the old aorist became the general preterite, the *a*-subjunctive (originally optative, see ch. 5, 1) held its ground and the erstwhile perfect simply disappeared. "The Celtic *s*-subjunctive thus directly continues the Indo-European *s*-aorist; it is entirely unnecessary and unwarranted to assume the mediation of any hypothetical sigmatic subjunctive or injunctive forms to account for the short root vowel of the sigmatic stem" (ibid., 125). From this it can be seen that Watkins' explanation of these forms depends upon his contention (ibid., 18-52), to be discussed later, that the PIE *s*-aorist was characterised by the full rather than the usually assumed lengthened *e*-grade of the root.

Finally, according to Watkins "there is an additional testimony of the athematic character of the *s*-aorist/ subjunctive. The forms have independent value, being in the Old Irish period divorced from the paradigm of the *s*-subjunctive. They are the six originally 2 sg. *s*-subjunctive forms which function as 2 sg. present imperatives: (*OIGr.* 375) *at-ré* 'arise!' < **reg-s-s*; *no-m-ain* 'spare me!' < **aneg-s-s*; *aicc* 'invoke!' < **ad-ged-s-s*; *tog* 'choose!' < **to-gōs-s-s*; *tair* 'come!' < **to-are-ink-s-s*; **foir* 'help!' (MS *-fóir*) < **wo-ret-s-s*. These forms can only be explained as containing athematic 2sg. *-s*. And since they function as imperatives we may assume that they were taken over after the transition from aorist to subjunctive, in other words, that they are by origin 'jussives'" (1962, 139; cf. K. H. Schmidt, 1966b, 25; Kortlandt, 1984, 179-80; Rasmussen above).

2. Although uncompromising versions of the athematic hypothesis deny that any Old Irish *s*-formation had inherited thematic inflection, more moderate formulations are prepared to recognise an originally thematic reduplicated future at least and sometimes even a once entirely thematic *s*-subjunctive too. Thus Rasmussen (1985, 388-90) ascribes the mixed paradigms of all the *s*-formations to the interaction of originally athematic *s*-preterite and unreduplicated *s*-future (old 'prospective') with originally thematic *s*-subjunctive and reduplicated *s*-future. Similarly Jasanoff (1975, 94) saw "unambiguous traces of an athematic *s*-future" in the unreduplicated OIr. type (cf. 1988, 232-4), but then seriously considered the possibility that the *s*-subjunctive was originally thematic and related to the Greek and Indo-Iranian *s*-aorist subjunctives (1986, 133-4). G. Schmidt (1986, 34, 51 and 57-8) rather unsystematically recognises reduplicated and unreduplicated athematic *s*-'futuroids' for PIE alongside a functionally identical thematic *s*-formation originally independent of the *s*-aorist indicative and ultimately responsible for reduplicated and unreduplicated *-se/o-* desideratives or futures as well as thematic *s*-aorist subjunctives in various daughter languages, the OIr. *s*-subj. included.

Against these variously nuanced approaches are ranged what may be termed strong versions of the thematic hypothesis. Common to these is the view that all of the non-preterital Old Irish *s*-formations were originally thematic, the apparently athematic 3sg. being due to the influence

of the originally athematic *s*-preterite after this had been secondarily thematised in all but the 3sg. (see 6 below). This theory too has recently been maintained in a number of different varieties.

Prior to Rix's epoch-making study (1977, 147-54) it had been unquestioningly assumed that the Old Irish *a*-subjunctive was directly related to the Italic *ā*-subjunctive and as such etymologically unconnected with the Old Irish *s*-subjunctive, regardless of whether the latter was originally thematic or athematic. Rix, however, pointed out that derivation of the basic markers of the OIr. *s*- and *a*-subjunctives from **-se/o-* and **-a-se/o-* respectively entailed a unitary origin for both types as well as a nice parallel with the generally recognised relationship between the reduplicated *s*- and *a*-futures.

Remarkable formal correspondences between the relevant Old Irish and Old Indic formations indicated that the split in the future stems was secondary and due ultimately to the spread of a laryngeal between a resonant and *-s-* from CERH to CER roots in the PIE reduplicated thematic desiderative. The end product was the typical opposition between C*i*-CR̥T-*se/o-* (CERT) > OIr. *s*-fut. C*i*-CR(*i*)*s-s-* on the one hand and C*i*-CR̥H*se/o-* (CERH and CER) > C*i*-CR*ā-se/o-* > OIr. *a*-fut. C*i*-CR-*ā-* (but C*i*-C(R)*i*H*se/o-* > OIr. *i*-fut. C*i*-C(R)*ī-*) on the other. Arguing that PIE had also possessed an unreduplicated full-grade thematic desiderative for which certain Greek futures such as Hom. μενέουσι "will remain" < **men-h₁so-nti* indicated a similar distribution of presuffixal laryngeal to yield Ce(R)T-*se/o-* (Ce(R)T) but CeRH-*se/o-* (CERH and CER), Rix made the novel suggestion that the OIr. *s-* and *a*-subjunctives plus the handful of unreduplicated *s*-futures were all simply descended from this second PIE desiderative formation. Hence, say, OIr. *gess-* "may pray" < **gʷhedʰ-se/o-* but *-mela* "may grind" < **melā-* < **melase/o-* < **melh-se/o-* (set **melh*) and *-bera* "may bear" < **berā-* < **berase/o-* < **bʰer-hse/o-* (anit **bʰer*).

While recognising the likely role of an isomorphic thematic *s*-aorist subjunctive in the semantic shift of the posited full-grade *s*-desiderative, Rix essentially proposed a blanket derivation of the futures and subjunctives of Old Irish strong verbs from PIE desideratives, reduplicated and unreduplicated respectively: "ernsthaft erwägen muß man dagegen, ob nicht die Wurzel oder mindestens eine der Wurzel des Keltischen *s*-Subjunktivs beim nicht-reduplizierten Desiderativum der idg. Grundsprache liegt. ... Diese Desiderativbildung muß mit dem Konjunktiv des *s*-Aorists isomorph gewesen sein. ... Eine solche zufällige Isomorphie ist nichts Ungewöhnliches. ... So ist die oben mit air. *-lessed* verglichene homerische Form λέξεται nicht nur als Konjunktiv Aorist sondern auch als Indikativ Futur belegt. ... Daß das unreduplizierte Desiderativ im Keltischen zum Subjunktiv geworden ist, hat seinen Grund in der Isomorphie mit dem Konjunktiv des *s*-Aorists; außerdem stand für das Futur die eindeutige reduplizierte Bildung zur Verfügung" (ibid., 152).

In a review of the volume containing Rix's contribution Cowgill rejected desiderative origins for either type of subjunctive and considered it probable "that Celtic once had the system of Greek or Indo-Iranian, but simplified it, preserving only one modal per verb: typically, an *s*-subjunctive going back to the PIE subjunctive of the *s*-aorist if the root ended in a dental or dorsal stop; otherwise an *ā*-modal built to either the present or the aorist, whichever was simplest" (1981, 63). Bammesberger's criticism (1982) of Rix centred upon the proposed shift from desiderative to subjunctive function and upon the undesirability of splitting the Old Irish from the Italic *ā*-subjunctives. Assuming thematic *s*-aorist subjunctive origins for the Insular Celtic *s*-subjunctive, he argued that both the Italic and Celtic *ā*-subjunctives could likewise have been extrapolated from a small nucleus of thematic aorist subjunctives, but this time a root-aorist type C(R)*ā-* < C(R)*eh₂-e/o-*. Finally, the present writer (McCone, 1986, 243-60) has attempted to combine Rix's insight into the common origins and subsequent distribution of the Old Irish *s-* and *a*-subjunctives with a straightforward ascription of *s*-aorist subjunctive origins to the **-(a)se/o-* suffix involved.

The nature of Rix's hypothesis has made some preliminary reference to the *a*-subjunctive and the future above unavoidable, but a detailed discussion of the various proposals relating to these will be postponed until chapters 5 and 7 respectively. The essential point for present purposes is that, as far as the Insular Celtic *s*-subjunctive in isolation is concerned, positing a desiderative origin has no formal advantages whatever over derivation from a thematic *s*-aorist subjunctive and is, indeed, bedevilled by quite serious systemic and semantic problems inapplicable to the subjunctive hypothesis (see 3 below). For this reason a decision in its favour can only be justified by a manifest superiority to the alternatives as an explanation of the Old Irish *a*-subjunctive. Accordingly, in anticipation of the following chapter's argument that a thematic *s*-aorist subjunctive can account quite adequately for this formation too, the thematic case below will be geared to that category rather than an assumed PIE full-grade unreduplicated desiderative. However, it is to be borne in mind that any purely formal considerations below would apply equally to both.

3. The overall question of thematic versus athematic origins for the Old Irish *s*-subjunctive and related formations is of considerable importance on account of the role it has played and continues to play in the theories of two divergent but far from rigidly distinct schools of thought about the reconstruction of Proto-Indo-European. Versions of what one might broadly term the 'traditional' line tend to accord a by no means unconditional primacy to the evidence of Greek and Indo-Iranian on account of the coherence of the basic model thus obtained and its ability to explain less systematically intact survivals elsewhere (cf. Schlerath, 1973, 8-9; Rix, 1977, 132-3). More 'radical' approaches, on the other hand, are suspicious of the very neatness of this construct and inclined to ascribe some of its key features a late or sub-PIE dialect stage shared by Greek, Indo-Iranian and Armenian (cf. Meid, 1977, 111). This engenders a looser and more 'democratic' framework that grants a more or less equal say to all branches, ranging from Anatolian attested from before the middle of the 2nd. millenium B. C. to Baltic attested only after the middle of the 2nd. millenium A. D. (cf. Kortlandt, 1984, 179).

The nature of the Indo-European modal system, particularly the subjunctive, constitutes a major area of disagreement between the two. Adherents of a fundamentally 'Greco-Aryan' framework project the Greek and Indo-Iranian subordination of modal markers to the double aspect (or triple aktionsart) opposition expressed by present and aorist (plus perfect) stems back to the parent language itself. This results in a PIE present, aorist and, more doubtfully, perfect subjunctive matched by a similarly bi- or trifurcated optative. Supporters of alternative models, by contrast, often prefer to see this system as a later development confined to an alleged intermediate precursor of Greek and Indo-Iranian that has been described by Meid as "ein dialektisches Spätindogermanisch östlicher Prägung, dessen besondere dialektische Züge unter anderem in einem durchstrukturierten Tempus- und Modussystem bestehen, in welchem die Modi Konjunktiv und Optativ in Abhängigkeit zu den indikativischen Tempus-, besser Aspektstämmen Präsens und Aorist gebracht worden sind" (1977, 111). Thus Watkins avers that in PIE "the subjunctive is independent of present and aorist alike" (1962, 118), and in W. P. Schmid's similar opinion "der Konjunktiv war vorhistorisch unabhängig von Präsens und Aorist, ein Konjunktiv Aoristi ist daher vom Standpunkt des Idg. stets eine sekundäre Erscheinung" (1963, 43, n. 163). The explicit or implicit corollary of such views as well as those of K. H. Schmidt and Kortlandt (1 above) is that PIE simply did not possess a thematic present or aorist subjunctive.

Watkins' (1969, 226-35) attempt to isolate a primary optative suffix **-oi-* alongside **-i(é)h$_1$-* and perhaps **-eh$_2$-* (> **-ā-*), all attached directly to the root, founders upon "a mass of uncontradicted Indo-Iranian, Greek, Germanic and Slavic evidence for its correlation with thematic bases" (McCone, 1986, 243) that speaks clearly for the customary segmentation as **-o-ih$_1$-*. As Rix (1977, 148-9) points out, unambiguous evidence for the addition of the one confidently reconstructed PIE optative suffix, namely **-i(é)h$_1$-*, to aspect stems is by no means confined to Greek and Indo-Iranian but is also supplied by Latin, Germanic and Slavic. This creates at least a presupposition that the PIE subjunctive was similarly formed, but conclusive demonstration depends upon the evaluation of potentially crucial Latin and Celtic evidence.

Strunk (1988b) has recently argued persuasively for a 1sg. 'voluntative' **-ō*, probably < **-o-h$_2$*, as the original nucleus of a full late or even sub-PIE ("voreinzelsprachlich") thematic and then also hyperthematic subjunctive paradigm triggered by formal and semantic interaction with PIE thematic indicatives, both present with primary and injunctive with secondary endings. As a result of this, the 1sg. pres. ind. tended to replace inherited **-o-mi* with originally voluntative **-ō*, whereas the new subj. acquired both primary and secondary endings in ultimately free variation outside the 1sg. through drawing on both pres. and inj. indicatives. If the full thematic subj. paradigm is not securely attested outside Greek and Indo-Iranian, it would presumably be best considered a sub-PIE phenomenon. If, however, Celtic and/or Italic provide reliable further support, the late PIE alternative becomes much more likely.

The arguments deployed in favour of deriving Insular Celtic *s*-subjunctives from a thematic *s*-aorist subjunctive will obviously vary somewhat according to the particular alternative ranged against it. To begin with, although there are no formal criteria for deciding between an isomorphic **-s(-)e/o-* subjunctive and unreduplicated desiderative, other considerations weigh strongly in favour of the subjunctive solution.

Firstly, the very reconstruction of a PIE desiderative of this type is highly questionable, resting as it does primarily upon various types of Greek future synchronically different from the corresponding aorist subjunctives, Old Latin futures of the type *faxit*, *parsit* and a couple of quasi-desiderative Latin presents, notably *quaeso*, *vīso*. However, both the archaic Latin and the Greek futures can be plausibly triggered from a nucleus of thematic subjunctives displaced by innovations in the corresponding preterite or aorist indicative stems, e. g. the ousting of aor. *pars-* by perf. *peparc-* in a new merged preterite (see Szemerényi, 1989,

308; McCone, 1986, 256-7; see ch. 7, 3 on Greek forms). The pair of relevant Latin presents might then be shifted subjunctive-futures (McCone, ibid., 257; cf. Watkins, 1962, 119 on W. *tech-* "flee" < subj. **tex-s-* etc.) or othewerwise explained (see Rasmussen, 1985, 390, n. 23). There is, moreover, a good structural argument for this alternative interpretation of the Old Latin forms: "the hypothesis that Latin or Italic underwent a shift subjunctive > future, optative > subjunctive can explain a wide range of phenomena neatly, including this **-se/o-* future and a corresponding **-sī-* subjunctive (see Ernout, 1953, 165-6) as deriving ultimately from the subjunctive and optative respectively of *s*-aorists. However, if the **-se/o-* future is an old desiderative this symmetry is destroyed and the **-sī-* subjunctive becomes a rather improbable analogical adjunct to it" (McCone, ibid., 257; cf. Leumann, 1976, 621; Szemerényi, 1989, 308).

Secondly, even in the unlikely event that PIE did have an unreduplicated full-grade desiderative isomorphic with the *s*-aorist subjunctive and isofunctional with the securely attested reduplicated zero-grade desiderative (see 2 above and ch. 7), it is hard to believe that such a formally ambiguous and semantically redundant form not only preserved its separate identity right down into Proto-Celtic or beyond in the face of the steady expansion of the *s*-aorist but actually ousted that notoriously productive formation's subjunctive.

4. Watkins' derivation of the Celtic *s*-subjunctives from shifted *s*-aorist indicatives has the merit that the latter's PIE status is indisputable. Not so, however, the full rather than lengthened grade of the root claimed by him (1962, 18-52) for this category in late Proto-Indo-European as an essential part of his argument, and critics such as Wagner (1967, 4) and Rix (1977, 151-2) have duly pointed to the evidence for an original lengthened grade provided by Indo-Iranian, Slavic and Latin.

Strunk (1985b) has now clarified the ablaut in question by means of a persuasive theory that acrostatic athematic paradigms with original C*é*(R)C- throughout underwent "Aufstufung" or upgrading on the model of more widespread athematic kinetic types opposing a strong C*é*(R)C- to a weak C(R)C-' stem. Accordingly perception of the strong alternant as weak stem plus *e* led to acrostatic C*é*(R)C- acquiring a strong counterpart C*ḗ*(R)C- (*ē* = *e*+*e*) by analogy (ibid., 499). As applied to the undoubtedly acrostatic *s*-aorist indicative (cf. Insler, 1972, 55-64) this meant upgrading an original active paradigm with 3sg. C*é*(R)C-*s-t*, 3pl. C*é*(R)C-*s-n̥t* to C*ḗ*(R)C-*s-t*, C*é*(R)C-*s-n̥t* respectively within PIE prehistory, whereas a thematic subjunctive C*é*(R)C-*s-e/o-* will have remained unaffected. Strunk goes on to argue (ibid., 500-6) that, by late PIE, contamination between acrostatic and (amphi)kinetic root aorists had helped to trigger the generalization of the lengthened grade C*ē*(R)C-*s-* underlying the inherited Indo-Iranian and Slavic active formations indubitably and the Latin one probably, as well as being at least compatible with the Greek and Tocharian evidence. The only serious problem was Celtic with what on Watkins' showing were exclusively full-grade descendants of the PIE *s*-aorist.

If Watkins' analysis of the Celtic forms is correct, PIE can hardly have progressed beyond unlevelled strong C*ḗ*(R)C-*s-* vs. weak C*é*(R)C-*s-*, and the generalization of lengthened grade must have occured independently in at least two, probably three and perhaps more IE groups. As Watkins has conclusively demonstrated (1962, 156-74) in conjunction with a bibliography and discussion of previous views, the (Insular?) Celtic *t*-preterite confined to strong verbs with root-final liquid, *m* or guttural goes back to a PIE *s*-aorist indicative. The crucial trigger was the regular loss of *s* between such sounds and *t* seen in OIr. *echtar* "outside" < **exs-tero-*, *tart* "thirst" < **tarsto-* < **tr̥sto-* (OHG. *durst*) (ibid., 143 and 169). This caused a 3sg. like **ber-t* "bore" < **ber-s-t* to be resegmented as root plus preterite suffix *-t(-)* with zero ending and made the base of a new paradigm using thematised **ber-t-e/o-* plus the appropriate personal ending outside the 3sg. The motive can be plausibly sought in what must have been a quite irregular inherited paradigm opposing **ber*C(-) to **berr*V- (see *VKG* I 82-3 on *rs* > *rr* prevocalically in Celtic). Whether 3pl. **berr-ant* < **b^{h}er-s-n̥t* had been first superseded by **berr-ont(i)* or the former had already been remodelled to **ber-t-ant* before becoming **ber-t-ont(i)* in the normal way (ch. 3, 1 and 4), the thematic-looking 3pl. presumably triggered the usual thematization of the whole paradigm, a process resisted in this case by the 3sg. for the simple reason that it was synchronically endingless.

Watkins (1962, 159-62) demolished the hitherto standard view that the Celtic *t*-preterite continued a PIE root aorist with a string of cogent arguments. Firstly, not only was this archaic and barely distinctive formation a poor survivor but root aorists were virtually unattested for the roots in question elswhere. Secondly, suppletive *do:cer* "fell" < **kérht* shows that set root aorists like **mélht* "ground", **stérh$_3$t* "strewed" should have yielded OIr. **-mel*, **-ser* not **-melt*, **-sert*. Thirdly, this hypothesis offers no explanation of the phonetic constraints upon the roots concerned. To this might be added the expectation that replacement of an anit 3pl. like **b$^{(h)}$r-ent* by **br(iy?)-ont(i)* (*bri(y)-* perhaps spread from 1

and 2pl. **bri-mos(i)*, **bri-te* < **bʰṛ-*C-) should have resulted in a new thematic paradigm **br(iy?)-e/o-* based upon the zero rather than the full grade (see ch. 1, 2 and ch. 3, 1; cf. McCone, 1986, 228-9). Finally, it is hardly a coincidence that the two or three undoubted reflexes of root aorists in Old Irish survive only in suppletion with a different root appearing in the present (see ch. 6, 4-7), since "this weakly characterized formation must have been particularly moribund in Celtic, which gave up a primary/secondary opposition distinguishing present from aorist in favour of an absolute/conjunct system. . . applying to both indifferently and thus robbed the root aorist of its sole morphological mark as past tense" (McCone, ibid., 230; cf. the similar import of remarks on the present/imperfect distinction by Meid, 1977, 129).

Watkins' theory has been widely (e. g. by Rix, 1977, 147) but not universally accepted. It was fiercely attacked by Wagner (1967), who had himself explained the *t*-preterite as a cross between root aorist and *-to-* verbal adjective shortly before (1961b), while Meid has more recently (1977, 122) expressed scepticism and a tentative preference for a modified version of Wagner's explanation. However, "on purely formal grounds this explanation cannot be upheld for the *t*-preterite, since the latter shows full grade root, whereas the *-to-* participle required zero-grade root form where the root was *TER-*, as proved by the Old Irish preterite passive: *-cleth* < **kl̥-to-*" (Watkins, 1962, 159). The trigger of a few roots with non-ablauting *a* proposed by Meid (1977, 122) seems statistically inadequate and anyway can hardly justify the introduction of full grades into the preterite active but not the passive.

Wagner's principal objections to Watkins were: firstly, the *-t* would have been lost unless originally followed by a further vowel (1961b, 2); secondly, "ein Watkins'scher *s*-Aorist **gʷelHst* hätte ebensowenig im Ir. **belt-* ergeben wie ein Wurzelaorist **gʷelHt*" (1967, 2-3); thirdly, the change *mst* > *mt* required for the *t*-preterites of *em-* and *sem-* is unsubstantiated; fourthly, his whole theory was contradicted by good evidence for a lengthened grade in the PIE *s*-aorist; fifthly, it was inconsistent to deny the antiquity of *t*-preterites like OIr. *-acht* "drove" = MW. *aeth* to roots with guttural final (ibid., 4-5). The first point is based upon a misunderstanding of the prehistoric Irish 'Auslautsgesetze', whereby only postvocalic final stops lenited to fricatives and then **-h* were lost, but unlenited stops and the vowels preceding them remained (cf. pres. 3pl. conj. *-berat* < **beront*; McCone, 1982, 24-5). The second can easily be invalidated by a well motivated set of morphological restructurings to be discussed later (ch. 5, 7), and the third by the sheer absence of counter-evidence. Finally, as the discussion below should show, the fourth and fifth points are only inimical to Watkins' particular mode of deriving the OIr. *t*-preterites and *s*-subjunctives from the PIE *s*-aorist indicative and not to such an origin for the *t*-preterite in principle. Indeed, demonstration that the OIr. *t*-preterite reflects a PIE paradigm with lengthened grade in the active singular at least would place Watkins' hypothesis of *s*-aorist indicative origins beyond all doubt, albeit at the cost of his similar explanation of the indubitably full-grade Insular Celtic *s*-subjunctives.

In letters dated 21/2/79 and 8/10/79 the late Warren Cowgill drew my attention to the good evidence for erstwhile lengthened grade provided by a comparison of OIr. forms like pres. *as:ro-bair* "can say" (< **-ro-beret(i)*) or pret. pass. *as:ro-brad* "has been said" (< **-ro-breto-* < **-brito-*), *-ta-bair* "gives" (< **-to-beret(i)*), ipf. subj. *a-t:roi-ble(a)* "may perish" (< **-ro-belaset(i)*), ipf. *do:ro-mlad* "used to have eaten" (< **-ro-meleto*) with the corresponding *t*-preterites *as:ru-bart* "has said", *-tu-bart* "gave", *a-t:ru-balt* "has died", *do:ru-malt* "has consumed". The more or less consistent early appearance of *u* for *o* in the latter category's stressed preverbs is certainly not due to analogy, which naturally worked in the opposite direction to produce later forms like *do:ro-mult*. That being so, it can only have resulted from regular raising before *i* in the following root syllable. Moreover, this *i* was short on the evidence of the MW. *ber-* compounds *cymyrth* "took", *diffyrth* "protected", which now appear closer to the original vocalism than the variants *cymerth*, *differth* readily attributable to an *e/y* fluctuation widespread in Middle Welsh texts. Accordingly the preforms of the preterites in question can be confidently reconstructed as **-birt(i)*, **-bilt(i)*, **-milt(i)*.

This postulate avoids the difficulty of deriving stressed conj. 1sg. *-biurt*, 2sg. *-birt*, abs. 3sg. *birt* < **bert-ū*, **bert-is* (< **-es(i)*; McCone, 1982, 17 and 23), **berti(-)* respectively by means of a raising of *e* to *i* across *rt* flatly contradicted by the OIr. singular paradigm na. *nert*, g. *neirt*, d. *neurt* "strength" (see *GOI* 48). On the other hand, forms like 1pl. *-bertam(mar)*, 3pl. *-bertat(ar)* can be accounted for by a lowering of *i* to *e* that definitely took place over *rt* in the light of nsg. *fiurt* "miracle" (< Lat. *virtus*) but gsg. *ferto*. The main problem is the stressed 3sg. conj. *-bert*, *-melt* etc., but this can be overcome by simply positing a late prehistoric Irish sound change *i* > *e* before non-palatal *-r/lt*.

A form like **birt(i)* cannot, of course, be accounted for in terms of an *s*-aorist indicative paradigm with full grade **bʰ(ʰ)er(s)t(-)* only. However, it can be generated straightforwardly enough from one characterised by lengthened grade **bīr-s-* < **bʰēr-s-*, whether throughout or in the sin-

gular active alone. In the latter case, typical Celtic modification of verbal paradigmatic ablaut alternations in both length and quality (ch. 3, 2) will have changed an opposition between, say, 3sg. **bīr-s-t* and 3pl. **ber-s-ant* to one of vowel length only, whence **bīr(-s)-t*, **bir-s-ant*. From this **bīr-t(i)*, **bir-t-ont(i)* would have resulted through the various morphological transformations discussed above, the plural stem ultimately being generalised as a concomitant of thematization to give 3sg. **bir-t(i)* and **bir-t-e/o-* elsewhere (McCone, 1986, 231). Singular **birt(i)* etc. could, of course, equally well be the phonetically regular outcome of **bīrt(i)* on account of the Osthoff-style shortening of vowels before liquid or nasal plus stop exemplified in ch. 3, 3-4. This possibility obviously makes it quite feasible to derive **birt(-)* from a paradigm with unvarying lengthened grade **bīrt(-)* in both weak and strong active stems.

According to *GOI* 421, in the two *t*-preterites of roots with final *m*, namely *em-* (*do:eim* "protects", *ar:fóem* "receives") and *sem-* (*do:fuis-sim* "begets"), "*-em-t* becomes *-ét*, with *t* = *d*". This could only have arisen regularly from a full-grade *-(s)en-t(-)* < **-(s)em-(s)-t* in the light of the argument (ch. 3, 4) that *in*T generated from *īn*T by shortening or ablaut modification gave OIr. *it* or lowered *et* (= */id/*, */ed/*), whereas *ét* resulted from *ın*T < *e/an*T. Since both the active and passive preterite of *do:eim* augmented by fixed or 'preverbal' *ro* (*EIV* 148-54) must have been *do:róet*, an *-ét* originating in the zero-grade pass. pret. could easily have replaced **-it/-et* (the latter probably also in the 3sg. conj. on the analogy of 2sg. *-birt* vs. 3sg. *-bert* etc.) in the active too.

A more serious problem is posed by the indubitable full grade rather than *i* seen in a handful of old *t*-preterites to guttural-final roots (see 5 below), notably OIr. *-acht* "drove" (= MW. *aeth* "went"), *-ort* "slew", *a-t:recht* "arose" (MW. *dyr-reith* "returned") and MW. *gwreith* "made" (< **wrex-t*). In the case of *-acht* and *-ort* one might suppose that the *a* and *o* vocalism of the corresponding presents seen in OIr. *-aig* and *-oirg* was felt to be so far removed from *i* that an ablaut accomodation between sg. **īx-s-*, **īrx-s-* (< **h₂ēĝ-s-*, **h₃ērĝ-s-*; see ch. 3, 4) and pl. **ax-s-*, **orx-s-* (< **h₂eĝ-s-*, **h₃erĝ-s-*) exceptionally went the latter's way. However, this does not explain the failure of the forms with an old *e*-vocalism unmistakable from British (cf. MW. m. *brith* "speckled" < **brixtos* vs. f. *breith* < **brextā*) to conform to developments claimed for *ber-* etc. above.

The evidence of an OIr. form like *ichtar* "bottom" (*VKG* II 44) that *īxt* did not undergo prehistoric shortening may provide a clue to all of these apparent exceptions. After an Insular Celtic analogue of Osthoff's Law had produced **birt(-)* < **bīrt(-)*, **kilt(-)* < **kīlt(-)* (OIr. *-celt* "hid"), **int(-)* < **īnt(-)* etc., it may be assumed that the few remaining *t*-preterites with now anomalous *ī* simply got rid of this by introducing the short vowel (*a*, *e* or *o*, as the case might be) appearing in the present and elsewhere. Since the root *ag-* almost certainly acquired its *s*-aorist at a relatively late, albeit at least Insular Celtic, date (ch. 2, 3), the new form would have been most conveniently generated by mere addition of the appropriate markers to the normal root, whence **ax(-s)-t*. If so, the relationship between pret. **ax-t(-)* and pres. **ag-e/o-* would provide a neat trigger for the replacement of **īrxt(-)* by **orxt(-)* (pres. *org-e/o-*), **rīxt(-)* by **rext(-)* (pres. *reg-e/o-*) and **anīxt(-)* by **anext(-)* (pres. **aneg-e/o-*). This explanation will, of course, only work if the *s*-aorist had once had lengthened grade throughout the indicative active in Celtic as in Indo-Iranian, Slavic and probably Latin at least. If so, the thesis that this was the late PIE ablaut pattern is corroborated, and derivation of the typically full-grade Insular Celtic *s*-subjunctive from an old *s*-aorist indicative is ruled out.

5. That leaves various versions of the athematic *s*-modal hypothesis. Insofar as this has been connected with a PIE *s*-aorist 'injunctive' classically assumed to differ from the indicative only in its lack of the augment **é*, the full grade of the OIr. *s*-subjunctives is as problematical for this as for Watkins' explanation. A possible way out is offered by Kortlandt's (1987, 219-21) claim that an observable but far from consistent Vedic tendency to oppose full-grade injunctive (e. g. 1sg. *jeṣam*) to lengthened-grade indicative (e. g. 1sg. *ajaiṣam*) in the *s*-aorist system goes back to PIE. Although it is not unthinkable that a PIE active inj./ind. paradigm with sg. lengthened and du./pl. full grade should have been skewed in order to maximalize the formal difference between unaugmented injunctives and augmented indicatives by generalising full and lengthened grade respectively, the actual attestations suggest otherwise. As Narten (1964, 21-2) has shown, almost all of the full-grade forms in question belong to late Vedic. That being so, the Rigvedic 1sg. inj. *stoṣam* and 3pl. ind. *amatsur* are probably stray innovations due to analogical influence from the full grades of the subjunctive and the indicative middle respectively (ibid., 17, n. 12), while RV. 1sg. *yeṣam*, 1pl. *jéṣma* have been explained as particularly old examples of a type of precative likewise better attested later (Hoffmann, 1967 = 1976, 465-74).

The alleged wholly or partially (sg. act. only) full-grade PIE athematic *s*-modal or 'prospective' cannot, then, be plausibly connected with the *s*-aorist injunctive. Once that prop is removed, the grounds for positing it are considerably weakened. To begin with, circular arguments about the

athematic sigmatic origins of attested fully thematic *-s(y)e/o-* paradigms must be rejected, thus excluding the relevant Tocharian presents, Greek, Latin and Old Indic futures (see 1 above) from consideration.

That being so, potentially acceptable evidence for an old athematic *s*-modal or the like is confined to the Baltic and Osco-Umbrian *s*-futures, the Vedic *-si* 'imperative', and the Old Irish *s*-subjunctive plus a few unreduplicated *s*-futures and originally sigmatic imperatives. It will be argued below that the Vedic and Old Irish *s*-imperatives as well as the Old Irish *s*-subjunctives and futures are almost certainly to be derived from older fully thematic paradigms. If so, that leaves just Baltic and Osco-Umbrian.

The idea that the latter's *s*-futures could reflect an original thematic paradigm was vigorously contested by Pedersen: "on trouve dans les manuels les plus répandus l'opinion que le futur osco-ombrien serait en vérité un subjonctif de l'aoriste qui aurait pris le sens d'un futur. . ... Mais cette opinion est contredite par tous les faits. Osque *pert-emes-t* 'il interrompra', ombr. *feres-t* 'il portera', *furent* 'ils seront', osque *censaz-et* 'censebunt' sont évidemment des thèmes en *-s-*, non pas des thèmes en *-se-*, *-so-*. Rien ne nous autorise à croire qu'un *e* soit tombé entre *-s-* et *-t-* dans *pert-emest*, *ferest*, rien ne peut motiver l'hypothèse que la désinence *-ent* (< **-enti*) ait supplanté une désinence **-ont* (< **-onti*) dans *furent*, *censazet*" (1921, 22-3).

On the other hand, there is no compelling evidence against the assumption that the apparently athematic 2sg. *-s* and 3sg. *-st* of these paradigms are from originally thematic **-ses(i)* and **-set(i)*, given the marked tendency to syncopate vowels in contact with *s* in Osco-Umbrian final syllables (Buck, 1928, 59). Furthermore, Osco-Umbrian replacement of old thematic **-ont(i)* by originally athematic **-ent(i)* < **-ént(i)* and/or **-n̥t(i)* (Buck, 1928, 152), while admittedly unusual, might be motivated by the latter's identical vocalism with thematic 3sg. **-et(i)*. Indeed, pressure towards homogenization of vocalism between **-et(i)* and **-ont(i)* could arise even without the extensive survival of athematic **-ent(i)* in Osco-Umbrian and hence Italic, given the parallels provided by the Lat. *e*-fut. type *feret*, *ferent* probably based upon hyperthematic pres. subj. **ferēt*, **ferōnt* (e. g. Leumann, 1976, 577) and the OIr. subj. abs. 3sg. *beith*, 3pl. *beit* "may be" < **bweti*, **bwenti* for original **bweti*, **bwonti* (ch. 6, 3).

At any rate, as long as there are good reasons for deriving the thematic *faxit* type of future in Old Latin from the PIE thematic *s*-aorist subjunctive (see 3 above), only positive proof to the contrary can invalidate the presumption that the similar Osco-Umbrian type originated in what

will then have been an Italic *-se/o-* subjunctive > future inherited from PIE. That being so, Osco-Umbrian must be regarded as a weak support for an old athematic *s*-modal or 'prospective', as Rasmussen (1985, 385, n. 4) candidly admits.

If the Irish evidence for an athematic *s*-modal should fail to hold, such a category can hardly be posited for PIE on the strength of the Baltic verbal system alone. Caution is urged by the latter's particularly late attestation and radical restructuring to produce a regular dichotomy between present and infinitive stems, from the latter of which both preterite and *s*-future derive by only marginally different synchronic rules. Indeed, since the Baltic preterites are invariably asigmatic and share the vocalism of the infinitive stem, a significant role in the constitution of the future inflection may have been played by a modally shifted *s*-aorist indicative with ablaut adapted to the infinitive (cf. the optional 'modal', often future, usage of the Old Irish preterite documented by Quin, 1974; cf. 1978, 22-3). The formal aspects of a proposal along such lines for Baltic would, for instance, barely differ from that entailed by Jasanoff's bold proposal to reconstruct an acrostatic "*s*-present 3sg. **rḗt-s-ti*: 3pl. **rét-s-n̥ti* for the common ancestor of the Celtic, Baltic and Osco-Umbrian forms" (1988, 234).

Needless to say, even if a PIE athematic *s*-modal could be securely established, it would by no means necessarily follow that the OIr. *s*-subjunctive, unreduplicated *s*-future and so on had originated in such a formation.

6. The Insular Celtic evidence, then, appears crucial, and one point can be conceded to the various hypotheses of athematic origins at the outset. Since the *s*- and *t*-preterites with their thematic inflection outside the 3sg. undoubtedly continue a PIE athematic *s*-aorist indicative paradigm (Watkins, 1962, 156-80; see 4 above and ch. 5, 7-8), there is no *a priori* reason why *s*-subjunctives and futures with the same basic inflectional pattern should not likewise continue originally athematic paradigms. Thus in Kortlandt's forthright opinion, "the projection of the Old Indic thematic paradigms back into the Indo-European proto-language is simply not warranted. Indeed, the very mixture of thematic and athematic forms in the Old Irish paradigms shows that it is not correct. If the thematic paradigms of Old Indic had once existed in Celtic, they would undoubtedly have been preserved, and the 3rd. sg. form would not have been ousted by a less distinctive formation. The attested forms show that

we have to start from an athematic paradigm with secondary endings" (1984, 179).

However, the athematic origins of the OIr. *s*-preterite's 3sg. should not blind us to the fact that, once the other persons had been secondarily thematised, the resultant paradigm would be synchronically thematic with a zero personal ending for the basic 3sg. Thus (*-i* marking absolute only) 1sg. **anass-ū*, 2sg. **anass-es(-i)*, 3sg. **anass-Ø(-i)*, 1pl. **anass-omos(-i)*, 2pl. **anass-ete*, 3pl. **anass-ont(-i)* (OIr. *anais*, *-an* "stayed"; cf. Watkins, 1962, 174-80). If once thematic throughout, the *s*-subjunctive will have differed from this only in the 3sg., e. g. 1sg. **ress-ū*, 2sg. **ress-es(-i)*, 3sg. **ress-et(-i)*, 1pl. **ress-omos(-i)*, 2pl. **ress-ete* (see McCone, 1982, 27-8), 3pl. **ress-ont(-i)* (OIr. *reiss*, *-ré* "may run"). From a synchronic standpoint **-ss-et(i)* can hardly be considered more distinctive in relation to the other personal inflections than **-ss(i)*. It was simply a matter of two paradigms identical apart from their different but to all intents and purposes equally viable 3sg. forms.

Since no Old Irish verb has both an *s*-preterite and an *s*-subjunctive, the convenient introduction of complete inflectional identity between the two would pose no problems. Such homogenization could have proceeded in one or the other of two more or less equally plausible directions. In favour of **-ss-et(i)* would be its conformity to a paradigmatic type found in strong presents of the type 3sg. **ber-et(i)*, 3pl. **ber-ont(i)* etc. (OIr. *beirid*, *-beir* "bears"). On the other hand, among the *s*-formations themselves **-ss(i)* would have the advantage of belonging to the *s*-preterite typical of the large and productive category of weak verbs rather than to the manifestly non-productive *s*-subjunctive or future confined to certain strong verbs of a particular shape. It will be shown below that British took the first option and Irish the second. However, the main point for present purposes is that there is nothing inherently implausible about the ousting of **-ss-et(i)* by **-ss(i)* under the circumstances just described. Accordingly everything hinges on whether the explanation of the 3sg. OIr. *s*-subjunctives as ancient athematics is formally satisfactory and, if not, whether the prehistoric Irish remodelling of a once thematic formation under the *s*-preterite's influence fares significantly better in this respect. What follows is a somewhat modified restatement of an argument already presented elsewhere (McCone, 1986, 243-6).

7. The 3sg. of OIr. *s*-subjunctives based upon roots with a final dental can be derived quite regularly from athematic prototypes, e. g. 3sg. abs. *reis* "may run", *geis* "may pray" < **ressi*, **g^{w}essi* < **ret-s-ti(-)*, **g^{w}ed-s-ti(-)*, conj. *-ré*, *-gé* < **ress*, **g^{w}ess* < **ret-s-t(i)*, **g^{w}ed-s-t(i)*. However, the hypothesis that **ressi*, **ress* etc. had been remodelled from thematic **ress-eti*, **ress-et* < **ret-s-eti(-)*, **ret-s-et(i)* is also formally unimpeachable. Here, then, we have a tie, with considerations of economy slightly favouring the athematic option *ceteris paribus*.

The 3sg. forms based upon guttural-final roots are, however, decisive because the regular OIr. outcome of always athematic **tēx-s-t(i)*, **rex-s-t(i)*, **anex-s-t(i)*, **orx-s-t(i)* could only have been non-existent '*t*-subjunctive' **tíacht*, **recht*, **anacht*, **ort*, whereas the actually attested forms are *s*-subjunctive *téis*, *-té* "may go", *a-t:ré* "may arise", *-ain* "may protect", *-orr* "may kill". Since the latter's immediate preforms **tēssi*, **-tēss*, **-ress*, **-aness*, **-orr* cannot be straightforwardly derived from the athematic set above (cf. Jasanoff, 1986, 140, n. 5), they are most obviously ascribed to the secondary influence of the 3sg. *s*-pret upon earlier thematic **tēss-eti*, **-tēss-et*, **-ress-et*, **-orr-et*. These in turn derive from **tēx-s-eti(-)*, **tēx-s-et(i)*, **rex-s-et(i)*, **or(x)-s-et(i)* by a perfectly normal development of intervocalic *-xs-*. The corollary, of course, is that the OIr. *s*-subjunctive once had **-se/o-* throughout and accordingly almost certainly derives from a PIE thematic *s*-aorist subjunctive, the attestation of which is not only indisputable in Greek and Indo-Iranian but also highly probable in Latin.

The problems posed by these guttural-final roots have not often been properly confronted by advocates of an originally athematic paradigm. In proposing a derivation of the OIr. unredup. fut. *a-t:ré* "will arise" < athematic 'prospective' **h$_3$reĝ-s-ti* Rasmussen shows an awareness of the problem but does no more than hint at a possible solution: "lautgesetzlich wäre **-recht*: die Form *-ré* dürfte sich aus Systemzwang erklären" (1985, 39 , n. 30). Since he believes that the OIr. *s*-subjunctives and reduplicated futures reflect old thematic formations (see 1 above), Rasmussen is free to envisage influence from that quarter. Thus the reformation of fut. **rext(i)* < **rex-s-t(i)* to **ress(i)* identical with the subj. from earlier **rex-s-et(i)* might have been triggered by the relationship between, say, subj. **rēss(i)* and fut. **ri-riss(i)* (both once **-xs-et(i)*) of **rige-ti* (OIr. *rigid* "(binds), rules"; McCone, 1986, 234-5) in combination with that between subj. and fut. **sess(i)* "will sit" (earlier **sed-s-et(i)* and **sed-s-t(i)* respectively) - if, that is, athematic 'prospective' origins for the OIr. unreduplicated *s*-future were not unacceptable on other grounds (see ch. 7, 8).

Be that as it may, the problem is particularly acute for those who posit an originally athematic *s*-subjunctive, especially if this is coupled with a denial of the reduplicated *s*-future's thematic origins, and Watkins remains the only representative of this school to have tackled it seri-

ously. According to Watkins (1962, 143-4) the peculiar development *-*xst*(-) > *-*xss*(-) > *-*ss*(-) taken to underlie these *s*-subjunctives was due to the *s*'s irregular retention because of its indispensibility as an aorist marker. That being so, **anex-s-t* "protected" must have yielded **aness* > OIr. *-ain* "may protect" and the OIr. *t*-preterite *-anacht* "protected" could only be a new prehistoric Irish creation despite complete formal and semantic compatibility with a preform **anex-s-t*. Still more disturbingly, the precise correspondence of OIr. *-acht*, *-recht* with MW. *-aeth*, *-reith* respectively now has to be considered the coincidental outcome of parallel innovations and no longer the regular reflex of (Insular?) Celtic prototypes **ax-s-t* and **rex-s-t*. Moreover, there is no obvious reason why the same alleged morphological conditioning should not have preserved the *s*-marker in the aorist of roots like **ber-* "bear", thus yielding **-berr* < (for Watkins) **berss* < **-berst*. However, its failure to apply is proved by the regular loss of *s* underlying **-bir(s)t* > **-bert* "bore" and so on.

The only *t*-preterite of a guttural-final root allowed to be inherited on this hypothesis was OIr. *-ort* "slew" < **or-s-t* < aorist **orx-s-t*, preferred as preterite because the root's initial vowel militated against a sufficiently distinctive perfect form (Watkins, 1962, 173-4). The identity of this with pret. pass. *-ort* "was slain" < **or-to-* < **orx-to-*, itself presumably an analogical remodelling of **rix-to-* or more likely **-art* (Joseph, 1982, 51) < **h₃rĝ-to-*, is then supposed to have triggered new pret. act. *-acht*, *-anacht* from pret. pass. *-acht*, *-anacht* < **ax-to-*, **anex-to-* at a late prehistoric stage.

It is true that there are a few OIr. guttural-final roots with a *t*-preterite inflection probably applied secondarily to old suffixless preterites lacking distinctive reduplication through syncope or the like in unstressed position (*EIV* 56). It is also true that Middle Irish provides further examples of the use of OIr. preterite passives as actives too (ibid., 257). However, the former seem to have arisen only through ambiguity with the present (e. g. *do:for-macht* "increased" for **do:foirmig* < **wormemage* barely distinguished after apocope and syncope from pres. *do:formaig* "increases" < **wor-maget*), and the latter "are suspect of being purely literary products of uncertainty about obsolescent or extinct strong preterite actives and passives, resulting in hypercorrect interchange between them on the basis of a small old core of *t*-preterites identical with corresponding actives in the literary standard" (ibid., 257). In the last analysis, *-anacht* and *-acht* "are the only Old Irish preterites of *-anaich* and *-aig*, and there is no reason to suppose that they had not been those verbs' sole preterites ever since the Insular Celtic aorist/perfect merger, especially as their root-initial vowel would be no more conducive to distinctive perfect reduplication than Watkins claimed *-oirg*'s was" (McCone, 1986, 233).

Moreover, *-oirg* most inconveniently has both a *t*-preterite *-ort* and an *s*-subjunctive *-orr*, both of which Watkins must derive from the **-orx-s-t* paradigm. If *-ort* is the direct outcome of the 3sg., then *-orr* cannot be and *vice versa*. This obliges Watkins (1962, 173-4) to posit a quite unprecedented skew whereby 3sg. **ort(i)* < **or(x)st(i)* became the base of a new *t*-preterite paradigm by spreading **orte/o-* to the other persons in the normal way, but this time already thematized old **orre/o-* < **orse/o-* outside the 3sg. uniquely generated a new 3sg. **orr(i)* and a separate subjunctive paradigm. As pointed out by Cowgill (1983, 86), this intrinsically improbable explanation can be rejected on the grounds that nothing remotely similar happened in the case of primary verbs with root-final liquid despite virtually identical conditions for the creation of a separate *t*-preterite and *s*-subjunctive by skewing, e. g. aor. 3sg. **bert(i)* < **ber-s-t* vs. **berre/o-* < **berse/o-* elsewhere in Watkins' terms.

Indeed, the whole notion of an *s*-aorist indicative or, for that matter, any athematic or thematic *s*-modal becoming the subjunctive of precisely those roots whose final consonant was lost before the *-s-* is implausible in the extreme, if the competition was a once general and arguably optative *ā*-modal of Italo-Celtic or older provenance, as Watkins (1962, 118-9) and others maintain (see ch. 5, 1 and 2). If **berā-* etc. could hold its ground, what possible motive can be envisaged for preferring opaque forms like **orr(e/o)-*, **ress(e/o)-* to crystal-clear **org-ā-*, **reg-ā-*, **ret-ā-* as subjunctives corresponding to pres. **org-e/o-*, **reg-e/o-*, **ret-e/o-* even in a straight battle between rival modals, let alone by deliberately skewing and shifting the former from aorist indicative function in order to challenge the latter?

At any rate, if the skew of *ort(-)/orr(-)* cannot be justified and/or even one of the other *t*-preterites to a guttural-final root is old, Watkins' whole explanation of the *s*-subjunctive, which is in any case incompatible with what appears to have been the inherited lengthened grade of the Celtic *s*-aor. ind. act. (5 above), collapses. By contrast, these intractable difficulties melt away once one posits an athematic *s*-aorist indicative vs. a thematic *s*-aorist subjunctive. Then the *t*-prets. *-acht*, *-anacht*, *-ort* and *-recht* can be simply derived from aor. ind. **ax-s-t*, **anex-s-t*, **orx-s-t* and **rex-s-t* (for vocalism see end of 5 above), while the corresponding *s*-subjs. *-ain*, *-orr*, *-ré* (see ch. 2, 3 on *-aig*'s subj.) are from **aness*, **orr*, **ress* remodelled from **aness-et*, **orr-et*, **ress-et*. These in turn descend quite regu-

larly from **anex-s-et(i)*, **orx-s-et(i)*, **rex-s-et(i)* with the full grade of the root expected in a thematic *s*-aorist subjunctive.

8. It might seem better to argue that a few guttural-final roots with *t*-pret. and subj. **anext(-e/o-)*, **ort(-e/o-)* etc. adopted an *s*-subjunctive **aness(-e/o-)*, **orr(-e/o-)* in order to avoid this serious ambiguity. One might then further speculate that the proportion pres./subj. **reg-/*ress-*, **aneg-/*aness-* or **org-/*orr-* thus established was spread by analogy to other guttural-final roots which had preferred the old perfect over the aorist in the new combined aorist. Hence, say, replacement of presumed subj. **rēxt(-)* by **rēss(-)* "may bind" (OIr. subj. *-ré*, pres. *-rig*, suffixless pret. *-rerraig*).

However, none of this seems remotely probable. In the vast majority of guttural-final roots a *t*-subjunctive contrasting with a suffixless preterite would have been quite unambiguous. The obvious course for **org-*, **aneg-*, **reg-* and **wreg-* would thus have been the parallel adoption of a distinctively inflected old perfect as a preterite impossible to confuse with any *t*-subjunctive. After all, in at least one vowel-initial root with final guttural an OIr. pres. *imm:com-airc* "asks" < **-arket(i)* is opposed to a suffixless pret. *imm:com-arcair* "asked", the deponent inflection of which was obviously a recent innovation aimed at differentiating pret. **imm:com-airc* < **-arke* from a now identical pres. sg. (*EIV* 82; McCone, 1986, 237-8). Failing that, the most likely proportion would be provided by other verbs with a *t*-preterite, e. g. pret. **bir-t(i)*: subj. **beraset(i)* = pret. **rex-t(i)*: subj. x (x = **regaset(i)*), but that would have produced an *a*- not an *s*-subjunctive.

In any case, if the OIr. *s*-subjunctive's attested 3sg. in the large class of guttural-final roots can only be explained by analogy, the hypothesis of an originally athematic paradigm immediately loses its one apparent advantage over the thematic alternative (see 6 above). Indeed, the tables are turned insofar as analogical replacement of the latter's inherited 3sg. **-ss-et(i)* by the **-ss(i)* of the productive and now otherwise identical *s*-preterite is an appreciably more understandable and straightforward proposition than the complex and dubiously motivated analogies needed to sustain the athematic derivation. The simple fact is that the undoubtedly old athematic 3sg. of the *s*- and *t*-preterites behaves quite properly, whereas the allegedly inherited athematic 3sg. of the *s*-subjunctives and, for that matter, the unreduplicated and reduplicated *s*-futures most decidedly does not. The only efficient explanation of this contrast is that the latter was not originally athematic. Predictably enough, perfect behaviour ensues forthwith upon recognition of its status as an old thematic formation subjected to well motivated analogical remodelling in fairly recent Irish prehistory (cf. G. Schmidt, 1986, 38).

Finally, the already quite lopsided balance of probability is brought down firmly on the thematic side by a consideration of some germane British data. Here such 3sg. *s*-subjunctive forms as survive can only derive from thematic preforms, e. g. MW. *gwnech* "may do" < **wrex-s-et* (Morris Jones, 1913, 339; Lewis/Pedersen, 1937, 288) vs. *t*-pret. *gwnaeth* "did" < **wrex-s-t*. The exigencies of Watkins' theory make the otherwise unproblematical *gwnaeth* a late prehistoric innovation and *gwnech* the outcome of old absolute **wrex-s-ti* (1962, 145). K. H. Schmidt too has rather hesitantly adopted this explanation (1966b, 24-5), but it is untenable in the light of the earlier (7 above) demonstration that aorist *-s-* underwent regular loss between *r/l/m/x* and *t*. Furthermore, derivation of *gwnech*, *duch* "may lead", *gwares* "may help" from abs. **wrexsti*, **dōxsti* (< **dewk-s-*), **(wo+)retsti* rather than conj. **wrexset*, **dōxset*, **resset* is morphologically questionable on account of a British bias towards the statistically more frequent conjunct 3sg. (e. g. MW. *car* "loves" < **karōd* < **karāt*) in eliminating the functionally otiose abs./conj. inflectional dichotomy.

It is also phonetically dubious, since the standard doctrine (Jackson, 1953, 581-3) that only *y* and *ī* but not *i* caused ultimate *i*-affection is hardly correct in the case of *e* and *o* at least, to judge from forms like W. *bugail* = OIr. *búachaill* "cowherd" < **bōkolis* < (**g^{w}ow-k^{w}ol-*), MW. *cyntefin* = OIr. *cétamuin* "May(day)" < **kintu-samonis*, or vestigial abs. 3sg. MW. *eyt* (OW. *hegit*) "goes" < **ageti* vs. conj. *a* < **aget*. That being so, the athematic abs. preforms alleged by Watkins should have produced **gwnych*, **gweryss*. In view of MW. *chwech* "six" < **swexs*, a derivation of *gwnech*, *duch* < athem. conj. **wrexss*, **doxss* might be ventured if Watkins' theory about the irregular retention of aorist *-s-* (so **-xst* > **-xss*) with its corollary **wrexst* > *gwnech* not *gwnaeth* were viable. Since, however, it is not and retention of the final syllable in *gwaress* < **wo-ress* seems at least doubtful (cf. Watkins, 1962, 177), there is no plausible alternative to the utterly straightforward derivation of 3sg. subj. *gwnech*, *duch*, *gwares* from thematic conj. **wrex-s-et*, **dōx-s-et*, **ret-s-et*.

Grounds for thinking that Proto-Celtic had inherited an unreduplicated thematic *s*-formation are supplied by Continental as well as Insular Celtic. At least two good examples occur on the Celtiberian Botorrita inscription, namely, *CaPiseTi* (A 3) and *amPiTiseTi* (A 5) (cf. Rasmussen, 1985, 388). In the former the normal form of the root has presumably

been restored to opaque **gaxse-*, the regular outcome of **gabse-*, the impossible sequence *-bs-* being avoided by insertion of a vowel between root and suffix. Watkins (1962, 135-6) convincingly posits a similarly motivated remodelling of the same root's pret. **gax(-s)-t* to **gab-ass* in Insular Celtic (likewise subj. **gaxse/o-* > **gabase/o-* according to McCone, 1986, 260), but here the union-vowel seems to have been taken over from the present system (see Eska, 1989, 55-6; cf. the Gaulish 2sg. ipv. *gabi* < **gab(i)ye*; Meid, 1980, 15-6).

K. H. Schmidt (1976, 366-7) is probably right to take *amPi-TiseTi* as an *s*-subjunctive, but what would then be its zero-grade vocalism militates against his comparison with OIr. *im:té* "may go round" < **ambi-tēx-s-*. My own (McCone, 1986, 253) tentative suggestion of a desid./fut. *-ti(x)seti* < **tik^{w}seti* < **ti(-t)k^{w}-se-ti* to **tek^{w}* "run, flee" should probably be withdrawn in favour of Eska's (1989, 42-4) contention that a verbal noun/infinitive of the same verb occurs in the following line as *(a)mPiTinC-ounei*. However, Eska's (ibid.) etymological connection with OIr. *-ding* "presses, builds" (cf. Eichner, 1989, 35) also yields the wrong grade for a subjunctive (**dēx-s-*), while a reduplicated desiderative **di-dix-se-ti* seems most unlikely to have been dissimilated to **dix-se-ti* in the way he suggests. A more promising alternative would be **tenḱ-* "make/become solid" (OInd. *tanakti*, OIr. *con:téici*; see ch. 3, 4), which would regularly become Celtic **tink-* (strictly *ink* but usually written *ink* in Gaulish at least; ch. 3,4). If *n* was lost before fricative *x(s)* unlike the corresponding stop *k* (cf. Germanic), one could posit **tenk-se-ti* with the *e*-grade expected of an *s*-aorist subjunctive > **tinx-se-ti* > **tī̆(x)seti*.

Whatever about the precise interpretation of these two forms, they are both clearly 3sg. thematic *s*-formations, most probably *s*-aorist subjunctives (cf. Eichner, ibid., 47) with an outside chance that one of them is rather a once reduplicated thematic *s*-desiderative. Indeed, they have led Schmidt to recognise "the preservation of thematically inflected *s*-subjunctive-futures of the 3rd. person singular" in Celtiberian and to conclude that Proto-Celtic "shared ... the *s*-subjunctive with Indo-Iranian and Greek" (1988, 239 and 245), albeit without mentioning the incompatibility of this position with his previously expressed views (see 1 above).

9. Apart from a few 3sg. vestiges of the *t-* and suffixless preterites still well preserved in Old Irish, the British preterite is obviously based upon the productive sigmatic type (*VKG* II 375). That this had been thematised outside the 3sg. before the separation of Irish and British is implied by the equation 1sg. MW. *cereis*, MCo. *kerys*, MBr. *quiris* < **karass-ī* (< **-ū*)

= OIr. conj. *-carus* < **karass-ū* "I loved". Manifest innovations render the 2sg. and pl. inconclusive, but Pedersen assumes that MW. 1pl. *carassam*, 3pl. *carassant* reflect original athematic **-s-ṃmos*, **-s-ṇt* and "die corn. und mbr. Formen sind nach dem Muster des Präs. umgebildet" (ibid., 377). In view, however, of the 1sg. and of the MW. byforms *-som* and *-sont* (D. S. Evans, 1964, 127) it seems more reasonable to see an older vocalism **-s-ont* and **-s-omos* in 3pl. MCo. *carsons*, MBr. *quersont*, 1pl. MBr. *quersomp* and take the MW. 3pl. to have been modelled on pres. *carant* (< **karant* < **-ānt*), 1pl. *carassam* then taking its vocalism from *carassant*.

The 3sg. MW. *caras* (*agores* "opened", *erchis* "asked" etc.), MCo. and MBr. *caras* "loved" is usually derived from old athematic absolute **karass-i* or the like (e. g. *VKG* II 377: Watkins, 1962, 177). This could be justified on the assumption that conj. **karass* would have yielded a **car* indistinguishable from the 3sg. pres., the corollary being that survivals of an absolute in *-it* such as OBr. *toreusit* (gl. 'attrivit'), MW. *kewssit* "got", *keressyt* "loved" (further examples in D. S. Evans, 1964, 123) are analogical to pres. abs. *-yt* beside conj. (later general) *-Ø* (so *VKG* II 374; similarly Watkins, 1962, 176-7). Such an analogy could hardly have operated before the loss of final syllables, when the pret. would still have had abs. **karass-i* vs. conj. **karass* and the pres. abs. **karōdi* vs. conj. **karōd*. If, however, it took place after the loss of **-i* etc., the regular effects of ultimate *i*-affection on the forms in question are virtually inexplicable. It thus follows that abs. *keressyt*, for example, is the direct reflex of pre-apocope **karass-eti*, and this conclusion provides compelling morphological grounds for the phonetically unimpeachable derivation of *caras* from a corresponding conj. **karass-et*.

It is not, of course, beyond the bounds of possibility that British secondarily thematized the 3sg. of both the *s*-subjunctive and the *s*-preterite on the model of old thematic present paradigms. However, such a hypothesis would be most uneconomical in view of the grave difficulties confronting the theory that the OIr. *s*-subjunctive was originally athematic. The neatest and most obvious solution is to suppose that, prior to the separation of Irish and British, the inflection of the sigmatic preterite and subjunctive had become identical outside the 3sg. owing to the former's partial thematization, whereas distinct reflexes of the original athematic/thematic dichotomy remained in the 3sg. abs. and conj. Thus 1sg. **-(s)s-ū*, 2sg. **-(s)s-es(i)*, 1pl. **-(s)s-omos(i)*, 2pl. **-(s)s-ete*, 3pl. **-(s)s-ont(i)* in both, but 3sg. *s*-pret. **-ss(i)* vs. *s*-subj. **-s-et(i)*. Complete homogenization of these complementarily distributed paradigms was carried out

in the separate prehistories of Irish and British, the former preferring **-(s)s(i)* but the latter **-(s)s-et(i)*.

It may thus be claimed in partial anticipation of the results of the next two chapters that Celtic, like Latin, provides unequivocal support for a subjunctive originally formed along Greco-Aryan lines by suffixing a thematic vowel to the relevant present or aorist stem as aspectually appropriate. When (Insular?) Celtic moved from a verbal inflection dominated by aspect and aktionsart oppositions to one geared primarily to tense, the pruning of subjunctive stems to one per verb was only natural. As Rix puts it, "in der Tat lassen sich die keltischen Tempus-Modus-Kategorien auch historisch als Kontinuanten von ur-idg. Aspekt-Aktionsart-Kategorien erweisen; das gilt für die morphologischen Mittel genauso wie für die Inhalte. Was die Inhalte anbelangt, ist freilich die schon (2.3.) erwähnte Tatsache zu berücksichtigen, daß das Keltische die morphologische Kennzeichnung von Aspekt- und Aktionsart-Oppositionen aufgegeben hat" (1977, 146).

The choice of originally aorist subjunctives in the new streamlined system was presumably conditioned by the formal advantage of a near general **-se/o-* formans, whereas the majority 'hyperthematic' type of present subjunctive must have developed a bizarre ablaut pattern in Celtic with 1sg. **-ū* (< **-ō*), 2/3sg. plus 2pl. **-ī-* (< **-ē-*), and 1/3pl. **-ā-* (< **-ō-*CV(-)) (see ch. 6, 4 end). As with the optative (**-i(e)h_1-*; see 3 above), then, circumstantial evidence for a specific subjunctive morph (*-e/o-*) added to the various aspect/aktionsart stems rather than direct to the root is by no means confined to Greek and Indo-Iranian. Celtic and Italic furnish vital corroboration to put this formation's PIE status beyond reasonable doubt.

10. There remains the question of the half dozen or so apparently athematic 2sg. sigmatic imperatives in Old Irish (see 1 above). A notable exception to the more or less general consensus that these originated in an *s*-formation is Cowgill's (1970, 123) derivation of a form like *-ré* "arise!" < **reg* < **rege*, a normal 2sg. present imperative subject to a sporadic early apocope parallel to that observed in Lat. *dic*, earlier *dice* "say!". However, "doubts about regularity aside, apocope of present stem forms cannot explain the hiatus type *déne*, and the commonest form of all, *tair(i)*, cannot be from apocopated **-t-ar-ink*, which would give OIr. **tairic* or **tairec* (cf. the rules in McCone, 1982, 24-5). Despite the morphological attractions of Cowgill's view, it seems that imperatives like *déicce*, *déne*, *-ré*, *tair(i)* must be from sigmatic preforms such as **d-en-*

k^{w}ēs-s, **de-gnē-s(-s)*, **res-s* (< **rex-s*), **t-ar-īs-s* (< **īx-s*)" (McCone, 1986, 242). Essentially the same point about *tair(i)* has been made independently by Jasanoff (1986, 134-5), who also observes that "in the case of *do:gní*, it is difficult to believe that the subjunctive *do:gné*, *:dénae*, an analogical creation on the model of the substantive verb, would have replaced its inherited imperative **dén(a)i* (< **gniye*), while the imperative of the substantive verb was itself preserved as *bí* (< **biye*)" (ibid, 139). That being so, ipv. *déne* "do!" is best regarded as analogical to *décce* "see" < **di-en-k^{w}ēss* < **-k^{w}eys-si* (ibid.).

It therefore seems necessary to posit sigmatic preforms for these imperatives, and these have all the appearance of old athematics. Appearances, however, can be deceptive. Advocates of an originally athematic OIr. *s*-subjunctive such as Watkins, Schmidt and Kortlandt have naturally taken these forms as precious 'jussive' relics of the originally athematic 2sg. **-s-s* displaced from the main paradigm by the secondarily thematised **-s-es* (see 1 above). In view, however, of the already documented (7-8 above) difficulties confronting attempts to trace Insular Celtic *s*-subjunctives back to an athematic prototype, this explanation can hardly be accepted unless there is no reasonable alternative. In fact, four counter-proposals, all entailing some sort of comparison with the Vedic *-si* imperatives but otherwise rather different, have recently been proffered more or less simultaneously by Rasmussen (1985, 387), Jasanoff (1986), G. Schmidt (1986, 54-7) and the present writer (McCone, 1986, 242-3).

G. Schmidt traces the OIr. forms back to a PIE bare-stem 2sg. *s*-aor. ipv. of the type **$h_3$reĝ-s* optionally suffixed by the deictic particles **-i* or **-om* to give the OInd. 2sg. *-si* imperatives and the Gk. 2sg. *s*-aor. ipv. of the type δεῖξον "show!" respectively. However, this postulate is unacceptably *ad hoc* by virtue of simply pushing three attested sigmatic imperatival variants back to PIE without due motivation. For Rasmussen the Old Indic and Old Irish forms are cognate isolated vestiges of a 2sg. athematic PIE 'prospective' originally unconnected with the *s*-aorist subjunctive, e. g. OIr. *tair* "come!" and OInd. *nakṣi* "reach!" < full grade I **$h_2$enk-s-si* and II **$h_2$nek-s-si* respectively of the same root. If, however, the OIr. unreduplicated *s*-future cannot be convincingly accounted for as an old 'prospective' (see ch. 7, 9), these 2sg. imperatives scarcely provide adequate grounds for the reconstruction of a new PIE non-imperative category with a full complement of personal endings.

Jasanoff is agnostic as to the origins of the 2sg. **-si* formans, insisting only that it had already become associated with the thematic *s*-subjunc-

tive by late PIE and is directly continued by the relevant OIr. and OInd. imperatives, e. g. Ved. *jóṣi* = OIr. *to-g* "choose!" (**to* + **gews*) < PIE **ĝéws-si* (1986, 137-8; see *EIV* 34-5 on *tog* for historically regular **togo/a* etc.).

Rasmussen's rejection and Jasanoff's hesitation notwithstanding, Szemerényi's (1966) explanation of the Vedic *-si* forms with full-grade root as from 2sg. thematic *s*-aorist subjunctives by an Indo-Iranian haplology of **-sa-si* > **-(s)si* is surely correct. Only thus can its occasional obviously non-imperative use in subordinate clauses and the alleged paucity of 2sg. *s*-aorist subjunctives in the Rigveda be convincingly explained: "the form is attested plentifully but is paraded as an independent form in *-si*. The curious morphological amalgam of 2nd sg. impv. and 3rd sg. subj. must give way to a uniform morphological pattern in which the *s*-subjunctive is represented in all forms while the imperative is absent" (ibid., 3). The upshot is a Vedic subjunctive paradigm 1sg. *stoṣāni*, 2sg. *stoṣi*, 3sg. *stoṣat* "may praise" etc., and occasional 2sg. subj. forms like *vakṣas*, *jeṣas* are readily explicable in terms of paradigmatic pressure from 3sg. *vakṣat* and so on. "To sum up, the so-called *-si* imperatives are in truth simple *s*-aorist subjunctives. They were shortened at an early date from the full form in *-sa-si*, which led to their formal isolation, though syntactically they continued in their earlier role, including their ability to be used in relative constructions demanding the subjunctive. It follows therefore that the *-si* forms cannot be projected as such into Indo-European, and especially not as original infinitival forms" (ibid., 6).

Although Szemerényi himself did not discuss the Old Irish forms, Jasanoff's theory that they reflect the same **-si* might be combined with the basic thrust of his explanation on the assumption that a late PIE haplology of **-s-e-si* to **-(s)si* was involved. One might then suppose that pressure from the rest of the paradigm led to well motivated independent rethematizations in Greek, Latin (as opposed to Osco-Umbrian?) and, in the basic subjunctive paradigm, Goedelic, as to some extent in Indic. In that case, of course, the Old Irish sigmatic imperatives would indeed be a relic of the original paradigm but this no longer needs to have been athematic.

However, a less ambitious approach to the Old Irish forms compatible with Szemerényi's view that the **-si* forms had not yet arisen in PIE "seems possible if a sigmatic analogue of Cowgill's (1980, par. 26; cf. McCone, 1981, 36-7) Law is invoked. This posits Primitive Irish syncope (before the main apocope and syncope) of an unstressed vowel between two dentals in final syllables if the penultimate syllable was also

unstressed, whence 3sg. conj. pres. **to adwēdet* > **to ad-wēlt* > OIr. *tadbat* 'shows'. If unstressed final *-sVs* were similarly affected (but without the restriction of unstressed penultimate too), the forms above could be from **denk^{w}ēss-es*, **degnēs-es*, **rexs-es*, **tarīxs-es* quite straightforwardly (even if the unstressed penultimate rule applied, *-ré*, *-gné* could easily be analogical once a set of 2sg. ipvs. resembling 3sg. conj. subjunctives had come into being). Within the paradigm of the *s*-preterite and subjunctive identity of 2 and 3sg. conj. **-ss* (< **-ses* and **-st* respectively) triggered restoration of 2sg. **-es* by the proportion abs. 3sg. **-ss-i*: 2sg. **-(s)s-es-i* = conj. 3sg. **-ss*: x (x = **-(s)s-es*), but the residual 2sg. **-ss* remained as a (quasi-)imperative in the manner posited by Watkins. A striking typological parallel for much of this is provided by Szemerényi's explanation of Vedic *-si* imperatives as < **-sa-si* subjunctives by haplology" (McCone, 1986, 242-3).

The rule can be tightened up if we posit the application of Cowgill's Law after lenition so that the dentals involved were no longer stops but continuants, whence **-deþ*, **-þeþ* > **-þþ* and then > **-(l)t* by normal delenition of such homorganic groups. If so, *déne* will be analogical to *décce*, as suggested by Jasanoff (1986, 139) with reference to OIr. vestiges of *-ci*'s original *s*-subjunctive (cf. *EIV* 33). A late seventh-century Old Irish sound law (McCone, 1981) voicing dental stops and fricatives on the word boundary before or after an unstressed vowel then produces the */-d/* guaranteed by a number of rhymed examples involving forms like *tadbat*, cf. OIr. *saiget* "arrow" (ModIr. *saighead*) < Lat. *sagitta* (W. *saeth*). A similar precocious syncope rule for the alveolar sibilant *s* thus becomes all the more likely, especially since OIr. *-tochar(r)* "is put" (Tur. 14) < **-to-chor-or* and *-tabarr* "is brought" < **-to-ber-or* (cf. McCone, 1986, 240) demonstrate the same loss of a vowel between two continuant *r*'s after an unstressed syllable. In every case the syncopated formation shows some tendency to spread beyond its original range after an unstressed vowel, e. g. *ad:fét* "relates" (*EIV* 30), *do:berr* "is brought" alongside *do:berar*, *-tabarr* (*EIV* 85), and presumably ipv. *a-t:ré* beside *com-éi-r*.

Whether a shared PIE protoform or roughly parallel separate developments within Indo-Iranian and Goedelic are involved, these sigmatic imperatives do not provide good evidence for an originally athematic *s*-subjunctive paradigm or the like. On the contrary, the Insular Celtic evidence considered so far points strongly to an inherited connection between an athematic *s*-aorist indicative with lengthened grade of the root and a thematic *s*-aorist subjunctive with full grade of the same, exactly as in Indo-Iranian.

CHAPTER FIVE

The origins of the Old Irish *a*- and the British *h*-subjunctives in the thematic subjunctive of the PIE *s*-aorist

1. The possibility of comparing the Old Irish with the Latin *ā*-subjunctive was mooted at the very birth of the scientific linguistic study of early Insular Celtic material: "est etiam conjunctivus temporis praesentis, in cujus terminationibus dominatur vocalis *ā*. Quapropter comparari poterit cum conjunctivo praesentis latino *legam*, *-as*, *doceam*, *-eas* etc., nisi praeferemus statuere affinitatem cum formatione futuri primarii sine signo ejus temporis" (Zeuss, 1853, I 454-5). By the time of his own celebrated article on the topic Thurneysen obviously regarded the identification of the Old Irish with the Italic formation as non-controversial: "ist nun der ursprüngliche conjunctiv durch das lat. futurum vertreten, so verlangt der conjunctiv mit *ā* eine andere erklärung. Er findet sie bekanntlich nicht nur in den italischen dialekten, sondern auch im Keltischen" (1884, 270). The general consensus on this matter remained undisturbed for over ninety more years until Rix made his revolutionary proposal about the Celtic formation in 1977, and even since then seems to have retained the approval of most scholars in the field.

On the other hand, the last hundred years or so have witnessed a good deal of controversy about the 'Italo-Celtic' *ā*-subjunctive's origins and possible relationship with more distant Indo-European *ā*-formations, as can be seen from Oettinger's recent study of the issue (1984) and Szemerényi's concise treatment accompanied by extensive bibliography (1989, 279-81). Since further details and refererences can be found in these two lucid and up-to-date presentations of the *status quaestionis* from rather different standpoints, the following outline can afford to be correspondingly skeletal in general and focus upon some recent develoments as well as points of particular relevance to Celtic.

If OIr. subjunctives like *-bera* "may bear", *-cana* "may sing" are to be directly compared with Italic forms such as Lat. *ferat*, *canat*, the shared protoforms can only be **b^{h}er-ā-t*, **kan-ā-t* and so on with a modal morpheme *-ā-*, which laryngeal theory may further analyse as either irreducible **-eh$_2$-* or composite **-e-h$_2$-*. Thurneysen pointed out (1884, 282-3)

that the Olr. formation's independence of the present stem, most clearly seen in the BIV/V type pres. *-cren* "buys" < **k^{w}ri-na-t(i)* vs. subj. *-cria* "may buy" < **k^{w}rey-ā-t(i)* or less probably **k^{w}riy-ā-t(i)* (see Jasanoff, 1983, 76), was matched by a handful of Old Latin subjunctives such as *advenat*, *attulat*. This led to the conclusion that the Classical Latin (and Osco-Umbrian) norm of dependence upon the present stem as *adveniat*, *afferat* etc. was due to a later innovation. As to the origins of the *ā*-marker, Thurneysen (ibid., 284-8) proposed extrapolation from the full-grade aorist injunctive **b^{h}wā-t* (= **b^{h}weh$_2$-t* in laryngeal terms) of the verb 'to be', probably aided by one or two more such formations from set roots, e. g. *tulat* = Gk. aor. *(ἔ)τλᾱ* < **t(l̥)lā-t* (= **t(l̥)leh$_2$-t*; see ch. 1, 4).

This aoristic starting point soon suggested a further connection with the Balto-Slavic *ā*-preterites as well as various subjunctival and preterital *ā*-formations in Tocharian. Szemerényi summarises and further develops this basic position as follows: "in Kuryłowiczs Formulierung: der lat. *ā*-Konjunktiv, früherer Optativ, geht auf einen Aorist zurück, der im Balto-Slavischen gut bezeugt ist; der konjunktivische Gebrauch ist der modale Rest dieses alten Aorists, dessen Charakteristikum ... von alten Set-Wurzeln stammt ... Wenn aber der lange Vokal von den Set-Wurzeln herstammt, dann kann er auch im Präsens und ganz allgemein im Verbalstamm vorgelegen haben, und das wird durch das Tocharische erwiesen, in dem, wie im Italischen und Keltischen, *ā*-Konjunktiv und *ā*-Präteritum sowie *ā*-Präsens im selben System nebeneinander existieren ... Damit ergibt sich folgendes Bild für das Latein. Der idg. Konjunktiv (*e/o* und *ē/ō*) wurde zum Futur. Noch vor diesem Wandel wurden aber zu *s*-Bildungen thematische Konjunktive gebildet, die die Grundlage fur Konj. Impf. und Plqpf... abgaben. Der neue Konj. Präs. wurde teils aus den idg. Optativen, teils aus modal gebrauchten *ā*-Bildungen aufgebaut. Für einen idg. *ā*-Optativ läßt sich kein Beweis erbringen" (1989, 280).

This last point is directed at Trubetzkoy's (1926) famous suggestion that the Italic and Celtic *a*-subjunctives continued an *ā*-optative formed from thematic bases, present or aorist as the case might be, in part of the Indo-European area instead of the **-oi-* formation found in the rest (see ch. 4, 3). Benveniste (1951) followed this up by deriving the Italic imperfect *ā*-formations from the same optative (cf. Eng. "he would go" etc.), the corollary being that the Balto-Slavic *ā*-preterites hardly had the same origin. Jasanoff (1983, 75-7) adopts a broadly similar position, adding the formal difficulty that the Balto-Slavic preterite seems originally to have had zero grade of the root whereas the Italo-Celtic modal had full grade on the evidence of Old Irish above all: "in short, any attempt to link the

Italic and Celtic *a*-subjunctive to the Balto-Slavic *a*-aorist must account not only for the obvious functional difference between the two categories, but for a significant formal disparity as well" (ibid., 77; cf. Oettinger, 1984, 198). Rix (1977, 150) tacitly excludes the Balto-Slavic preterite from consideration and concentrates upon the Italic, Celtic and Tocharian subjunctive evidence for an *ā*-modal, while expressing doubts about the relevance of the Tocharian data.

Cowgill's (1967) and Jasanoff's (1983, 82) explanations of the Tocharian *ā*-subjunctives as old athematic indicatives of laryngeal-final roots are supported by plentiful evidence for an indicative > subjunctive shift there, the ablauting paradigms involved and the regularity of Tocharian *ā* < vocalised *h* (whereas old *ā* probably gave A *a*, B *o* on the evidence of A *pracar*, B *procer* "brother" < **b^{h}rātēr* etc.; see Hilmarsson, 1986, 9). Oettinger too (1984, 196) takes the Tocharian *ā*-marker to be < *h* rather than the *eh$_2$* implied by the Italic, Celtic and Balto-Slavic formations, further noting that an ablaut relationship between the two is quite improbable.

Whether analysed as thematic vowel **-e-* + **-h$_2$-* suffix or as a primary **-eh$_2$-* suffix added direct to the root (e. g. Watkins 1962, 118-9; 1969, 26-35), Trubetzkoy's old *ā*-optative formans must be dismissed as *ad hoc* and inadequately supported (cf. Oettinger, 1984, 187-8). Although recently endorsed with some modifications by Pinault (1984, 119-22), Jasanoff's (1983) identification of a new PIE aorist formans **-h$_2$-* on the strength of Tocharian and Balto-Slavic *ā*-preterites above all also suffers from weak foundations in addition to depending upon the dubious proposition that zero-grade *tudáti*-type thematic presents were a well established feature of the parent language (cf. McCone, 1986, 227-8; Oettinger, 1979, 270, 297 and 299 claims at least some PIE formations of this type on the strength of equations involving Hittite, but Melchert, 1984, 16-9 and Lehrman, 1985, 254-60, question the Anatolian evidence). Still more speculative is Jasanoff's (ibid., 80-1) further analysis of the *ā*-subjunctive of Italic and Old Irish as a post-PIE conditional analogous to the French *lir-ait*, Italian *legger-ebbe* types and formed by adding the alleged preterital marker **-h$_2$-* to full-grade thematic subjunctives. The whole theory has been effectively criticised by Oettinger (1984, 191-2).

So far, then, it appears that attempts to link the Tocharian and Balto-Slavic *ā*-formations with the *ā*-subjunctives of Italic plus Celtic create at least as many formal and semantic problems as they purport to solve. The relevant Tocharian forms can be satisfactorily ascribed to internal developments triggered by regular set root-final *-Ch-* > *-C-ā-*, while the

more difficult Balto-Slavic preterites may have been somehow generated from a small core of C(R)*eh₂*- root aorists or, as suggested by Klingenschmitt (1982, 3-5), from a 1sg. mid. **-(h₂)ăm* resegmented as **-ā-m*. Such highly circumstantial developments, which can hardly be posited for PIE or some hypothetical later shared phase, seem unlikely to have more or less replicated themselves in both Balto-Slavic and Italo-Celtic independently. That being so, the *ā*-subjunctive seems best treated as a problem exclusive to Italic and Celtic, as argued on various grounds by a number of the scholars mentioned above.

2. Narrowing the field to two witnesses in this way considerably increases the chances that the correspondence Italic subj. (and ipf.?) **-ā-* = Celtic subj. (and ipf.??) **-ā-* is a mirage resulting from statistically acceptable coincidence rather than a true reflex of common origins (cf. ch. 4, 1 on comparable doubts about Lith. *dúosiu* = OInd. *dāsyā-mi*). In excluding the Tocharian *ā*-formations from consideration, Oettinger remarked: "dieses Ergebnis illustriert zugleich auch das theoretisch ohnehin klare Faktum, dass eine Übereinstimmung in Form und Funktion allein noch keine gemeinsame Herkunft erweist" (1984, 197). Although resisted by Oettinger himself, the temptation to apply the same principle to the Italic and Old Irish *ā*-subjunctives is considerable, given that the latter, unlike the former, does not inevitably go back to old **-ā-* (probably < **-eh₂-*). Furthermore, the formal and functional match between the Italic and Celtic formations proves on closer inspection to be rather less impressive than is commonly supposed.

To begin with, an *ā*-imperfect, whether derived from the subjunctive/optative formans à la Benveniste or not, is unambiguously attested in the normal Latin *amabat* imperfect, *amaverat* pluperfect and *erat* "was" < **esāt*. Celtic evidence for such a formation is, by contrast, far from compelling, restricted as it is to Pedersen's equation of the MW. ipf. *oed*, Co. *o*, Br. *oa* "was" (< **esāt*) with Lat. *erat* (*VKG* I 73) and Thurneysen's (1884, 281) claim that identical subj. and pret./ipf. *ba(-)* of the OIr. copula was a primitive survival (cf. Bammesberger, 1982, 69; Klingenschmitt, 1982, 5-9; Jasanoff, 1983, 75-8).

However, it is clear that, apart from the suppletive (non-consuetudinal) pres. ind., the Irish differentiation of copula from substantive verb forms grew out of phonetic divergences conditioned by the respective absence and presence of stress. Whereas Old Irish is relatively conservative in the matter of stressed vowels, proclitic and other unstressed vowels underwent appreciable demonstrably late change (see *GOI* 35-42, 63-7, 72). For this reason the existence of quite different vocalisms in the subj. (*be-*) and pret. (*bá(-)*, 3sg. *boí*) of the substantive verb create a strong supposition that the identity of both in the copula is secondary and due mainly to the well-known early OIr. change *e* > *a* in proclisis.

As Thurneysen later observed, "most of the forms of the pres. subj. of the copula are shortened forms of the corresponding tenses of the substantive verb ... The absolute 3sg. *ba* ... and the conjunct by-form *-bo*, *-bu* appear to be forms of the preterite.. which were used in a modal sense.. and so came to be classed as subjunctive forms" (*GOI* 488). Since the older OIr. subj. 3sg. conj. was obviously *-b* < **b(w)et*, such transfer from the pret. will have been a recent development triggered by the latter's attested 'modal' function in Old Irish (see end of ch. 4, 5), as Thurneysen implies. Indeed, the problem with subj. 3sg. abs. *ba* is not the vocalism but the lack of absolute *-d* (depalatalised in proclisis). OIr. **bad* < **b(w)eti* could easily have been altered to avoid homonymy with 3sg. ipv. *bad* or the like, *ba* being extrapolated from cases where **-d* should have undergone delenition (plus devoicing) before a following *d* (or *t*, cf. *a:treba* for *ad:treba* "inhabits"). As the next chapter should show (ch. 6, 2 and 7), in substantive verb and, therefore, copula an original *-ā-* characterized neither the subjunctive nor the preterite (which also assumed ipf. function in the copula; cf. the partial confusion between consuetudinal and non-consuetudinal pres. there, *GOI* 487).

As for MW. *oed* < **esāt*, the strongest phonetic argument in its favour is Pedersen's (*VKG* II 95-6) derivation of the *-oed(d)* plural associated with British reflexes of *s*-stems such as W. *nef*, *nefoedd* "heaven(s)" from **-esa*. However, MW. pl. *tir-ed* "lands" (OIr. *s*-stem *tir* "land") would seem to be older than ModW. *tir-oedd* (D. S. Evans, 1964, 28), and anyway the absence of any reflex of *-d(d)*(-) in the corresponding Cornish and Breton imperfects (ibid., 422) strongly suggests that MW. *-d*(-) throughout the imperfect/conditional *oed*(-) is analogical to that throughout the present/future: MW. *byd*(-), MCo. *beth*(-), MBr, *bez*(-) (ibid., 437). If so, the equation MW. *oed* etc. = Lat. *erat* appears to be phonetically questionable. It is also morphologically suspect in view of the total isolation of a form like ipf. **esāt* in Celtic and the ease with which Lat. *erat* can be explained as a relatively late prehistoric back-formation from fut. *erit* triggered by fut. *-bit* vs. ipf. *-bat* in the 1st. and 2nd. conjugations (Benveniste, 1951, 19).

The Insular Celtic redistribution of prim. **-(n)ti* vs. sec. **-(n)t* as abs. **-(n)ti*-E vs. conj. **-(n)t* (e. g. McCone, 1985c) inevitably eradicated formal oppositions such as that between ipf. **est*, **sent* and pres. **esti*, **senti* (see

ch. 4, 4), a situation quite possibly still reflected in the OIr. copula's above mentioned lack of a distinctive imperfect. Consequently the filling of this hole in the system may very well have happened quite late in British. Given that in other verbs the pres./ipf. distinction was simply expressed by separate sets of endings (ipf. probably based on a nucleus of old sec. mid. *-*(n)to*), an obvious starting point for a new ipf. stem *oe*(-) would be provided by the highly characterised 3sg. pres. MW. *oes* (MCo. *es*, MBr. *eux*) "is", which probably originated simply as a contraction of interrogative *a* with 3sg. cop. (MW.) *ys* but had obviously extended its range considerably (*VKG* II 428-9) before the separation of the British dialects. At all events, there is no remotely reliable evidence that *-*ā*- ever functioned as an imperfect formans in Celtic, and this fact alone constitutes a major point of disagreement with Italic. Benveniste was right to insist that the *ā*-imperfect "commence avec l'italique" (1951, 13).

As Rix (1977, 151) has pointed out, the vast majority of Latin and all attested Osco-Umbrian *ā*-subjunctives are based upon the present stem (e. g. Osc. *fakiiad* = Umbr. *façia* = Lat. *faciat*), a fact which engenders at least a probability that this was likewise true of Proto-Italic. Old Latin *attigas*, *tagam* can be taken as subjunctives from the OLat. pres. *tagit* (ibid., 150, n. 52; class. *tangit*, *tangat*), while *advenat*, *attulat* may be survivals of an aorist subjunctive left outside the main classical paradigm just like the *faxit* type: "zu beiden Verben sind Wurzelaoriste bezeugt: **e-g^{w}em-t* in ai. *ágan*, arm. *ekn* (~ osk. *kúm-ben-e-d*) und **e-tleh$_2$-t*: gr. ἔτλη" (ibid., 151). On the other hand, an Old Irish formation held to contain the irreducible subjunctive marker *-*ā*- cannot be convincingly linked to either the present or the aorist stem of many strong verbs and can only be comfortably analysed as bare root, typically in the full grade, plus *ā*-suffix. For instance, the type *-cria* "may buy" is obviously not connected with the present stem *-cren* and there is not the slightest evidence for the (Italo-)Celtic thematic aorist base **k^{w}riye-* or the like invented by Trubetzkoy to correlate with the subjunctive. Likewise subj. *gabaid*, *-gaba* "may grasp" apparently adds the *-*ā*- to root *gab-* without the aorist or present suffixes seen in *gabais* "grasped" < **gab-ass-i* (probably replacing **gax(-s)-ti*) and *gaibid* < **gab-(i)ye-ti* respectively.

Again, then, we have a disturbing gap between the Italic and Celtic evidence. This is further widened by the fact that the British subjunctive distributionally equivalent to the OIr. *a*-subjunctive is based upon an *-h*V(-) < **-as*V- (cf. Watkins, 1962, 145-9 and 152-3) quite compatible with the OIr. formation, but only if the latter is divorced from the Italic *ā*-subjunctive.

Compelling considerations such as these and the resultant close parallel with the **-se/o-* suffix underlying the OIr. and Brit. *s*-subjunctives led Rix (ibid., 151-4) to conclude that the proximate *-*ā*- morpheme behind the OIr. *a*-subjunctive was not irreducible but went back to an earlier **-ase/o-* via **-āhe/o-*, "in dem zunächst das (erste) *a* gedehnt und dann das *h* geschwunden wäre; eine genaue Parallele sind die von Watkins untersuchten *ā*-Verben, die auf athematische Präsentien von Wurzeln auf Resonant + Laryngal zurückgehen: **h$_2$enh$_1$-ti* 'atmet' wird zu air. *anaid* 'bleibt'. Vorbild für die Längung des *a* können das 'starke' *ā*-Futur, der 'schwache' *ā*-Subjunktiv und die denominativen *ā*-Präsentien gewesen sein, wo jeweils die Länge des *ā* ursprünglich war" (ibid., 153). The inevitably analogical *a*-subj. of weak verbs with only a present stem in PIE could still be ascribed to the model of the root-aorist **b^{h}weh$_2$-*, but to a **bwā-* from the aor. subj. **b^{h}weh$_2$-e/o-* also underlying OLat. *fuat* rather than the aor. inj. or ind. **b^{h}weh$_2$-t* usually posited since Thurneysen in 1884 (Rix, ibid., 153, n. 66). The basic OIr. distribution, with **-se/o-* after erstwhile dental and guttural stops or *s* but **-ase/o-* after resonants above all, could be neatly accounted for by Rix in terms of an unreduplicated PIE full-grade desiderative assumed to have opposed a suffix *-se/o-* after stops and *s* to a **-hse/o-* (**-h$_1$se/o-*?) generalized from set (CERH) bases after resonants (see ch. 4, 2).

Rix's hypothesis of reduplicated and unreduplicated desiderative -T-*s*- vs. -R-*hs*- origins for all OIr. futures and subjunctives has been accepted by Kortlandt (1984) with the significant modification that the paradigms in question were not thematic but athematic. However, it has already been shown that 3sg. OIr. *s*-subjunctives such as *a-t:ré* "may arise" cannot come directly from athem. **-rex-(s)-t(i)* but only from a them. **-ress-et* < **rex-s-et(i)* of a type directly attested in British and Celtiberian but remodelled to **-ress* in Old Irish under the *s*-preterite's influence (ch. 4, 6-9). There is every reason to posit an originally thematic **-ase/o-* for the OIr. *a*-subj. or fut. when forms like 3sg. *beraid*, *-bera* "may bear", *melaid*, *-mela* "may grind" or *ebraid*, *-ebra* "will give" derive quite straightforwardly from **berăset(i)*, **melăset(i)* and *iblāset(i)* (cf. Jasanoff, 1983, 140, n. 3).

Athematic protoforms, by contrast, should have produced abs. **berais*, **melais*, **ebrais* and could only have yielded the attested conjuncts if *a* < *h* had been analogically lengthened in the subjunctives as Rix supposed, e. g. **berast(i)* > **berass* > **berāss* > *-bera* but unchanged **berass* > **-ber*. Although such lengthening seems a distinct possibility (see 9 below), there is no obvious reason why *-a-e/o-* (< unlengthened **-ahe/o-*) should not have contracted to *-ā-* in prehistoric Irish. Anyway,

whether the preceding *a* was long or not, one would expect athem. 3sg. **-ss(i)* < **-s-t(i)* to become the base of a new Insular Celtic paradigm with **-ss(-)* throughout as in the case of the inflectionally identical *s*-pret. (ch. 4, 6; Watkins, 1962, 174-80). That, of course, would have produced Irish and British *s*-subjunctives (and OIr. reduplicated *s*-futures) rather than the actually attested *a*- and *h*-formations.

In short, there are almost insuperable formal objections to positing an athematically inflected subj. and/or fut. **-as-* for Celtic, whereas a thematic alternative **-ase/o-* is entirely unproblematical. In general, any explanation of the Insular Celtic subjunctives in terms of an unreduplicated desiderative, whether thematic or athematic, is vitiated by uncertainty about such a category's existence in PIE and the implausibility of the prehistoric Celtic developments it entails (ch. 4, 3). Moreover, if the argument to be advanced in chapter seven is valid, the PIE desiderative suffix was simply **-se/o-* added to roots of any shape and did not have a post-resonant variant **-hse/o-*. If so, an allegedly unreduplicated desiderative would have no formal advantages over the *a priori* more straightforward option of a thematic *s*-aorist subjunctive advocated by the present writer (McCone, 1986, 246-8 and 260) to explain both **-se/o-* and **-ase/o-* in Insular Celtic. A significantly altered version of this argument will be supported below.

3. With the exception of the two very different adaptations of it just discussed, Rix's theory about the origins of the Old Irish strong *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. This negative response stems chiefly from an understandable reluctance to drive a wedge between the strikingly similar looking Italic and Celtic formations. Thus Cowgill has objected that Rix's hypothesis "does not explain the Italic *ā*-modal, which cannot have lost **s*. If for Italic we need some other explanation — probably Trubetzkoy's thematic optative —, then parsimony suggests that we derive the Celtic *ā*-modal from the same source as the Italic" (1981, 63). For Bammesberger too "a misgiving of a general kind with regard to Rix's suggestion arises from the fact that it forces us to divorce the Irish *ā*-subjunctive from the Italic *ā*-subjunctive" (1982, 66; cf. 1984, 78-9). In Oettinger's similar opinion, "diese Lösung hat den unbestrittenen Vorzug, die beiden Subjunktivtypen der air. starken Verben, nämlich *ā*- und *s*-Subjunktiv, mitsamt ihrer Verteilung erklären zu können, andererseits aber den Nachteil der uneinheitlichen Herleitung der *ā*-Konjunktive erstens im Altirischen selbst und zweitens zwischen Altirisch und Italisch" (1984, 193).

Cowgill, then, inclines towards Trubetzkoy's hypothesis of an *ā*-modal correlating with thematic present and aorist indicatives, as does Watkins with the modification that this **-ā-* was rather added direct to the root (see 1 above). Bammesberger, however, takes up Rix's suggestion that aor. subj. **b^hw-ā-* < **b^hweh_2-e/o-* triggered the *a*-subjunctive of OIr. weak verbs and extends it to all of the *ā*-subjunctives of Italic and Celtic, initially envisaging additional support from a handful of other C(R)*eh_2-e/o-* root-aorist subjunctives (1982, 69-70) but subsequently positing subj. **$b^hwā$-* as the sole source (1984, 77-9).

The hypothesis that aor. subj. **bwā-* provided the starting point for further OIr. *a*-subjunctives, whether to weak verbs only à la Rix or all such formations à la Bammesberger, is untenable for the simple reason that the subjunctive of the OIr. substantive verb (3sg. *beith*, *-bé*) does not come from **bwāt(i)* but from an old root-aor. subj. **bwet(i)*. As the next chapter should show, this demonstrably goes back to Proto-Celtic on the strength of Gaulish *bueti(d)*, should (if the concept were valid) be Italo-Celtic on account of Lat. fut. *-bit* probably < subj. **(-)b(w)eti*, and may even continue a PIE root-aor. subj. **b^huh-e-t(i)* arguably also underlying OInd. *bhúvat*. Aorist indicative or injunctive **bwā-* < **b^hweh_2-* does not fare any better in view of good evidence that the root **b^huh-* did not ablaut in the normal way in PIE (see ch. 6, 6-8). Even if it did, the only reason for specifying the final laryngeal as *h_2* is the desire to make OLat. subj. *fuat* and ipf. *-bat* the regular outcomes of **$b^h(u)wéh_2$(-e)-t(i)*. Celtic derivatives of **b^huh_2* offer no reliable or even likely support for this form (see 2 above and ch. 6, 2-3), and comparative Baltic and Slavic data show that the standard Lith. pret. *bùvo* "was" is an innovation using a productive Baltic preterite marker and cannot directly continue such a PIE prototype (Benveniste, 1951, 11-2). The upshot is, as Oettinger (1984, 193) observes, a vicious circle: **b^huh-* must have had a full grade **b^hweh_2-* in Proto-Indo-European on account of the Italic or Italo-Celtic *ā*-modal it then duly 'explains'.

Oettinger (ibid., 199-200) is right to insist that the rather suspect **b^hweh_2(-e)-* urgently needs the backing of further C(R)*eh_2(-e)-* root-aorist indicatives, injunctives or subjunctives if Thurneysen's or Bammesberger's basic explanation of the Italo-Celtic *ā*-subjunctive, one or other of which he is inclined to accept, is to be upheld. However, his search for likely Italic or Celtic candidates is not very successful, only very tentatively adding **liyeh$_2$(-e)-t(i)* > OIr. *-lia* to the more widely acknowledged **$b^h(u)$weh(-e)-t(i)*, **l(l)eh$_2$(-e)-t(i)* > OLat. *fuat*, *tulat*, the latter comparable with OIr. *-tlia* if this had been remodelled from older **tlā-* (see ch. 1, 4).

Even if this trigger could somehow be made more plausible or Trubetzkoy's *ad hoc* theory of a thematic *ā*-optative justified for Italo-Celtic or some still earlier stage, the difficulties confronting this broad approach remain formidable. The morphological correspondence posited by Trubetzkoy and his followers is of a highly circumstantial nature. So too is the barely motivated extrapolation of a modal *-ā-* from a tiny nucleus of weakly characterized C(R)Eh_2- root-aorist formations so unproductive or ambiguous that in Indo-Iranian this type of subjunctive may be secondarily differentiated from a corresponding injunctive by acquisition of *-sa-* from the sigmatic aorist subjunctive. Hence OInd. *dāsat* "may give" alongside *dāt(i)* < **deh₃-e-t(i)* (inj. *dāt* < **deh₃-t*) or Gathic Av. *stå̊yhat* (< **stāsat*) vs. RV. *sthāt(i)* "may stand" < **steh₂-e-t(i)* (see Narten, 1964, 38). Since it is almost inconceivable that such an *ā*-modal was developed 'twice', so to speak, i. e. independently in Italic and Celtic, it must already have been well established at a presumed Italo-Celtic stage. Granted, however, that Italo-Celtic is a highly questionable concept (Watkins, 1966; cf. McCone, 1986, 261-2), this again brings us perilously close to a vicious circle: a period of Italo-Celtic unity must be posited to connect the Italic with the Old Irish *a*-subjunctive, whereupon this allegedly shared innovation becomes the best 'evidence' for the Italo-Celtic hypothesis.

Getting this irreducible *ā*-modal started may be something of a problem but, once it had become at all widespread by Italo-Celtic at latest, its morphological clarity might be expected to make it virtually unstoppable, as in the Italic subjunctive system. To judge from Gaulish *nitixsintor* (Larzac 1 a 7 and 2 a 4-5, presumably neg. *ni(t)* plus *(t)ixsintor*; Lejeune et al., 1985), which can hardly be other than a 3pl. middle *s*-aorist optative, and *regu-c* (Chamalières 9), very probably a 1sg. present subjunctive (see ch. 6, 2), simplification of aor./pres. and subj./opt. oppositions to give a single 'subjunctive' form per verb on the modal plane was an Insular Celtic innovation. Combination of an Italo-Celtic *ā*-modal with the previous chapter's conclusions about the Insular Celtic *s*-subjunctive would imply that by such a comparatively late stage many, perhaps even all or nearly all, strong verbs at least will have had subj./opt. oppositions like **rex-se/o-*/**reg-ā-* (**reg-*), **res-se/o-*/**ret-ā-* (**ret-*), **ber-re/o-*/**ber-ā-* (**ber-*), **mel-ase/o-*/**mel-ā-* (**mel-* < **melh-*). If so, there is no obvious explanation for the merger's failure to result in generalization of the synchronically predictable, widespread and homogeneous *ā*-formation in which the root was regularly unaltered. If, for instance, **ber-ā-* (OIr. *beraid*, *-bera*) understandably ousted **ber-re/o-*, why was the opaque **res-se/o-* (OIr. *reis*, *-ré*) preferred to crystal clear **ret-ā-* and so on?

In short, no conceivable version of the Italo-Celtic '*ā*-modal' hypothesis seems able to account for the basic distribution of the Old Irish strong *s*- and *a*-subjunctives according to root-final stop or *s* versus resonant (including vowel) respectively. This serious inadequacy must surely prompt a search for an alternative incorporating a reasonable explanation of this, even at the cost of a divorce between the OIr. and Italic *ā*-subjunctives.

4. The effects of a trial separation on the Italic side are also worth considering. Once Celtic is left out of account, the Italic situation seems best suited to a primary locus for the *ā*-subjunctive in the present system coupled with the existence of some mechanism for its limited spread to the root aorist. Over a century ago Wackernagel (1881, 267) noted that Greek present subjunctives like Dor. δύνᾱμαι, Arc. ἵστᾱται were older than the Homeric hiatus type στήομεν, βήομεν etc. (cf. Hom. aor. subj. δῷσι "may give", which, minus iota subscript, corresponds to Ved. *dāti* "may give" < **deh₃-e-ti* and so predates Hom. δώομεν etc.). If so, they could be cognate with certain Latin *ā*-subjunctives like *sternat*, *sistat*, the result being an inherited core for the development of that category in Italic: "belehrend ist namentlich die übereinstimmung von δύνᾱμαι mit lat. *sternāmus*, von ἵστᾱται mit lat. *sistātis*, die durch ihren gegensatz zu indicativischem *sternimus* (= *στόρναμεν) und *sistitis* (= ἵστατε) dem *a*-conjunctiv des lateinischen zum dasein verholfen haben" (ibid.).

The Old Indic ninth-class present subjunctive 1sg. *-nắni*, 2sg. *-nás*, 3sg. *-nắt*, 1pl. *-nắma*, 2pl. *-nắtha*, 3pl. *-nắn* is obviously a normal thematic full-grade formation < **-néh-e/o-* of the type expected to correspond to "state II" amphikinetic nasal-infix present indicatives and/or the hysterokinetic type virtually generalized in Indo-Iranian (see ch. 3, 5). If, as there is good reason to suppose (see ch. 4, 3 and 9-10), the parent language already possessed an aspectually differentiated subjunctive formed by thematizing full-grade athematic and 'hyperthematizing' thematic present and aorist indicatives, then the PIE pres. subj. corresponding to (nas.-inf. and redup. respectively) pres. ind. **tl̥néh₂-ti* "raises" (Lat. *tollit*; see ch. 1, 4), **sísteh₂-ti* "stands" (Lat. *sistit*) will have been **tl̥néh₂-e-t(i)*, **sísteh₂-e-t(i)*. The Lat. subjunctives *tollat*, *sistat* can, of course, be derived from these without the slightest formal difficulty. Presumably the subjunctive formed from a PIE "state I" amphikinetic nasal present like **pélnh₂-ti* "encounters" (Lat. *pellit*; see ch. 2, 3) would have been **pélnh₂-e-t(i)*. Since these pres. ind. and subj. stems would have fallen together as **pelna-* in Italic, remodelling of the latter to **pelnā-* on

the basis of inherited subjunctives like **tolnā-*, **sistā-* is easy to motivate. Moreover, this neat pattern could have become somewhat productive in Italic to yield consistent oppositions between ind. **pelna-*, **sterna-*, **tolna-*, **sista-* and subj. **pelnā-*, **sternā-*, **tolnā-*, **sistā-* etc. in the erstwhile CERH or C(R)EH present formations concerned.

Whereas the Lat. 2/3sg. (e. g. *pelli-s/-t*) and 1/2pl. (e. g. *pelli-mus/-tis*) of the pres. stems could contain the regular weakened form of either original athematic *-a-* (e. g. **pelna-*; cf. Leumann, 1976, 531 and 566) or secondary thematic **-e/o-* (e. g.**pelne/o-*), the 1sg. and 3pl. (e. g. *pell-ō/-unt*) have undoubtedly been thematised. Since the handful of Lat. presents retaining unmistakably athematic 2/3sg. and 2pl. forms combine these with a secondarily *o*-thematised 1sg. and (1/)3pl. (e. g. 3sg. *it*, *ēst*, *vult* vs. 1sg. *eo*, *edo*, *volo*, 3pl. *eunt*, *edunt*, *volunt*), forms like *tollo* or *sternunt* do not necessarily stem from fully thematised paradigms. On the other hand, there seems to be no conclusive objection to tracing *sternit/sternunt*, *tollit/tollunt* etc. back to **sterne/o-*, **tolne/o-* on the assumption that Italic thematisation had been as complete here as in the case of the **yunge/o-* underlying Lat. *iungit*, *iungunt* and so on (see ch. 3, 1).

If so, a proportion pres. ind. **stern-e-t(i)* vs. subj. **stern-ā-d* etc. is brought into existence for the further spread of the highly characterised *ā*-formation as a subjunctive corresponding to other old thematic or secondarily thematised indicatives in Italic. Hence new subj. **reg-ā-d*, *deik-ā-d* (Lat. *regat*, *dīcat*, Osc. 3pl. *deicans*) correlating with pres. **reg-e-t(i)*, **deik-e-t(i)* (Lat. *regit* "rules", *dīcit* "says") and so on. A secondarily thematised root aorist such as the **g^{w}en-e-d* (for **g^{w}en-t* < **g^{w}em-t*) underlying Osc. *kúm-bened* 'convenit' could then likewise acquire the new subj. **g^{w}en-ā-d* attested in OLat. *ad-venat* etc. The OLat. subj. *fuat* can be similarly motivated in relation to a thematised root aorist **fu-e-d* (for **fūd* < PIE **b^{h}uh-t*; see ch. 6, 6) quite likely to lie behind Lat *fuit* "was". Although not strictly necessary, a trigger within the Italic root-aorist system may be sought in the OLat. subj. *(at)tulat*. This could well have arisen from an inherited root-aorist subj. **tlād* < **tlḗh_2-e-t* remodelled to **tulād* by adapting the vocalism of a corresponding indicative in which homophonous inherited 3sg. **tlād* had been replaced by a **tuled* or **tulad* extrapolated from 3pl. **tulond* or original **tuland* < **tl̥h_2-ént* respectively and so on.

It even seems possible to combine an explanation along these lines with the attractive hypothesis of an Italic subjunctive > future and optative > subjunctive shift. Once a pres. stem like **sterna-t(i)* had been thematised to **sterne-t(i)*, pressure from old thematic presents like **deik-e-t(i)* with corresponding 'hyperthematic' subjunctive **deik-ē-t(i)* could easily have endowed it with the subj. **sternē-t(i)* underlying Lat. fut. *sternet* etc. (cf. Leumann, 1976, 577). However, rather than disappearing, an old subj. **stern-ā-t(i)* could have ousted a synchronically awkward inherited opt. like **storn-(a)yē-/-ī-* (< PIE **stṛnh$_3$-yéh$_1$-/-ih$_1$-*). Hence pres. ind. **sterne/o-*, subj. **sternē(/ō)-*, opt. *sternā-* etc., followed by the spread of **-ā-* at the expense of **-oi-* as an optative corresponding to thematic presents. After this stage the above modal shift can have come into operation.

Incidentally, although the evidence is too scanty to be at all conclusive, it seems possible that within Celtic an *ā*-subj. based on the present stem was developed in Gaulish or earlier for partly similar reasons. If, as argued later (ch. 6, 2), *regu-c* on the Chamalières inscription is a 1sg. pres. subj. based on 'hyperthematic' **regē/ō-* corresponding to pres. ind. **rege/o-* (e. g. OIr. *a-t:reig* "rises"), the regular Celtic outcome of this ablaut in the other persons would be a bizarre **regī-* in the 2sg., 3sg. and 2pl. versus **regā-* in the 1 and 3pl. On the other hand, a typical inherited pres. subj. corresponding to a nasal-infix or reduplicated pres. ind. with erstwhile final laryngeal would presumably have been 1sg. **-ū* (e. g. **marn-ū* < **marna-ū* < **mṛnéh$_2$-ō* or **sist-ū* < **sista-ū* < **sísteh$_2$-ō*) versus *-ā-* (< **-eh$_2$e/o-*) in the rest of the paradigm (e. g. 3sg. **marnā-t(i)* < **mṛnéh$_2$-et(i)* or **sistāt(i)*, possibly attested in Celtib. *sistat* at Peñalba de Villastar, < **sísteh$_2$-et(i)*). It would then be quite natural for this neat pattern to be spread to the 'hyperthematic' type with its identical 1sg., 1 and 3pl. but awkwardly divergent *-ī-* alternant in the other persons. Thus, say, 1sg. **marn-ū* / 1pl. **marnā-mos* : 3sg. **marnā-t(i)* = 1sg. *regū* / 1pl. **regā-mos* : *x* (*x* = 3sg. **regā-t(i)* for **regī-t(i)*). A possible example of this tentatively posited Continental Celtic *ā*-subj. correlating with a **-ye/o-* pres. ind. stem is the presumably 2sg. Gaulish *lubiias* (probable ipv. *lubi* and pret. *lubitus* also attested) on a La Graufesenque graffito (see Fleuriot, 1979b, 126-7; K. H. Schmidt, 1983, 78-9; Eska, 1988, 34, esp. n. 6), while *aseCaTi* might conceivably be an instance from Celtiberian (cf. Eichner, 1989, 47). Needless to say, such subjunctives cannot be directly related to the OIr. *a*-subjunctive, which is never based upon the pres. stem of primary verbs.

Regardless of this arguable partial analogue in Gaulish, the subjunctives of old nasal-infix and reduplicated presents from roots with final *h$_2$* not only provide a rather broader starting point for the Italic *ā*-morpheme than the subjunctives or indicative-injunctives of C(R)E*h$_2$* root aorists but also allow its subsequent spread and basic correlation with the-

matic presents to be better motivated. This proposal is, of course, quite incompatible with a common origin for the Italic and Old Irish forms for the simple reason that the latter, if from *-ā-* < **-eh₂-*, were independent of the present stem, particularly in the case of the arguably crucial nasal-infix type OIr. *-cren* vs. subj. *-cria*. Whatever about the explanation just offered, there is nothing obvious to be gained by projecting the problem of the Italic *ā*-subjunctive back to an anyway questionable Italo-Celtic phase. What follows should show that the Old Irish *a*-subjunctive becomes more manageable when released from this Italo-Celtic incubus.

5. To begin with, the protests against splitting the Old Irish from the similar looking Italic formations cited at the beginning of section 3 are based upon an over-simplification of the situation. The plain fact is that the British subjunctive corresponding to the Old Irish *a*-type is not directly comparable with the Italic formation. Surely even the most ardent believer in Italo-Celtic will have to admit that an internal Celtic derivation neatly linking the Old Irish with the British forms to the exclusion of the Italic must be preferred to one that divorces the British from the Irish evidence in favour of more distant Italic comparanda, even if the latter were not beset by all manner of problems. That being so, the origins and formation of the British *h*-subjunctive must be our next concern.

The W. vestiges *gwnech* (**wreg-se-t*), *duch* (**dewk-s-et*) and *gwares* (**ret-se-t*) "agree exactly in formation ... and distribution ... with the Old Irish *s*-subjunctive" (Watkins, 1962, 130-1) typical of strong verbs with dental- and guttural-final roots. From this it follows that the range of its British rival the *h*-subjunctive once corresponded very closely to that of the Old Irish *a*-subjunctive, which similarly tended to oust its rather awkward *s*-counterpart during the Middle Irish period (*EIV* 228-31). The obvious inference is that the Insular Celtic ancestor of both branches likewise knew an inflectional dichotomy between a **-se/o-* subjunctive attached to the root-final *t*, *d*, *k^(w)* *g^(w)* or *s* of primary verbs and another formation used elsewhere, from which the OIr. *a*- and Brit. *h*-subjunctives are directly or indirectly descended.

Thurneysen's (1884, 270) innocent equation of a Welsh subj. like 3sg. *-caro*, 3pl. *-caront* "may love" with OIr. *-cara*, *-carat* < **kar-ā-t*, **kar-ā-nt* on the basis of Brit. *ā* > *ō* was put paid to by the realization (e. g. *VKG* II 352) that the British formation had contained an *h*, the far from complete loss of which was demonstrably late. Thus Morris Jones remarks of Welsh: "the subj. stem is formed by a suffix *-h-* which is added to the

pres. ind. stem and hardens a media to a tenuis; thus *nottwyf* W. M. 479: *nodaf* ib. 'I specify'. After vowels and sonants the *-h-* disappears ..., but it is often written in early Ml. W. as *gwnaho* B. T. 16, *gwnelhont* B. B. 60" (1913, 328). This devoicing effect, e. g. MW. *gwr-theppo* "may answer" (< **-teb-ho*; *gwrtheb* "answer"), is also attested in Cornish and shows that *h* was still a regular constituent of this formation when it began to spread at the expense of the *s*-subjunctive in British.

The rules here are, of course, precisely matched by those governing the MW. superlative *-(h)af* (= OIr. *-em/-am*) < **-isamos*, e. g. *cadarn* "strong" and *caled* "hard" vs. *cadarn(h)af* "strongest" and *caletaf* "hardest (e. g. *VKG* II 122-3; Morris Jones, 1913, 241-3). Consequently there can be no doubt that Brit. subj. *-h-* has been similarly syncopated from *-Vh-* < *-Vs-*. Watkins (1962, 146-54) has argued cogently that the obvious candidate was **-as-*, spread from old set roots with **-a(-)s-* regularly < **-h-s-*, as part of an attempt to rescue Thurneysen's *ā*-subjunctive hypothesis with due modifications. According to Watkins the widespread *-ā-* marker was combined with the *-s-* of the other subjunctive to produce a composite **-sā-* subsequently prone to become **-asā-* in correlation with *s*-aorists (**-ass(-)* < **-h-s-t*) and so forth. This **-asā-* eventually ousted original **-ā-* completely.

Since subj. **-s(e/o)-* tended to obscure the preceding root-final consonant, influence from a clear and productive competitor might be expected to have resulted in replacement by **-ā-* rather than remodelling to a similarly disadvantageous **-sā-*. Far more seriously, the surviving Welsh *s*-subjunctives listed above all retained original **-se-* without the slightest hint of the posited remodelling. Furthermore, there is no convincing survival in British of the subj. **-ā-* taken as a starting point. Watkins' claim (ibid., 150) that suppletive subj. 3sg. MW., MCo., MBr. *el* "may go" continues **(p)elāt* directly is very suspect in view of normal *el(h)-* in the rest of the paradigm. The 3sg. form can easily be ascribed to earlier and more thorough reduction of **elh* to *el* in absolute auslaut (see below) than elsewhere, while the equation MW. imperfect *oed* = Lat. *erat* < **esāt* (ibid., 150-1) would be of doubtful relevance even if correct (see 2 above). Although the verbal stem MW. *tech-*, Br. *tec'h-* "flee" may well be a shifted *s*-subj. **tex-s-* in origin (ibid., 119), MW. *ry-decho*, far from "presupposing **tek-s-ā-*" (ibid., 152), is just its synchronically normal MW. subjunctive.

In view of the lack of good evidence for subj. **-ā-* or **-sā-* in British, their alleged end-product **-asā-* urgently needs unambiguous backing. "We have reconstructed a subjunctive suffix of the shape **-asā-*, which in

British gave *-(a)ho-*, and appeared in Cornish and Breton as *-ho-*. Such a suffix form cannot account for the Welsh subjunctive *-ho-* (~ *-hoe-*); but we have one precious indication that the suffix **-(a)ho-* did exist in this form in Primitive Welsh as well. A regular reflex of this suffix occurs in Middle Welsh, but not in the function of a subjunctive: the MW future forms in 3 sg. *-haud*, e. g. *briuhaud* "will break", *gwnahaud* "will make", *llwypraud* "will travel" (with provection) . . . These forms all reflect absolute 3sg. forms of the subjunctive: *-haud* < **-asā-ti*" (Watkins, 1962, 153). The problem here is that "the Welsh future 3sg. *-(h)awt*, 3pl. *-(h)awnt* corresponds precisely to the OBr. 3sg. *-(h)ot* present (Lewis/Pedersen, 1937, 279-80). Since Middle Welsh is prone to use the present but not the subjunctive as a future (D. S. Evans, 1964, 109, 112), whereas in Breton the subjunctive has mostly become a future (see Hemon, 1975, 254-5), it seems quite obvious that both the Welsh . . . and Breton forms are old **-ā-ti* present (= OIr. weak A1 type *móraid* < **mōr-ā-ti*) absolutes. The sporadic presence of *h* in these forms is parallelled by the alternation of (originally denominative < **-sag-*) *-ha* with *-a* in other Welsh presents (D. S. Evans, 1964, 118-9), and does not warrant a systematically unjustifiable derivation from subjunctive **-as-ā-ti* with an **-asā-* suffix for which the sure descendents of the British *h*-subjunctive provide no firm support whatever" (McCone, 1986, 248).

The suggestion that all British subjunctives contained the suffix **-se/o-*, preceded by a stop or vowel as the case might be to give the *s-* and *h*-types respectively, was made long ago by Morris Jones (1913, 339), but seems to have been generally ignored since. According to Jones the preceding vowel was an *-ā-* belonging originally to the weak *ā*-verbs and liable to shortening by certain improbable accentual rules he had developed. If we substitute Watkins' insight about *-a-* < laryngeal *-h-*, there is much to recommend Jones' idea that, for instance, "pl. 1. **kara-so-mos* . . . gave *kar-hom*, pl. 3. **kara-sonti* gave *kar-hont*" (ibid.).

Since, as Watkins points out, some of the Welsh forms appear to have been contaminated by a rather mysterious *-oe-* emanating from the peculiar subjunctive of the verb 'to be' (see ch. 6, 3), the Breton and Cornish paradigms offer the best indication of the original value of the vowel after **-as-*. The only possible direct reflexes of **-asā-* here, namely 1pl. MBr. *-(h)omp* = MW. *-(h)om* (MCo. *-yn* as in the pres. ind., Br. also *-(h)imp*) and 3pl. MCo. *-ons* = MBr. *-(h)ont* (or *-(h)int*), can just as well be from the **-aso-* expected in the 1 and 3pl. of a thematic paradigm. MW. 3pl. *-(h)ont* rather than the **-(h)wnt* expected by W. *o* > *u* before *n*T "is prob. due to the analogy of the other persons which have *-o-*" according to Morris

Jones (1913, 86), in which case the pattern probably inherited in the subj. of the verb "to be" with 1pl. *bom* and 3pl. *bont* (see ch. 6, 3) may well have played a decisive role. In the 2pl. MW. *-(h)och* and MCo. *-ough* are obvious innovations based on the so-called 'conjugated' prepositions (e. g. MW. *arnawch*, *ragoch*, MCo. *warnough*, *ragough* "on/before you" with **-ch* < 2pl. pron. **swis* or the like; cf. the reverse process in MW. *arn(ad)unt*, *racdunt* "on/before them" with new 3pl. *-nt* obviously taken over from the verbal system). The one form likely to be old, MBr. 2pl. *-het*, can only reasonably be derived from **-ase-te*.

MW. has *-(h)wyf*, more rarely *-oef* or *-of*, in the 1sg. as well as *-wyr* beside normal *-ych* in the 2sg., *-oe*, *-(h)wy* beside normal *-(h)o* in the 3sg. and *-(h)oent*, *-(h)wynt* beside normal *-(h)ont* in the 3pl. (D. S. Evans, 1964, 128-9). These *-oe-/-wy-* forms almost certainly emanate from the peculiar subj. paradigm of the substantive verb (see ch. 6, 3) with OW. 3sg. *boit*, *boi* (MW. *bo*), MW. 1 sg. *bwyf* (or *bof*), 2sg. *bwyr* (or *bych*), 3pl. *boent*, *bwynt* (or *bon(t)*). Whether originally conj. **-asāt* or *-aset* the historically regular 3sg. inflection will have been an *-(h)* that we may assume to have been lost early in final position, e. g. **karaset* > **karahed* > **karhed* > **karh* > **car* identical with the 3sg. pres. ind. *car* "loves" < **karāt*. In order to resolve such ambiguities, the *h* appears to have been restored with the help of the substantive verb's *-oi* to give a type *carhoe* liable to be remodelled to *car(h)o* under the influence of 3pl. *car(h)ont*. In Cornish and Breton 3sg. *-(h)o* was soon generalized, but in Welsh *-(h)oe*, *-(h)wy* survived alongside it for long enough to help introduce **-oe-/-wy-* byforms into other parts of the paradigm. The original 3sg. subj. formation was able to survive in *el* (see above) < **elh* < **elaset* precisely because it was suppletive to a quite different 3sg. pres. ind. *a* "goes".

There are archaic MW. survivals of pres. ind. pass. forms *-ator*, *-itor*, *-otor*, *-etor* (D. S. Evans, 1964, 120-1) corresponding to OIr. *-e/athar* likewise based on stem plus **-tor* (see McCone, 1986, 238-40 on the mostly post-syncope Irish differentiation of 3sg. passive and deponent forms). However, the inherited **-or* type seen in OIr. *-berar* "is borne" etc. and segmented as **-o-r*, i. e. (thematic) stem plus *-r* (ibid., 239), seems to have become particularly productive in British, where *-r* mostly replaced *-tor* as in the standard MW. pres. ind. pass. *-ir* presumably for *-itor* (cf. Cowgill, 1983, 87-8 and 102-3). Consequently the subj. pass. MW. *car(h)er*, MCo. *carer*, MBr. *carher* could be taken to involve a similar replacement of **-ase-tor* by **-ase-r*. At all events, it is difficult to see how predesinential **-asā-* could be made to work.

Since the MW. 1sg. obviously contains innovatory *-oe-/-wy-*, we must look for the original vocalism in MBr. *-if*, MCo. *-yf* with presumably inherited *i*-affection of the preceding syllable in MBr. *guillif*, MCo. *gyllyf* "may be able" as against MW. *car(h)wyf* "may love" etc.

The 1sg. pres. ind. ending *-af* normal in MW. and general in MCo. and MBr. can only come from **-a-mi* and had presumably been spread in late British from the (in OIr. terms) athematic B IV type **k^{w}ri-na-mi* (OIr. *crenaim* "I buy"; cf. *VKG* II 342). The variant *-if* also surviving in early Welsh poetry, e. g. *kenif* "I sing", *dygif* "I bring", *gwelif* "I see", *gwneif* "I do, make" (D. S. Evans, 1964, 115), obviously continues **-ī-mi* and has usually been assumed to stem from the weak *i*-verbs (cf. Morris Jones, 1913, 332), Pedersen for instance deriving OIr. *léicim* "I leave" < **link^{w}ī-mi* (*VKG* II 340). However, it has recently been shown (McCone, 1982, 9-14) that the important long OIr. poem *Féilire Óengusso*, securely dated to around 800 A. D., regularly uses the ending *-(a)im* < **-Vmi* in the athematic B IV/V (-)*benaim* (*-na-* etc.; see ch. 1,1-2) and A I (-)*marbaim* (*-ā-* < factitive **-e-h$_2$-*) classes, but equally regularly employs forms based on **-ū* < **-ō* (see ch. 3, 4) in the remaining classes comprising old thematic or secondarily thematised verbs, e. g. B I *-biur* "I bear" < **ber-ū*, B II (-)*guidiu* "I pray" < **g^{w}ed(i)y-ū*, A II (-)*léiciu* "I leave" < **lēg(i)y-ū*. That being so, examples like (-)*léicim*, (-)*guidim* in the less conservative prose medium of the eighth- and ninth-century OIr. glosses are manifestly not original and instead mark the beginning of a tendency, increasing through Middle and virtually complete by Modern Irish, to generalise the distinctive 1 sg. *-(a)im* in the pres. ind. (*EIV* 221-2). It follows that the inherited 1sg. in the weak A II *i*-verbs was **-(i)yū*, as one would expect in a formation chiefly based upon **-ye/o-* denominatives plus some **-eye/o-* causatives. Even in the doubtful event that this class or B II contained a few once athematically inflected statives with zero-grade root and **-ī-* (< **-eh$_1$-*) suffix (cf. K. H. Schmidt, 1966), these will have been far too scarce to spread 1sg. **-ī-mi* at the expense of normal **-ū*.

Athematic British **-ī-mi*, then, seems most improbable, especially when most of the early Welsh examples cannot convincingly be regarded as old *i*-verbs and look more like old full-grade thematics with plain *-e/o-* suffix, e. g. *kenif* cognate with OIr. them. *-cun*, *-cain* "sing(s)" < **kan-ō*, **kan-e-t(i)* (> Lat. *cano*, *canit*), *dygif* comparable with Lat. them. *duco*, and *gwelif* corresponding to OIr. (-)*f(e)il* "there is" < them. ipv. **wel-e* "voilà" (McCone, 1982, 19-21). An obvious explanation presents itself in the light of the well-known change of Celtic *ū* > *ī* in British, e. g. MW. *ci* = OIr. *cú* "hound" < PCelt. **kū* < **kwō(n)* or *i*-affected 1sg. *s*-pret.

MW. *cereis*, MCo. *kerys*, MBr. *quiris* "I loved" < **karass-ī* < **karass-ū* (> OIr. *-carus*). This is to ascribe Brit. *-ī-mi* to addition of the athem. 1sg. pres. ending **-mi* to the corresponding them. *-ī* or earlier *-ū*, a process for which Gaulish *uediiumi* and *pissiiumi* (see ch. 6, 2), not to mention the OInd. 1sg. them. pres. *bharāmi* "I bear" with *-ā* (< *-ō*) plus athem. *-mi*, provide good parallels (cf. Fleuriot, 1977, 176-7).

K. H. Schmidt's (1981, 264) objection to this analysis on the grounds, that Proto-Celtic *-ō* > *-ū* was confined to final syllables is illogical, since the composite ending could have come into being at any stage between Proto-Celtic and Gaulish or British when the pres. ind. still opposed them. **-ū* (or **-ī*) to athem. **-mi* in the 1sg. act. Indeed, the evidence referred to above for the survival of such an opposition intact right down into early Old Irish shows that **-ūmi* did not yet exist in Proto- or even Insular Celtic, i. e. that **-ō* must have become *-ū* well before acquiring **-mi* from its athematic counterpart in Gaulish and British, probably separately. Schmidt's "Gall. *pissiu mi* ... vgl. altir. *mé* 'ich'" (1983, 81) is highly improbable, given that even in Old Irish *mé* could not be used as a straight subject pronoun and **mi* < **me* is otherwise unattested in Celtic (OIr. *mé* is, of course, < **me*, as shown by *me-sse* with clitic emphatic particle).

We can, then, derive early MW. 1sg. pres. *kenif* < **kanīvi* < **kanū* (> OIr. *-cun*) + *-mi* < **kanō* (> Lat. *cano*) and so on. Once the pres. ind. had begun to develop 1sg. **kanīvi* (or **kanūmi*) alongside ultimately moribund **kanī* (or **kanū*), an adjacent category like the subj. could easily acquire, say, the eventually generalised **kan(a)hīvi* (or **kanasūmi*) beside inherited **kan(a)hī* < **kanasū*. In other words 1sg. pres. subj. MCo. *gyllyf*, MBr. *guillif* are < **gal(a)hīvi*, which in turn presupposes an original **galasū* only compatible with a thematically inflected Proto-British **-ase/o-* subjunctive. Here, of course, there was no competing *-af* as in the late British pres. ind., and the distinctive *i*-vocalism of the 1sg. subj. is probably responsible for the MBr. 1 and 3pl. variants *-himp* and *-hint* respectively (see above).

According to Pedersen, in the 2sg. pres. ind. "die brit. Endungen werden von den *-i*-Stämmen ausgegangen sein: mc. *cery* aus *-i-si*, mc. *ceryd*, corn. *keryth*, mbr. *querez* aus *-i-jei*" (*VKG* II 343). Conj. **-iyes* would do just as well as the morphologically bizarre **-iyei* here, and MW. *cery* simply arose from *ceryd* by early loss of *-d* (D. S. Evans, 1964, 115). However, the inherently plausible development **-isi* > *-y* can be combined with grounds for supposing that unstressed *es* became *is* in Insular Celtic (see McCone, 1978, 30-1) and applied to the 2sg. subj. MW.

ker(h)ych, MCo. *gylly*, MBr. *guilly* by positing **-asesi* > **-(a)hihi* > *-(h)y*. The tendency of subj. *h* to be lost and for the 2sg. pres. to become *-y* in MW. adequately motivates the patently secondary transfer there of *-ch* from the 2pl. to now ambiguous 2sg. subj. **-y*. In this case the reflex of abs. **-asesi* was preferred over that of the conj. **-ases* because the latter will have fallen togther with that of 3sg. conj. **-aset* after the loss of final syllables. One thing is certain: *i*-affecting 2sg. *-(h)y(ch)* cannot possibly be from **-asās(i)*.

In conclusion, **-ase/o-* not only has much greater morphological credibility than its only remotely feasible rival **-asā-* but also proves to be a far more effective tool for explaining the various actually attested inflections of the British *h*-subjunctives. It therefore seems clear that the Proto-British subjunctive was formed by suffixing **-se/o-* to strong verbs with root-final dental, guttural or *s* but **-ase/o-* (or perhaps **-āse/o-*; see 9 below and ch. 6, 3) to all others.

6. The main subjunctive morphemes of Italic and British Celtic thus turn out to have been quite different, the former reflecting an inescapably asigmatic **-ā-* and the latter an equally unavoidable **-ase/o-* or perhaps **-āse/o-*. As far as the origins of the Old Irish subjunctive's proximate **-ā-* is concerned, a choice between these formally more or less equally viable alternatives must surely go in favour of the **-ăse/o-* demanded by its close Insular Celtic relative British rather than the **-ā-* of considerably more distant Italic congeners, Italo-Celtic or no.

In any case, there is one valuable piece of formal evidence for the OIr. *a*-subjunctive's origins in (Insular?) Celtic **-ăse/o-* and not **-ā-*. This is provided by the 1sg. subj. of BIV/V verbs exemplfied by *-gléu* "I may stick" (Ml. 86^{b}8; pres. *-glen*) rather than the **-glí* or **-glé* expected from **-gleyām* or the like by regular Celtic shortening of *-V̄m* > *-V̆m* (and then probably Goedelic **-am* > **-an* > **-en*, see ch. 3, 4). Since either of the latter would be a distinctive and for the OIr. *a*-subjunctive synchronically normal 'zero-ending' counterpart to 3sg. *-glia* (cf. 1sg. *-ber* vs. 3sg. *-bera* etc.), there would be no obvious motive for analogical imitation of the marginal and rather different *e*-subjunctive type 1sg. *-béu*, 3sg. *-bé* etc. (*EIV* 36) as proposed by Thurneysen (*GOI* 387). Its isolation is such that *-gléu* looks more like a survival than an innovation, and it can be derived quite regularly < **gleyū* < **gleyăū* < **gleyăhū* < **gleyăsū* (corresponding precisely to Brit. 1sg. subj. *-(h)if* < **-ăsū* + **mi* in 5 above) < **gleyh$_2$-sŏ*. In other words, it can be assumed that in the OIr. *a*-subj. **-ăū* contracted to **-ū* whereas in the other persons **-ăe/o-* contracted to *-ā-*

(cf. the Lat. first conjugation pres. ind. *-ō*, *-ās*, *-at*, *-āmus*, *-ātis*, *-ant*). However, in BI a 1sg. subj. **berū* < **beră(h)ū* (< **-ăsū*) would have been indentical with 1sg. pres. **berū* (< PIE **b^{h}erō*). An obvious solution would be to remodel it to **berā* on the basis of the *-ā-* vocalism in the rest of the subjunctive paradigm, e. g. 3sg. *beraid*, *-bera* < **berāþ(i)* < **beră(h)eþ(i)* (< **-ăset(i)*) or 3pl. *berait*, *-berat* < **berād(i)* < **beră(h)ont(i)* (< **-ăsont(i)*). Hence OIr. 1sg. subj. *-ber* < **-berā* vs. pres. *-biur* < **-berū* (cf. McCone, 1982, 15-6). This pattern was then spread to all 1sg. consonant-final *a*-subjunctives to give OIr. AI *-mór*, AII *-léic*, BII *-gab* etc. However, the original *-u* form could survive as *-gléu* etc. in the vowel-final BIV/V roots, where it was highly distinctive by virtue of differing in both stem and ending from the corresponding pres. ind. 1sg. *-glenaim* etc. Its survival was probably also helped by the similarity of the 1sg. *e*-subj. *-béu* etc., the origins of which will be discussed in the following chapter.

That said, there remains one possible way of connecting a Proto- or Insular Celtic subj. **-āse/o-* with the Italic *ā*-subjunctive. That would be to posit an Italo-Celtic *ā*-modal that remained essentially unchanged in Italic but became **-āse/o-* in (Insular?) Celtic by adding the **-se/o-* subjunctive marker characteristic of roots with final dental/ guttural stop or *s*. A rough parallel would be provided by already mentioned (3 above) Indo-Iranian tendencies to remodel root-aorist subjunctives like *dāt(i)* "may give" to *dāsat* and so on, while a thinkable trigger might be the acquisition of a subj. **marwāset(i)* etc. by weak *ā*-verbs such as **marwāt(i)* (> OIr. *marbaid*, *-marba* "kills") incapable of forming a distinctive *a*-subj. without some such additional suffixation (cf. the Italic subj. of *a*-verbs seen in Lat. *am-et*, Osc. *deiv-aid* <**-ā-yē-t*).

Nevertheless, this approach has little attraction as long as the formation and distribution of an *ā*-modal allegedly developed in Italo-Celtic or earlier cannot be properly explained. In particular, no version of this hypothesis seems able to account for the basic Celtic dichotomy between -R-*ă(se/o-)* and -T-*se/o-*. Now, of course, a solid foundation for the solution of this formal riddle has been laid by Rix's derivation of **-ase/o-* and **-se/o-* from desiderative **-hse/o-* and **-se/o-* respectively, the former normal after resonants and the latter after stops (see 2 above). Whether subsequently lengthened to **-āse/o-* or not, the original **-ase/o-* < **-hseo/o-* thus arrived at cannot possibly be connected with Italic **-ā-*.

As long as the alternatives fail to elucidate the clear (Insular) Celtic demarcation according to root shape between **-ăse/o-* and **-se/o-*, the formal side of Rix's theory can hardly be disputed. The basic question to be raised below is whether **-(a)se/o-* can only be generated from an old

unreduplicated full-grade **-(h)se/o-* desiderative, the reconstruction of which for PIE is far from secure and the development of which to a subjunctive alongside a reduplicated zero-grade **-(h)se/o-* desiderative undoubtedly turned OIr. future is distinctly problematical (see ch. 4, 3). If it can also account for the physical shape and distribution of the **-ase/o-* subjunctive now necessarily reconstructed for (Insular?) Celtic, the vote must rather be for the semantically unobjectionable derivation of (Insular?) Celtic subjunctive **-(a)se/o-* from a PIE thematic *s*-aorist subjunctive well supported by Greek, Indo-Iranian, and Italic data, not to mention the strong corroboration potentially provided by the Celtic *s*-subjunctive (see ch. 4, 9).

7. We may begin by observing that the *s*-aorist of Celtic set roots only retained presuffixal *-a-* < laryngeal *-h-* where the present also had such an *-a-* immediately following the root, e. g. OIr. 3sg. *s*-pret. *anais*, *-an* "stayed" < **ana-ss(i)* < **ana-s-t* < **h₂énh₁-s-t* (see 8 below) to pres. *anaid*, *-ana* < **anāt(i)*, the latter replacing **ana-t(i)* < **h₂énh₁-ti* (see 8 below). Otherwise this **-a-* was eliminated in conformity with the normal aniṭ type 3sg. pres. *beirid*, *-beir* < **ber-e-t(i)* < **bʰer-e-ti*, pret. *birt*, *-bert* < **bir-t(i)* < **bīr-s-t* < **bʰēr-s-t* (see ch. 4, 4). This model accounts for an OIr. *t*-pret. like *-melt* "ground" < **mil-t* < **mīl-s-t*, the substitute for **mīl-as-t* triggered by pres. *melid*, *-meil* < **mel-e-t(i)* (< **melh-e-ti*). Segmentation of old nasal-infix presents like **ster-na-* (pl. **star-na-*), **bal-ni-* as root plus *-n*V- suffix caused a similar replacement of 'seṭ' aor. **stīr-as-t*, **bīl-as-t* by 'aniṭ' **stīr-s-t*, **bīl-s-t*, whence the OIr. *t*-prets. *-sert* "arrayed", *a-t:belt* "died".

Further repercussions in the preterite passive have been dealt with by Watkins (1958, 99-101), whose basic approach is followed below with some modifications. The typical inversion of vocalism between an old aniṭ *t*-pret. act. and pret. pass. like **bir-t(-)* "bore" vs. **bri-to/ā-* "(was) borne" (< vbal. adj. **bʰr̥-to/ā-*) was then spread to the originally seṭ verbs with new *t*-preterite, whence act. **mil-t(-)* "ground", **sir-t(-)* "strewed" vs. pass. **mli-to/ā-* (> OIr. *-mleth*), **sri-to/ā-* (> OIr. *-sreth*) instead of the regular reflexes **mlā-to/ā-*, **srā-to/ā-* of **mḷh-to/ā-*, **stṛh₃-to/ā-* respectively. The latter, however, had apparently already been analogically shortened to **stra-to/ā-* matching nasal present C*ar/l-n*V-, to judge from OIr. *-rath* "was given, gift", *mrath* "treachery" and *srath* "meadow, valley", W. *ystrad* "valley". Paradigmatically isolated survivals of the historically regular reflex are seen in OIr. *mláith* "smooth(ly ground)" < **mḷh-ti-*, *ráth* "(that which has been given as) surety" < **pṛh₂-tā*. *Rath* "(that which has been given,) gift, favour, grace", *srath* "(that which has been laid down), flat/level place" and *mrath* "(that which has been betrayed), betrayal" then reflect the nominalizations **ra-tom*, **sra-tos*, **mra-tom* of already remodelled past pass. participles. Because its base verb seen in OIr. *-ern* had selected a suffixless (i. e. old perfect; OIr. *-ír* "gave") rather than a *t*-preterite, *-rath* "(was) given" escaped remodelling within the verbal paradigm, whereas **sra-to/ā-* underwent further change to **sri-to/ā-*, whence OIr. *-sreth* "(was) strewn/ arranged" and yet another nominalization *sreth* "that which has been strewn/arranged, strewing, arrangement" < **sri-tā*.

For present purposes it is the new *t*-preterite analogically acquired by a considerable number of old CERH roots in the manner described above that really matters. This process endowed Celtic presents like **mel-eti* (OIr. *-meil* "grinds"; PIE root **melh*), **ar-ye-ti* (*-air* "ploughs"; **h₂erh₃*), **gan-ye-tor* (*-gainethar* "is born"; **ĝenh₁*), **dam-ye-ti* (*-daim* "endures"; **demh₂*), **ster-na-ti* (*-sern* "strews"; **sterh₃*), **mar-na-ti* (*-mairn* "betrays"; **merh₂*), **bal-ni-ti* (*-baill* "dies"; **gʷelh₁*), **er-na-ti* (*-ern* "gives"; **perh₂*) with new 'aniṭ' *s*-aorists > *t*-preterites such as **mĭl(-s)-t* (OIr. *-melt*), **ĭr(-s)-t* (OIr. *t*-pret. **-art* inferred but only Mid. Ir. *s*-pret. attested; cf. ch. 4, 4), **gen(-s)-to(r)* (in later merged pret. ousted by perf. > OIr. *-génair*), **dĭm(-s)-t* (ousted by perf. > OIr. *-dámair*), **stĭr(-s)-t* (OIr. *-sert*), **mĭr(-s)-t* (OIr. *-mert*); **bĭl(-s)-t* (OIr. *-belt*), **ĭr(-s)-t* (ousted by perf. > OIr. *-ír*; see ch. 4, 4 on *t*-pret. vocalism etc.).

Once this stage had been reached, the (*s*-aorist) subjunctives of the roots in question could only be segmented as **mel-ase-t(i)* < **mélh-se-ti* (OIr. *-mela*), **ar-ase-t(i)* < **h₂érh₃-se-ti* (OIr. *-ara* implied by pass. *-arthar*), **gen-ase-tor* < **ĝénh₁-se-tor* (OIr. *-genathar*), **dem-ase-t(i)* < **démh₂-se-ti* (OIr. *-dama* with transfer of vocalism from pres. *-daim*), **ster-ase-t(i)* < **stérh₃-se-ti* (OIr. *-sera*), **mer-ase-t(i)* < **mérh₂-se-ti* (OIr. *-mera*), **bel-ase-t(i)* < **gʷélh₁-se-ti* (OIr. *-bela*), **er-ase-t(i)* < **perh₂-se-ti* (OIr. *-era*). The result will have been a synchronically unmotivated allomorphy between **-ase/o-* and **-se/o-* in the subjunctive of roots with final resonant. Of these the former seems to have been considerably more widespread than the latter, which was the historically regular formation in a smaller group continuing old aniṭ CER roots, e. g. **gʷen-se-t(i)* (OIr. pres. *-goin* "kills" < **gʷan-e-t(i)*; see McCone, 1986, 228), **kan-se-t(i)* "sings" (*-cain* < **kan-e-t(i)*), **em-se-t(i)* (*-eim* "takes" < **em-e-t(i)*), **ber-se-t(i)* (*-beir* "bears" < **ber-e-t(i)*), **kel-se-t(i)* (*-ceil* "hides" < **kel-e-t(i)*).

Pressure towards homogenization of the suffix would be only natural. Since the extreme rarity of a PIE radical sequence CE(R)TH excluded sig-

nificant competition from *-*ase/o*-, the form used after CE(R)T roots was regularly *-*se/o*-. In the overall subjunctive context this factor might have been expected to secure the generalization of minority *-*se/o*- over majority *-*ase/o*- in the (synchronically) CER roots too. When the perspective is narrowed to the CER subclass itself, however, *-*ase/o*- obviously had the statistical upper hand, the correlation between subj. **mel-ase/o*- and *t*-pret. **mil-t(e/o)*- being just as convenient as that between subj. **ber-se/o*- and *t*-pret. **bir-t(e/o-)* once the latter had lost its *-*s*-. Since an allomorphic alternation CE(R)T-*se/o*-, CER-*ase/o*- was quite predictable synchronically, the generalization of dominant *-*ase/o*- over *-*se/o*- in the latter seems perfectly plausible, if hardly inevitable.

However, a further consideration tips the scales decisively in favour of CER-*ase/o*-. Although Pedersen's view (*VKG* I 82-3) that the assimilation *rs* > *rr* (and by implication *ls* > *ll*) was Proto-Celtic probably cannot be sustained in the light of Continental Celtic attestations such as the Gaulish patronymic *ouersiknos* (*RIG* I G-206), there is no reason to doubt its validity for Insular Celtic with the result that subj. **ber-se-t(i)* and **kel-se-t(i)* above will have become **berre-t(i)* and **kelle-ti*. If so, the option of remodelling subj. forms like **s(t)er-ase/o*-, **bel-ase/o*- to **s(t)er-se/o*-, **bel-se/o*- would be excluded because it entailed a phonologically impossible sequence for Insular Celtic, and there would be little attraction in transforming them into the morphologically opaque **sterre-t(i)*, **belle-t(i)*. On the contrary, there would presumably be strong pressure towards 'reclarification' of subj. **berre-t(i)* (pres. **ber-e-t(i)*, pret. **bir-t(i)*), **kelle-ti* (pres. **kel-e-t(i)*, pret. **kil-t(i)*) as **ber-ase-t(i)*, **kel-ase-t(i)* on the model of subj. **mel-ase-t(i)* (pres. **mel-e-t(i)*, pret. **mil-t(i)*). Hence OIr. *a*-subj. *-bera*, *-cela*. Once this trend had been established, the residue of *-R-*se/o*-subjunctives including **g*^{w}*en-se-t(i)*, **kan-se-(i)*, **em-se-t(i)* will likewise have been transformed to **g*^{w}*en-ase-t(i)* (OIr. *-gona* with later transfer of vocalism from pres. *-goin*), **kan-ase-t(i)* (OIr. *-cana*), **em-ase-t(i)* (OIr. *-ema*).

The strong CER(H) roots where R = *r/l/m/n* are crucial because this and CE*w*(H) (see below) are the only categories in which the unreduplicated full-grade **-hse/o*- desiderative can score a few more 'direct hits' than the **-se/o*- of the thematic *s*-aorist subjunctive. As we have seen, CER-*ase/o*- would be the regular outcome of the latter in most instances, while its analogical spread to the remainder with CE*rre/o*-, CE*lle/o*- or CEN-*se/o*-can be readily motivated. A further well motivated analogical extension required by both hypotheses was to the two roots with labial final stop, which will have had a highly anomalous opposition between

pres. **gab-ye-t(i)* (OIr. *-gaib* "seizes"), **ib-e-t(i)* (OIr. *-ib* "drinks") and aor./pret. **gax(-s)-t*, **ix(-s)-t*, subj. **gax-se-t(i)*, **ix-se-t(i)*. This was resolved by giving them a -V*ss*(-) aor./pret. (Watkins, 1962, 135-6) and an *-ase/o*- subj., whence pret. **gabass(i)*, **ibess(i)* (> OIr. *s*-pret. *-gab*, *-ib*), subj. **gabase/o*-, **ibase/o*- (> OIr. *a*-subj. *-gaba*, *-iba*).

Since Thurneysen's BIV and V nasal-present classes are made up of old C(R)E*y*H and CREH roots (see ch. 1, 1 and 4), the normal *a*-subjunctive type *-cria* (*-cren* "buys") there is entirely regular < **k*^{w}*reyh*$_2$*-se-t(i)* and so on in the former and, like its desiderative rival, only requires trivial late analogical readjustment in the latter, e. g. *-tlia* (*-tlen* "removes") for **-tlá* < **tleh*$_2$*-se-t(i)*. The *e*-subjunctive proper to remaining CRE*(y)h*$_1$ roots with an *i*-hiatus present such as *-slí* "earns", *-sní* "spins" (*EIV* 28-9 and 36) has somewhat different (but definitely non-desiderative; see ch. 6, 1-2) origins, and so is irrelevant here. Since the *a*-hiatus verbs appear to be based upon CE*h*$_{2/3}$ roots (McCone, 1986, 228), e. g. OIr. *baid*, *-bá* "(goes, departs,) dies" < **ba-et(i)* probably < **ba-ye-t(i)* < **g*^{w}*h*$_2$*-yé-ti*, an *a*-subj. type *baid*, *-bá* apparently characteristic of this class (*EIV* 38-9) can easily be derived < **bā-se-t(i)* (< **g*^{w}*éh*$_2$*(e/o)*-plus *-se/o*-; cf. Ved. *dāsat* in 6 above).

That leaves the *a*-subjunctive of primary C(R)E*w*(H) verbs with their nucleus in the tiny *o/u*-hiatus class. At least one of the latter, *soid*, *-soí* "turns" is probably from a secondarily thematised **suw-e/o*- of the athematic set present (act. 3pl. **suw-ont(i)* < **suh-énti*) seen in OInd. mid. *sú-te* and similarly thematised act. *suv-á-ti* "impels" (McCone, 1986, 228). If so, its *a*-subj. *-soa* would be quite regular < **séwh-se-t(i)* and would provide a suitable trigger for a similar formation in the other couple of members of a class anyway heavily influence by 'weak' inflection in Old Irish (*EIV* 26). As the sole nasal-infix present without an *-ase/o*- subjunctive, originally aniṭ **klu-ni-tor* "hears" (see ch. 1, 2) would hardly be able to avoid remodelling of **klow-se-tor* to the **klow-ase-tor* underlying OIr. *a*-subj. *-cloathar*.

In conclusion, it would seem that the basic shape and distribution of all Insular Celtic subjunctives (except the next chapter's OIr. *e*-type) can be comfortably accounted for in terms of an original thematic *s*-aorist subjunctive, the range of which greatly expanded along with that of the corresponding *s*-aor. indicative in Celtic prehistory. That being so, we no longer need the help of a considerably more problematical unreduplicated desiderative and may assume that, when a pres./aor. aspectual opposition was abandoned in the Insular Celtic modal system, this always subjunctive **-(a)se/o*- (< **-(h-)se/o*-) obtained a virtual monopoly of the

new single stem by virtue of its formal clarity and homogeneity (cf. ch. 4, 9).

8. If the *a*-subjunctive of the relevant OIr. strong verbs presupposes an **-ase/o-* suffix ultimately based upon a thematic *s*-aorist subjunctive of the shape CeCH-*se/o-*, a similar derivation of the *a*-subjunctive of weak verbs would be preferable to Rix's suggestion (1977, 153, n. 66; see 2 and 3 above) that the model for these was a **bwā-* < **b^hweh_2-e-* unsupported in Celtic and dubious elsewhere. Oettinger's (1984, 193; see 3 above) objection that Rix's hypothesis thereby entails a non-unitary origin for the OIr. *a*-subjunctives has considerable force, but hardly necessitates a reversion to the traditional 'Italo-Celtic' *-ā-* morpheme. One might rather ask whether an **-ase/o-* subjunctive could have been acquired by weak verbs too in (Insular?) Celtic, as the ubiquity of the **-(a)se/o-*subjunctive securely inferred for British would seem to indicate.

As Watkins has shown (1962, 185-90), a number of OIr. weak verbs are based upon old athematic CERH formations that had developed an **-a-* resegementable as a present suffix. A good example continuing an athematic root present is OIr. *anaid*, *-ana* "rests" (OInd. *áni-ti* "breathes", Gk. ἄνε-μος "wind" etc.). For this we can posit a pres. stem sg. **ana-* < **$h_2$énh$_1$-*, 1/2pl. **nā-* < **$h_2$nh$_1$-*C-, 3pl. **ane-nti* < **$h_2$nh$_1$-énti*. We may then take it that the 3pl. became **ană-nti* under pressure from the rest of the paradigm, while the anomalous 1/2p. **nā-mos(i)/-te* were remodelled from the 3pl. to **anā-mos(i)/-te*. In the case of OIr. *scaraid*, *-scara* "separates" and probably *caraid*, *-cara* "loves" precisely similar developments will have produced an alternation between sg. **skera-*, **kera-* < **skérh-*, **kérh-* (cf. Beekes', 1988, 88 tentative equation of Toch. A/B *krant/krent* "good" < PT. **kärent-* < **kṛh-ont-* with OIr. *carae* < **kṛh-ent-s*) and pl. **skară-*, **kară-* (earlier 1/2 **skrā-*, **krā-* vs. 3 **skar*V-, **kar*V-).

Depending upon whether 3pl. *-a-* was lengthened under the influence of the 1/2pl. or remained short as in the sg., the pl. paradigm **skarā-mos(i)/-te*, **skara-nt(i)* would have been or become identical with the weak type **marwā-/mos(i)/-te*, **marwă-nt(i)* underlying OIr. *marbaid*, *-marba* "kills" etc. (see ch. 3, 4 on 'Osthoff' shortening of **-V̄nT(-) > **-V̄nT(-)). That being so, the identity could readily be made complete by generalising the pl. stem in the former according to the proportion pl. **marwā-* : sg. **marwă-* = pl. *skarā-* : *x* (*x* = sg. **skarā-*, similarly **karā-* and **anā-*).

Unlike the 'secondary' factitive and denominative formations with which they were now associated, the old primary verbs **an-ā-t(i)*, **skar-ā-t(i)*, **kar-ā-t(i)* were not originally restricted to the present stem but had inherited such formerly aorist categories as *s*-pret. **īn-ass(-i)* < **$h_2$énh$_1$-s-t*, **skīr-ass(-i)* < **skérh-s-t*, **kīr-ass(-i)* < **kérh-s-t* and subj. **an-ase-t(i)* < **$h_2$énh$_1$-se-t(i)*, **sker-ase-t(i)* < **skérh-se-t(i)*, **ker-ase-t(i)* < **kérh-se-t(i)*. Once the anomalous pret. *-ī-* had been replaced by the vocalism of the root appearing in the pres. to give **an-ass(-i)*, **skar-ass(i)* and **kar-ass(i)* (see 7 above and ch. 4, 4 end), the subjunctives could easily have acqired this too in accordance with the proportion pret. **an-ass(-)* : subj. **an-ase/o-* = pret. **skar-ass(-)* : *x* (*x* = subj. **skar-ase/o-*, similarly *kar-ase/o-*).

Thus we arrive at the nucleus of a productive 'weak' inflectional type with essentially unvarying base. The two nasal presents with **-lna-* assimilated to anomalous **-lla-*, having been resegmented as **ell-a-/*all-a-* and **k^well-a-/*k^wall-a-*, then also developed 'weak' pres. **e/allā-*, **k^we/allā-* (see ch. 2, 3 and 5). There ensued a similar adaptation of inherited pret. **īl-ass(-i)*, **k^wīl-ass(-i)* (< **pélh$_2$-s-t*, **k^wélh$_2$-s-t*) and subj. **el-ase-t(i)*, **k^wel-ase-t(i)* (< **pélh$_2$-se-t(i)*, **k^wélh$_2$-se-t(i)*) to the pres. stem as **e/all-ass(-i)*, **e/all-ase-t(i)* and **k^we/all-ass(-i)*, **k^we/all-ase-t(i)*.

Here we see the antecedents of OIr. (3sg. conj.) pres. and subj. *-ana*, *-scara*, *-cara*, *-ella*, *-cella* vs. *s*-pret. *-an*, *-scar*, *-car*, *-ell*, *-cell*. Since this is precisely the pattern observed in all denominative and factitive OIr. *a*-verbs too, e. g. pres. and subj. *-marba* vs. *s*-pret. *-marb*, it seems reasonable to suppose that they took over badly needed non-present forms from the nucleus of old primary verbs that had adopted their present inflection. This is quite obvious in the case of the *s*-pret., where the endingless 3sg. conj. *-marb* can only be < **marw-ass* and the same suffix with short *a* is clearly implied by the standard British pret. seen in MW., MCo., MBr. 3sg. *caras* "loved" etc. It is difficult to see how this arose except by the proportion pres. **an-ā-t(i)* : pret. **an-a-ss(-i)* = pres. **marw-ā-t(i)* : x (x = pret. **marw-a-ss(-i)*). That being so, the weak verbs presumably acquired new subjunctives in a precisely analogous fashion, whence pres. **an-ā-t(i)* : subj. **an-ase-t(i)* = pres. **marw-ā-t(i)* : x (x = subj. **marw-ase-t(i)*).

In this way we obtain a unitary origin for all Old Irish *a*- and British *h*-subjunctives in an Insular Celtic **-ase/o-* formation that began as a thematic *s*-aorist subjunctive to CERH bases.

9. None of the many forms considered so far calls for **-āse/o-* rather than **-ase/o-*, but it will emerge in the following chapter (ch. 6, 3) that the British subjunctive of the verb 'to be' is probably easier to explain with

the help of secondarily lengthened **-āse/o-*. The latter seems as viable as the former not only in Old Irish but also in British, where a form like MW. 1pl. *car(h)om* could presumably just as well be syncopated from **karōhomoh* < **kar-āso-mos(i)* as from **karahomoh* < **kar-aso-mos(i)*. Accordingly, a possible trigger for replacement of **-ase/o-* by **-āse/o-* in Insular Celtic is worth investigating.

Prior to the motivated spread of **-ase/o-* from its original CERH base, subjunctives such as **ker-ase/o-* (< **ḱerh-se/o-*; OIr. *-cara* "may love"), **an-ase/o-* (< **$h_2$enh$_1$-se/o-*, OIr. *-ana* "may remain"), **mel-ase/o-* (< **melh-se/o-*; OIr. *-mela* "may grind"), **bel-ase/o-* (< **g^{w}elh$_1$-se/o-*; OIr. *-bela* "may die") or **mer-ase/o-* (< **merh$_2$-se/o-*; OIr. *-mera* "may betray") will have been matched by the following descendants of reduplicated zero-grade desideratives: **kikr-āse/o-* (< **ki-kr̥h-se/o-*; OIr. *-cechra* "will love", prob. via **kikarā-* with introduction of pres. and subj. vocalism), **in-āse/o-* (< **h$_2$i-h$_2$n̥h$_1$-se/o-*; OIr. *-ainfea* "will remain" with new 'weak' *f*-fut.), **miml-āse/o-* (< **mi-ml̥h-se/o-*; OIr. *-méla*, see ch. 7, 7), **bibl-āse/o-* (< **g^{w}i-g^{w}l̥h$_1$-se/o-*; OIr. *-béla*), **mimr-āse/o-* (< **mi-mr̥h$_2$-se/o-*; OIr. *-méra*).

Given the semantic proximity of subj. and desid. (see Rix, 1977, 152), it seems quite likely that the two suffixes should have been homogenised, the direction perhaps being determined by the new 'weak' verbs with pres. **kar-ā-*, **an-ā-* and desid. **kikr-ā-se/o-*, **in-ā-se/o-* but subj. **kar-a-se/o-*, **an-a-se/o-* consequently liable to be transformed to **kar-ā-se/o-*, **an-ā-se/o-*. If so, the subj. suffix acquired by old 'weak' factitives by the proportion in the previous section will have been **-ā-se/o-* rather than **-a-se/o-*. 'Strong' **-ase/o-* may well have followed suit by becoming **-āse/o-* as in the desideratives, with the result that the suffix spread to old CER roots (see 7 above) will have been **-āse/o-* rather than **-ase/o-*, e. g. OIr. *-bera* "may bear" < **ber-āse-t(i)* replacing **berre-ti*, *-cloathar* "may hear" > **klow-āse-tor* replacing **klow-se-tor*.

Be that as it may, Rix's revolutionary proposal that the OIr. *a*-subjunctive be derived from **-ăse/o-* < **-hse/o-* stands vindicated in a somewhat modified form that only serves to increase its coherence. Firstly, the British *h*-subjunctive is now to be traced directly from the same formation (see 5 above). Secondly, weak and strong *a*-subjunctives alike show reflexes of **-ăse/o-* (see 8 above). Thirdly, the basic distribution pattern of Insular Celtic *s*- and *h*-/*a*-subjunctives can easily be generated from CET-*se/o-* vs. CERH-*se/o-* on the assumption of well motivated adoption of the latter's CER-*ase/o-* by old CER roots with original CER-*se/o-* (see 7 above). That being so, the PIE precursor of all these Insular Celtic subjunctives was the thematic *s*-aorist subjunctive familiar from Greek, Indo-Iranian and, probably, Italic rather than a more doubtfully reconstructed and semantically problematical unreduplicated full-grade desiderative. The Celtic evidence thus provides crucial corroboration for the hitherto disputed reconstruction of a PIE thematic subjunctive based upon present and aorist stems, while the divorce of the Old Irish from the Italic *ā*-subjunctive on grounds of mutual incompatibility seriously weakens the Italo-Celtic hypothesis.

CHAPTER SIX

The origin of Old Irish *beith, -bé* and Gaulish *bueti(d)* as a root-aorist subjunctive like OInd. *bhúvat*

1. In addition to the two major categories of *s*- and *a*-subjunctive discussed in the previous two chapters, Old Irish had a further minor type in the *e*-subjunctive, which was confined to the small class of *i*-hiatus verbs and even there used only when the verb itself (as opposed to a preverb) was stressed. Its synchronic derivation is quite straightforward: "most of the small H 2 group forms an *e*-subjunctive by exchanging *e/é* for present *i/í*. . . Unlike the present, the *e*-subjunctive with stressed root never displays hiatus, and in unstressed position these subjunctive forms converge in the plural with the more widespread *a*-subjunctive. . ., a coincidence then extended to the unstressed singular except for the substantive verb. In effect, then, a stressed *e*-subjunctive alternates with an unstressed *a*-subjunctive in most H 2 verbs. Thus 3sg. *beith/ -bé* (unstressed *-roi-b*), 3pl. *beit/ -bet* (unstressed *-ro-bat*) corresponding to consuetudinal pres. 3sg. *biid/ -bí*, 3pl. *biit/ -biat* of substantive verb, 3sg. *do:gné* (*-dé-na*), 3pl. *do:gnet* (*-dé-nat*), 3pl. rel. *gnete* corresponding to pres. *do:gní*, *do:gniat*, *gníte* 'do', unstressed 3sg. *as:roi-llea*, 3pl. *as:roi-llet* 'may earn' corresponding to pres. *as:roi-lli*, *as:roi-llet*. Apart from vestiges of an *s*-subjunctive in the passive above all, compounds of *-cí* 'sees' have a subjunctive of this type but anomalous deponent inflection, e. g. 3pl. *ad:ceter* (*-accatar*) 'may see' versus pres. *ad:ciat*" (*EIV*, 36).

K. H. Schmidt refuses to recognise the *e*-subjunctive as a separate synchronic category in Old Irish on the grounds that "historically . . . his *e*-subjunctive can only be traced back to the *a*-subjunctive (*GOI*, pp. 385-6) and the very scanty evidence of this *e*-formation is another argument against its equivalence to the other types" (1990, 71-2). However, "very scanty" seems a strange epithet to apply to the securely attested subjunctives with stressed *e* of some of the commonest verbs in Old Irish. Moreover, apart from being rendered irrelevant to a synchronic classification by elementary principles of linguistic analysis, the diachronic argument is not only falsified by the remainder of this chapter but also rests upon a serious misunderstanding of the *GOI* passage referred to, which unequi-

vocally ascribes the partial formal convergence of the two inflections in Old Irish to quite recent prehistoric developments.

As pointed out by Thurneysen (ibid.), in unstressed syllables with following consonant the inflections of the *e*-subjunctive fell together with those of the *a*-subjunctive owing to the phonological reduction of all vowels except *u* in this environment to shwa, the precise phonetic realization of which then basically depended upon the quality of the flanking consonants (ibid., 63-6). With the exception of the extremely frequent and correspondingly conservative substantive verb (*-roi-b* above), the resultant convergence (e. g. **de-gnent* > *-dé-nat* like the *a*-subj. 3pl. *-berat* etc.; on non-palatalization of consonant groups see Greene, 1973) was then spread by analogy to unstressed forms initially unaffected (e. g. *-dé-na* in place of **-dé-n* on the model of *-bera* etc.). That being so, the evidently late and secondary unstressed *a*-subjunctive forms of most *i*-hiatus verbs need concern us here no further.

The origin of the apparently isolated Old Irish *e*-subjunctive has yet to be satisfactorily explained. Pedersen expressed the following rather vague opinion : "bei den Hiatusverben sind die Formen des *a*-Konjunktivs und des *s*-Konjunktivs zum Teil durcheinander geraten... Das *-e-* kann in allen zweisilbigen Formen aus hiatusbildendem *-ia-* entstanden sein, vgl. I 311, auch *-bé -gné* werden lautgesetzliche Formen sein (vgl. *scé* aus **sqwijats* I 252); einsilbige Formen wie Ipf. 3. Sing. *-beth*, *-gned* sind aber analogisch, und *beo*, *-gnéo* sind nach dem Muster der *s*-Konjunktive gebildet. Die Konjunktive der *-na*-Stämme zeigen gleichfalls eine gemischte Flexion: 1. Sing. *coni-gléu*... (Ind. *glenaid* 'bleibt stecken'), 3. Sing. *-ria*, 3. Pl. *-riat* (*renim* 'verkaufe'), aber 3. Pl. rel. *glete* 'welche stecken bleiben'. Die belegten Formen sind mit Ausnahme der 1. Sing. die Formen des *-ā*-Konjunktivs" (*VKG* II 351).

The problem here is that the number of stressed forms with the three syllables needed to produce *e* regularly from *ia* is unhelpfully small. Furthermore, there is no obvious reason for the generalization of *e* in the subjunctive of the *i*-verbs with hiatus present but not in that of the *i*-verbs with a nasal present, since according to Pedersen both would have had the same distribution of *-e-* and *-ia-* forms (cf. *EIV*, 39). Moreover, a case like *scé* "whitethorn" < **ske* < **sk^{w}eya(h)* < **sk^{w}iyass* merely shows the expected loss of a short final syllable after the lowering of *i* > *e* before *a*, and so is quite irrelevant to subjunctives like *-gné*, *-cria*, where long *ā* before final consonant would have yielded OIr. *-a* and changed preceding *e* > *i* in hiatus as in the historically regular *crieid* (*GOI* 66-7), *-cria* "buy" < **k^{w}reyāpi*, **k^{w}reyāh* < **k^{w}reyăhep(i)* < **k^{w}reyăset(i)* < **k^{w}reyh$_2$-se-ti* (see ch. 5, 7). It follows that *beith*, *-bé* can hardly derive from an inherited subjunctive formation of this type.

A quite different explanation of the subjunctive forms of the Old Irish substantive verb has been proposed by Thurneysen, and broadly accepted by Watkins (1969, 62): "the short *e* of the stem and the ending of 1sg. *beu* seem to indicate that the Ir. subjunctive is really based on the IE subjunctive of the root *es-*. . ., i. e. 1sg. originally **esō* = Gk. ἔω, Lat. *ero*. The *b* has been taken over from the other forms. The conjunct 3sg. *-bé*, enclit. *-b*, may have been formed like the *s*-subjunctive.. and theoretically go back to **best*. The remaining persons are formed as if the stem were *be-*" (*GOI*, 482). Kortlandt is in essential agreement on the formal side, but bases his morphological analysis upon a quite unprecedented ablaut of the *s*-suffix combined with a zero grade of the root: "the stem *bes-* shows the full grade of the suffix **-es-* after the zero grade of the root **bhw-*" (1984, 185). His insistence (ibid.) that "the subjunctive 3rd. sg. *-bé*, *-roib* points unambiguously to **bes(t)*" entails the highly improbable ascription of the corresponding 3sg. abs. *beith* to analogy. There is no obvious motivation for this, since an original athematic **b(w)es-ti(-)* or the like should have produced a synchronically normal *s*-subj. alternance between abs. **beis* and conj. *-bé* (cf. *geis*, *-gé* "may pray" etc.).

On the whole, Thurneysen's and related approaches are no less problematical than Pedersen's. In the first place, one can see no good reason for replacing the *b-* subjunctive expected from **b^{h}uh-* by a copular paradigm too synchronically anomalous to be tolerated without a new initial *b-*. Secondly, a regular development can be envisaged in the singular conjunct only, e. g. 1sg. *-béo* < **(b)es-ū*, 2sg. *-bee* < **(b)es-es*, 3sg. *-bé* < **(b)es-et* (cf. Watkins, ibid., with the further comment that the 2sg. *-bee* attested only in the hapax *slán:bee* "sana sis" probably stands for */bē/*).

As far as the 1 and 3pl. are concerned, "Thurneysen derives *beu* from **b-esō*. . ., which is monosyllabic; I do not see how a **b-esonti* would yield a monosyllable, except by invoking a weak stress in sentence position" (Watkins, 1958, 97). Since this possibility is excluded by the fact that full stress is precisely what distinguishes forms of the substantive verb from those of the copula at bottom, the outcome of **-besomos*, **besont(i)* could only have been disyllabic 1pl. **-biam*, 3pl. **biit/*-biat* or the like. One might, of course, posit remodelling on the analogy of the forms with e-grade of the thematic vowel in order to avoid homonymy with pres. ind. *-biam*, *biit/-biat*. However, cases such as *sceïd* "vomits" < **ske(y)-e-ti*, nsg. *tee*, later *té* "hot" < **te(y?)ēs* < **tep-ents*, pl. *téit* < *teït* < **te(y?)-ēd-eh* < **tep-ent-*

es make it likely that 3sg. **beset(i)* > **be(y)et(i)* would have yielded OIr. abs. **beïd*, later **béid*, conj. *-bé*. Therefore, an analogy along these lines should have produced a perfectly viable *ee-* or *é*-subjunctive instead of the actually attested *e*-subjunctive. That being so, the posited **b+ese/o-* > *be-* appears to be not only morphologically improbable but also well nigh impossible phonetically. Although neither Thurneysen nor Watkins mention their theory's further implication that features of the particularly common substantive verb's subjunctive had been transferred to the other members of the small class of *i*-hiatus verbs, such a development may be regarded as eminently plausible. This may conveniently be represented in Old Irish guise as (pres. ind.: subj.) *biid/-bí* : *beith/-bé* = *gniid/-gní* : x (x = *gneith/-gné*), but could have happened rather earlier when the forms were, say, **b(w)iyet(i)*, **b(w)et(i)* and **gniyet(i)* (**gnet(i)*). That, of course, still leaves the question of the origins of *beith/ -bé* itself open.

2. The foregoing points to **b(w)et(i)* or the like as the only phonetically viable preform, the basic issue then being whether such a postulate can be justified on morphological grounds. The recent appreciable increase in available Continental Celtic material has brought to light a readily comparable Gaulish verbal form, the relatively frequent occurrence and initial *bu-* of which clearly indicate a reflex of **b^{wh}uh-* "be(come)". This is now attested in the 3sg. as *buetid* (Chamalières, 8-9), compound *de-uor-buetid* (Lezoux plate, 6), and *bueti(d)* (Lezoux lead tablet, 7). The *-d* here is almost certainly due to the petrification of a neuter enclitic pronoun *-(i)d*, a process for which Old and above all Middle Irish offer typologically illuminating parallels (*EIV*, 186-90), and need concern us no further. Since both Lezoux inscriptions (Fleuriot 1980b and 1986) are unfortunately fragmentary, they shed little light on the grammatical function of *bueti(d)*, but for that very reason hardly preclude a subjunctive.

The fully preserved lead tablet of Chamalières, by contrast, offers a significantly better prospect for the specification of *buetid*'s meaning and morphology. Despite having been first published only thirteen or so years ago, this relatively short inscription is already, word for word, probably the most heavily commentated text in a Celtic language (see Lejeune and Marichal, 1977; Fleuriot, 1977, 1979 and 1980; Lambert, 1979b and 1987; K. H. Schmidt, 1981; Henry, 1984; Kowal, 1987). Although the meaning of a good many words and phrases nonetheless remains quite uncertain, the whole can be confidently interpreted as some form of prayer, regardless of whether the second word *uediiumí* is

to be translated "I bind, lead, introduce, invoke" (cf. Fleuriot, 1977, 178; OIr. *feidid* "leads" < **wed^h-e-ti*) or "I beseech" (cf. Lejeune and Marichal, 1977, 166; OIr. *guidiu* "I beseech" < **$g^{wh}ed^h$-yō*). Cowgill (1980, 68) has now made the latter analysis not only semantically and morphologically compelling but also, as long as no counter example comes to light, phonetically probable (PIE *g^{wh}* > PCelt. *g^w* > Gaul. *w*).

The passage that concerns us here is *meion ponc se sit buetid ollon regu*c *cambion exsops pissiiumí* (ll.8-10), which may be roughly translated "when... small, let it be(come) great, and(?) may I make the crooked straight. Blind I (will?) see". Interpretation of *exs-ops* as "aveugle" or "blind" (Lejeune and Marichal, 1977, 165; cf. Lambert, 1979b, 158 and Watkins, 1983) and comparison of *ollon*, *regu* with OIr. *oll* "great", *-riug* "I stretch, direct, make straight/erect" (Fleuriot, 1977, 185-6) suggested themselves almost immediately. Nevertheless, the encouraging antithetical structure for all three juxtaposed phrases recognised by Meid (1987, 50-2) only emerges when these results are combined with Lambert's (1979b, 156) comparison of *cambion* with OIr. *camb* "crooked" plus K. H. Schmidt's (1981, 265) interpretation of *meion* as "small" (root **mey-* in OIr. *mi-n* "small", Lat. *mi-nus* etc.) and *pissiiumí* as "I shall see". *Ponc* is presumably a conjunction based upon the relative stem **k^wo-* (cf. Lat. *cum*) plus a particle *-c* (cf. Lat. *tun-c* beside *tum* etc.; Lejeune and Marichal, 1977, 167). The same particle, or perhaps a sandhi form of petrified *-(i)d*, seems to occur in *regu-c*. The difficult problem of *se sit*, at least part of which should be a verb, can be left on one side here.

Regu-c can scarcely be other than a thematic 1sg., and this raises the question as to why it does not have the same ending as *uediiumí*. Since a late Gaulish sound change *-oi* > *-ī* is not securely established, the in any case morphologically suspect explanation of this form as *uediu* plus dat. sg. pron. *-mī* < *-moi* "(to) me" with reflexive meaning is unlikely to be correct. Rather we have to do with an extension of the thematic (*-ū* < **-ō*) by the athematic (*-mi*) 1sg. present ending, a process for which Old Indic and, nearer home, British Celtic offer striking parallels (see ch. 5, 5). Lejeune and Marichal (1977, 166) envisage both possibilities, the second with the reservation "sans qu'alors soit claire la distribution, dans le type thématique, entre cet **-ōmi* et **-ō*".

Presumably this dichotomy could have been brought about by a desire to distinguish formally in the 1sg. between thematic present indicative and hyperthematic present subjunctive, a similarly motivated differentiation between identical 1sg. pres. ind. and subj. having already been posited for late prehistoric Irish (ch. 5, 6). This consideration combines

with the probable imprecatory context to suggest that *regu(-c)* be taken as a pres. subj. in contradistinction to pres. ind. *uediiumi*, an inference that would corroborate the contextually probable interpretation of preceding *bueti(-d)* as a subjunctive. If the 1sg. *delgu* of a brief Gaulish graffito, convincingly interpreted by Vendryes (1955), on a vase from Banassac is pres. ind. "I hold" rather than pres. subj. "may I hold", it can be ascribed to a period or dialect in which *-ū* had not yet been contaminated by *-mi*.

Since OIr. *-cí* "sees" could continue **k^{w}is-ye-t(i)* as easily as **k^{w}is-e-t(i)*, *pissīumi* might well be a pres. ind. similar to *uediiumi*. If, however, the spelling *-ss-* is to be taken seriously and *-pisetu* on the Thiaucourt ring (text and implausible alternative interpretation in Fleuriot, 1979b) belongs here, an analysis as desiderative or future **k^{w}is-syūmi* (with *-ū+mi* as in the present) seems preferable, although the zero rather than the expected full grade of the root poses something of a problem.

Be that as it may, Gaulish *bueti(-d)* can be taken with some assurance as a 3sg. subjunctive of the verb 'to be' as suggested by Lambert (1979b, 156) and Hollifield (1983, 96-7), the latter of whom tentatively suggests a comparison with Old Irish *beith/-bé* "may be" < **bwet(i)* and then the OInd. subj. *bhúvat* (cf. Meid, 1987, 52). Once made, this equation implies a Proto-Celtic subjunctive **b(u)weti* that is indeed strikingly similar to the Old Indic aor. subj. of the verb *bhū-* "become", namely *bhúvat* < **b^{h}úw-e-t(i)* < **b^{h}úh-e-t(i)*. This zero-grade subjunctive form constitutes an exception to the otherwise general correlation between full-grade acrostatic thematic subjunctive (CéC-*e/o*-) and (amphi)kinetic root athematic indicative (3sg. CéC-*t(i)*, 3pl. CC-*ént(i)*). If not actually inherited from PIE, its independent occurrence on the eastern and western edges of Indogermania at least presupposes a common base in both branches, namely an associated athematic root aorist with the peculiarity of invariable zero grade in the active.

Accordingly the regularly zero-grade Old Indic aorist paradigm 3sg. *ábhūt* "became" (inj. *bhūt*), 3pl. *ábhūvan* (remodelling of earlier **ábhuvan* on analogy of 1pl. *ábhūma*, 2pl. *ábhūta*) seems to continue a likewise synchronically abnormal PIE paradigm 3sg. **b^{h}úh-t*, 3pl. **b^{h}uh-ént* more or less directly (Meid, ibid.). Postponing a more thorough justification of this hypothesis until a later section, we must first examine the origin and further development of the Indo-Iranian and Celtic subjunctives at issue in greater detail.

If an exclusively zero-grade aor. ind. act. **b^{h}uh-* was a feature of the parent language itself, then the corresponding subjunctive can perfectly [illegible] precursor of the Celtic and

Old Indic forms cited above. On the other hand, it is also conceivable that the remodelling of an inherited full-grade aor. subj. **b^{h}éwh-e/o-* was independently motivated in two separate branches according to the proportion (aor. ind. : subj.) **g^{w}ém-t* : **g^{w}ém-e-t(i)* = **b^{h}úh-t* : x (x = **b^{h}úh-e-t(i)*) or, after loss of laryngeals, **b$^{(h)}$ūt* : *x* (*x* = **b$^{(h)}$uw-e-t(i)*).

Old Iranian evidence might contribute to a choice between these more or less equally plausible alternatives. The Old Persian inscriptions offer no relevant examples, but Avestan has both a full-grade (3sg. *bauuat*) and a zero-grade (3sg. *buuat*) stem of the aor. subj. of the verb *bu-*. Internal evidence marginally favours the former as the older form, Kellens remarking that *buua-* "n'est sûrement attestée que dans l'Avesta récent, alors que le gâthique a peut-être conservé, seul parmi les dialectes indo-iraniens, le thème original *bauua-* (voir 1 a 1)" (1984, 387). However, the limited Gathic evidence (ibid. 353 and 354, n. 12) seems too inconclusive to gainsay the probablities implied by a consideration of external comparanda.

Here two logical possibilities present themselves. Either Celtic and Old Indic have preserved the older form, whereas Iranian or (Gathic) Avestan has partially replaced it with a new full-grade type modelled on the other subjunctives of this class, or Celtic, Old Indic and, to some extent, Avestan have all innovated separately in the manner described above, the older full-grade subjunctive still surviving as a byform in Gathic Avestan. On the whole, considerations of economy favour the former option, since this entails merely a partial innovation in Iranian or Avestan whereas the second alternative requires the parallel independent creation of a zero-grade subjunctive in Indic, Celtic and Avestan. Moreover, in the likely enough event that the Latin-Faliscan *-b/f-*future (Lat. *carebo*, Fal. *carefo* etc.) was based upon an identical zero-grade subj. **-b^{h}(u)w-e/o-* as suggested by Puhvel (1960, 50; cf. Cowgill, 1970, 141; Bammesberger, 1984, 79), the PIE status of this formation would be placed beyond reasonable doubt.

Be that as it may and regardless of whether zero-grade **b^{h}úh-e-t(i)* or full-grade **b^{h}éwh-e-t(i)* was the older aor. subj., both explanations proffered above presuppose an inherited zero grade throughout **b^{h}uh*'s root-aorist indicative at least.

3. A couple of further problems must be overcome in order to consolidate the proposed derivation of Gaul. *bueti(d)* and OIr. *beith/-bé* from an old thematic subjunctive corresponding to a zero-grade athematic root aorist. Gaulish *bueti(d)* could represent either [*bweti*] or [*bueti*], but the

fact that a spelling **buueti(d)* is as yet unattested probably points rather to a [*bweti*] in full agreement with the OIr. form. Conceivably this resulted from a regular Proto-Celtic (or perhaps Insular Celtic or Proto-Irish) sound change **buw*V- > *bw*V-. However, the derivation of OIr. *boí* "was" < **bowe* < **buwet* argued for below makes this unlikely, and instead one might envisage analogical influence from the stem **b^{h}wi-* (< **b^{h}wih-*; perhaps metathesised from **b^{h}uhy-*?), which may be of somewhat obscure origins but is nonetheless securely attested in Celtic (OIr. pres. 3sg. *biid*, *-bi* < **biyet(i)* < **bwiyet(i)*; Gaul. *bissiet* (Chamalières); Celtib. *PionTi* etc. (Botorrita)?), Italic (Lat. pres. *fio* etc.) and Balto-Slavic (e. g. OLit. pret. *bit(i)*; see Stang, 1966, 380-1). At any rate, the problem of *bw*V- instead of *buw*V- < **b^{h}uh-* is not peculiar to the subjunctive stem of this verb in Celtic.

The forms attested so far do not preclude the possibility that the Gaulish subjunctive had retained the original *-e/o-* alternation of the suffixed thematic vowel and still had forms like 3pl. **buonti*, but Old Irish must have generalised the *e*-grade of the stem formans, e. g. 1sg. *beo*, *beu*, *-béo* < **be-ū* in place of **b-ū* < **b^h(u)w-ō*, 3pl. *beit*, *-bet* < **bed(i)* in place of **bod(i)* < **b(w)ont(i)* < **b^h(u)w-ont(i)*. Were the *e* in the 3pl. old, **(-)bé(i)t* should have resulted from stressed **bent(i)*. The attested OIr. 3pl. form must, then, be analogical. Although the remodelled form might possibly have been **bēḍ(i)* subsequently influenced by 3sg. **beþ(i)* etc., it seems more likely that an inherited **bod(i)* simply exchanged short *e* for short *o*. A typologically similar generalization of the *e*-grade alternant is probable in the Latin future of the type 3sg. *reget*, 3pl. *regent*, which seems to go back to a 'hyperthematic' *-ē/ō-* present subjunctive. As far as Old Irish is concerned, the eradication of *-e/o-* ablaut in favour of the *e*-vocalism of the base 3sg. of the paradigm may have been triggered by the model of the far commoner second type of subjunctive with vocalic stem, namely the *a*-subjunctive with 1sg. **-ā* or **-ū* < **-ă̄-ū* < **-ăsū* and **-ā-* < **-ă̄-e-* or **-ă̄-o-* < **-ă̄-se/o-* elsewhere (see ch. 5, 6).

The Celtic subj. stem **bwe(/o)-* posited here could well survive in the British ipf. subj. of *bot* "be", which displays *e* throughout: (MW./MBr., the latter essentially agreeing with MCo.) 1sg. *bewn/benn*, 2sg. *beut/bes*, 3sg. *bei/be*, 1pl.*beym/bemp*, 2pl. *-/bech*, 3pl. *beynt/bent* (*VKG* II 438). The corresponding OIr. ipf. subj., of course, also displays *be-* throughout: 1sg. *-beinn*, 2sg. *-betha*, 3sg. *-beth*, 1pl. *-bemmis*, 2pl. *-bethe*, 3pl. *betis* (ibid.; *GOI* 482). However, the endings after the *b-* are identical to those of other MW., MCo. or MBr. imperfects, and it seems clear that Insular Celtic had generalised the *e*-grade of the thematic vowel before the imperfect endings used with the pres., subj. and, in OIr., fut. stem (*VKG* II 336, 344-8, 352; *GOI* 370-1). That being so, there has obviously been considerable interaction between the ipf. subj. inflection of the verb 'to be' and that of other verbs in British. Consequently there is a distinct possibility that the Brit. ipf. subj. forms following *b-* have simply been taken over from the normal ipf. subj. paradigm. Nevertheless, it also seems quite likely that an inherited ipf. subj. stem *be-* was able to survive the remodelling that affected the Brit. pres. subj. precisely because of the ubiquity of predesinential **-e-* in other imperfect formations.

Be that as it may, the British present subjunctive is more problematical. The MBr. forms are unhelpful because they have taken over *bez-* from the pres. ind., a development found sporadically in MW. *byd-* forms too (*VKG* II 438). MW. 2sg. *bych*, MCo. *by* could conceivably be based on **bwe-si*, while MW. 1pl. *bom* (MCo. *byyn*, *beyn* has obviously adopted 1pl. *-yn* otherwise normal there) and 3pl. MW. *bont*, MCo. *bons* (*byns* modelled on 1pl.?) might reflect **bwo-mos*, **bwo-nt(i)* respectively and 2pl. MW. *boch*, MCo. *byugh* or *beugh* are manifestly innovatory (see ch. 5, 5 on MW. 2sg. *-ych*, 2pl. *-och* and 3pl. *-ont*).

However, since all of the MCo. forms can easily be ascribed to the influence of the standard pres. subj. paradigm there (*VKG* II 352) coupled with sporadic transfer of *be-* from the ipf. subj., the older stem is probably reflected in the OW. and MW. forms, of which 1sg. *bwyf* and OW. 3sg. abs. *boit*, conj. *boi* in particular display a diphthong hard to square with immediate **bwe/o-* preforms. On the other hand, there would be no difficulty in deriving 1sg. *bwyf* < **bōhīvi* < **b(w)āsū-mi* and 3sg. abs. *boit* < **bōhedi* < **b(w)āseti(-)* on the eminently reasonable assumption that the vowel before the **-se/o-* subj. suffix was not syncopated here as elsewhere simply because it was in the first syllable (see ch. 5, 5). If the regular outcome of 3sg. conj. **bōhed* was *boi*, then MW., MCo. and MBr. *bo* will be analogical to 3pl. *bont*, a less likely alternative being to take *bo* as the regular reflex and OW. *boi* as analogical to *boit*. At all events we thus arrive at the nucleus of forms with an *-oi-* diphthong needed to explain many features of the MW. pres. subj. of other verbs too (see ch. 5, 5). MW. 1pl. *bom* and 3pl. MW. *bont*, MCo. *bons* can be derived quite straightforwardly from **bōhomoh* < **b(w)āsomos(i)* and **bōhont* < **b(w)āsont(i)* respectively. The 2pl. is anyway innovatory and the 2sg., if not a residual survival of **bwesi(-)*, can be analogical to MW. *bwyf* on the model of pres. subj. 1sg. *car(h)wyf* to 2sg. *ker(h)ych* etc. (see ch. 5, 5).

It thus looks as though the stem underlying the British pres. subj. was **b(w)āse/o-* not **b(w)e/o-*. This, however, presents no serious obstacle to

the foregoing argument, based upon Gaulish and Old Irish forms, that the Proto- and Insular Celtic formation was **bwe/o-*, since there is no difficulty in motivating a British reformation of this to a **b(w)āse/o-* incorporating the **-āse/o-* (therefore preferable to **-ase/o-*, cf. ch. 5, 9) subjunctive suffix typical of most other verbs there (see ch. 5, 5). Moreover, it seems possible that OIr. fut. 3sg. *bieid, -bia* "will be" is < **biwāset(i)* dissimilated from **bibwāseti* (see 5 below), which will have replaced inherited **bibūseti* < **bʰi-bʰuh-se-ti* (OInd. *bubhūṣati*) under combined pressure from subj. **bw-* and the standard C*i*CR*ā-se/o-* fut./desid. (see ch. 7,). If so, such a **bi-bwā-se-ti* inherited through Insular Celtic could well have influenced the corresponding subj. in British prior to the prehistoric loss of a morphologically distinct fut./desid. there.

4. There remains the question as to whether the isolated survival of the reflex of a thematic subjunctive to an old root aorist right down into Old Irish is a plausible postulate. Three main considerations are of moment in determining this: firstly the widely observed tendency of the verb 'to be' to preserve archaic or otherwise anomalous inflectional characteristics on account of its particular frequency, secondly the origin of the other Old Irish subjunctives, and thirdly the fate of erstwhile root aorists in Old Irish.

A striking illustration of the first point is the copula's preservation of the one essentially unaltered ablauting root athematic present indicative in Old Irish 3sg. *is* < **essi* < **h₁és-ti* vs. 3pl. *it* < **sedi* < **h₁s-énti*. If a solitary old thematic subjunctive of a root aorist were to be preserved anywhere in the OIr. verbal system, considerations such as this make the copula and/or substantive verb the most likely candidate(s). Regarding the second point, the argument of the previous two chapters that both of the other Old Irish subj. formations derive from old thematic aorist subjunctives obviously increases the chances of a similar origin for *beith, -bé* < **bwet(i)*. In that case, whereas the OIr. *s-* and *a*-subjunctives would continue the productive thematic *s*-aorist subjunctive, *beith, -bé* would constitute an isolated survival of a thematic subjunctive of the non-productive root aorist.

This distribution would then have a close parallel in the OIr. preterite, which brings us to the third point. Whereas the vast majority of aorist survivals in the Old Irish preterite system belong to the *s-* and *t*-preterites based upon the PIE *s*-aorist indicative (see ch. 4, 4 and ch. 5, 7-8), the so-called 'suffixless' preterite, although largely continuing old perfects (e. g. *VKG* II 378-80; McCone, 1986, 233-8), also comprises two or three

erstwhile root aorist indicatives. Significantly, the two clearest examples (*VKG* II 378) are suppletive to presents based upon different roots (see ch. 4, 4), namely *do:cer* "fell" < **kérh-t* (pres. *do:tuit*; cf. OInd. *aśarīt*?) and *luid* "went" < **h₁ludʰe-t* (pres. *téit*; cf. Gk. ἤλυθε, OInd. *áruhat*).

The fact that OIr., Gk. and OInd. all show a zero-grade thematic formation is commonly taken as good reason for projecting **h₁ludʰ-e/o-* back to PIE as an unusually precocious instance of a type that later became quite widespread in Greek and Indo-Iranian especially through the often demonstrably secondary thematization of old (amphi)kinetic athematic root aorists from the 3pl. (cf. ch. 3, 1). However, this seems to be a dubious inference (cf. Bammesberger, 1985, 71-4). To begin with, the direct evidential value of Gk. ἤλυθε, OInd. *áruhat* or Gk. εἶδε "saw", OInd. *ávidat* (PIE **(e)wid-e/o-*?) is seriously compromised by a correspondence like Gk. ἔδρακ-ο-ν and OInd. *ádṛś-a-n* "they saw", which at first sight implies PIE **(e-)dṛḱ-o-nt* but is proved by the manifestly older OInd. athematic 1 sg. and pl. *dárś-am, ádarśma* to depend upon well motivated independent thematization of athematic root aorist 3sg. **(e-)derḱ-t*, 3pl. *(e-)dṛḱ-ent* (Szemerényi, 1989, 303). Since such secondary thematization of stop-final root athematic paradigms appears to have been the rule in Greek and a marked tendency in Indo-Iranian, εἶδε and *ávidat* can easily be due to parallel modifications of PIE 3sg. **(e-)weyd-t*, 3pl. *(e-)wid-ent* and only OIr. *luid* appears to stand in the way of a similar inference from ἤλυθε and *áruhat*. Since, however, there is absolutely no other example of an old stop-final athematic paradigm resisting thematization down to Old Irish, *luid* is no better an argument against a normal PIE athematic root aorist 3sg. **(e-)h₁lewdʰ-t*, 3pl. **(e-)h₁ludʰ-ent* than Gk. ἤλυθε (cf. McCone, 1986, 230-1).

The other alleged survivals of root aorists in Old Irish are suspect, not least because they do not stand in a suppletive relationship to the corresponding present. Pedersen's (*VKG* II 378) derivation of *-bi* "struck" (pres. *-ben*) from **bʰĭ-t* leaves 3pl. *(-)béotar* unexplained, thus making a dissimilation of reduplicated **bibi-* > **biwi-* perhaps more probable (cf. *EIV* 54). Still more problematical is Thurneysen's (*GOI* 431) suggestion that *-buich, -buig* is "an archaic by-form of *-bobig*.., to *bongid* 'breaks'" related as an old aorist to Gk. ἔφυγε "scattered". This would involve the otherwise quite unprecedented survival of both aorist and perfect forms as more or less free variants long after their general (Insular?) Celtic merger into a preterite by pruning to one or the other of these stems per verb. Given the existence in OIr. itself of prototonic forms like *-com-baig* (< **-com-bobaig* by syncope; *EIV* 52) and the lateness of the manuscripts

in which *-buich* is attested, it can readily be explained as a typical innovatory 's-preterite' (*EIV* 228-31 and 233-4) replacement of *-bobaig* just like 3pl. *-combuichset* (see *DIL* entry for *con:boing* and McCone, 1986, 230). If based upon an old root aorist (so Watkins, 1962, 117), the augmented pret. *ro:lae* "has put" suppletive to pret. *fo:caird* "put" but not to augm. pres. *ro:lá* "can put" etc. (unaugm. *fo:ceird* "puts"; *GOI* 420-1, *EIV* 143) has been secondarily adapted to the reduplicated *s*-preterite inflection normal for *a*-hiatus verbs (*EIV* 58-9), but with a telltale lack of reduplication (McCone, 1986, 230-1). However, it seems at least as likely that a plain *s*-preterite simply changed its 3sg. conj. from *-lá* to *-lae* on the same model in order to differentiate it from the corresponding augm. pres.

Be that as it may, we find in the OIr. preterite system plentiful *t*- and *s*-formations ultimately based upon the PIE *s*-aorist indicative but only a couple of certain reflexes of the PIE root aorist indicative, both surviving in the suppletive paradigms of rather common verbs. If, then, the OIr. subjunctive system is dominated by *s*- and *a*-formations ultimately traceable to the PIE *s*-aorist subjunctive, the isolated survival of a PIE root aorist subjunctive in the suppletive paradigm of the particularly common verb "to be" need come as no great surprise.

5. The case for taking OIr. *beith*, *-bé* = Gaul. *bueti(d)* as an old root-aorist subjunctive cognate with or perhaps merely parallel to OInd. *bhúvat*, Av. *buuat* and arguably Lat. fut. *-bit* would be further strengthened if the OIr. suffixless pret. of *a:tá* "is", namely *boí* "was", could be plausibly derived from a corresponding old root aorist indicative.

The standard *ad hoc* explanation of *boí* etc. as an old unreduplicated perfect **b^{h}ōw-e* (*VKG* II 379) or **b^{h}ow-e* (*GOI* 483) is fatally undermined by incontrovertible evidence that the PIE perfect of **b^{h}uh* was reduplicated, e. g. 3sg. OInd. *babhū́va*, Av. *buuāuua*, Gk. πέφῡκα, 3pl. OInd. *babhūvur*, Av. *bābuuarə*, Osc. *fufens*, Umbr. fut. perf. *fefure* (cf. Strunk, 1972, 25, n. 16). Accordingly, if OIr. *boí* is an old perfect, it must once have been reduplicated. In that case we need to reconstruct a preform like **bu-bw-e* or **be-bw-e* comparable to the Proto-Osco-Umbrian **fefw-e(d)* posited by Jasanoff (1987, 180) and presumably replacing an earlier **be-buw-e* or **be-bow-e* < **b^{h}e-b^h(o)uh-e* (cf. *bwet(i)* for *buwet(i)* in 3 above?). We might then suppose a dissimilatory loss of *b* in the environment *b*V___*w* (cf. fut. *bieid*, *-bia* "will be" < **bi-bwā-se-t(i)* in 3, on which see *GOI* 66-7, and *-bí* "will smite" < **bi-bi-* in 4 above?). This would give **buw-e* or **bew-e*, whence regularly the **bow-e* that almost certainly underlies OIr. *boí*. In view of the unreduplicated British forms such as MW. *bu*

"was", this dissimilation will have to be placed at least as far back as Insular Celtic, a chronology also indicated by the desirability of arriving at **buw-e* or **bew-e* before the early Proto- or Insular Celtic changes of prevocalic *uw* and *ew* to *ow* (see 7 below). Since, unlike the similar dissimilation arguably underlying OIr. fut. *-bia*, this rather *ad hoc* sequence of developments has to be invoked at an uncomfortably early stage in order to derive OIr. *boí* etc. from **b^{h}uh*'s reduplicated PIE perfect, a less contrived unreduplicated alternative would be welcome.

This root was, of course, characterised by both frequent occurrence and a suppletive paradigm in Celtic and earlier, circumstances already shown to have been conducive to the preservation, with appropriate modifications, of old root aorists right down into Old Irish. Consequently the possibility of such antecedents for *boí* merits serious consideration as a means of avoiding the difficulties associated with erstwhile reduplication. This inevitably brings us to the difference of opinion, especially noticeable in recent publications, about whether or not **b^{h}uh* ablauted in the normal way in Proto-Indo-European.

6. Reluctance to countenance a striking apophonic anomaly in the parent language's verbal system has led a number of scholars to maintain that **b^{h}uh* must *a priori* have conformed to standard PIE paradigmatic ablaut patterns, but there has been a disconcerting lack of agreement, rooted in a dearth of good evidence, as to what the full grade thereby implied actually was. In Bammesberger's words "the canonical equation of Skt. (aorist) *á-bhū-t* = Gk. (aorist) ἔ-φῡ, which has traditionally been deemed sufficient for proving a proto-form IE **(é-)bhū-t*, was challenged by Rix 1976:214, who claimed that the common Indo-European aorist of the root **bhew-* 'grow, become' was **bhw-ā-* and further suggested that Skt. *bhū-* and Gk. φῡ-, superficially alike though they are, represent independent innovations" (1981, 231).

After objecting to this reconstruction of a PIE aorist paradigm with a "state II" full grade in 3sg. **b^{h}wéh$_2$-t* and a zero grade in 3pl. **b^{h}uh$_2$-ént* etc. on the grounds that the Lith. pret. *bùvo*, the Lat. *-bā-* ipf. and the OIr. copula's ipf. *ba* adduced in its support were manifestly innovatory while Lat. *fuat* was a subjunctive, Bammesberger preferred to see the "state I" **b^{h}éwh-* implied by OInd. pres. *bhávati* as the original PIE full grade and suggested the following motive for the eradication of the expected Gk. and OInd. aor. reflexes, namely **phe(w)a-* and **bhavi-*, in favour of the zero-grade variant: "these singular forms lacked any correlationship with the plural alternant **bhū-*. It is quite conceivable that paradigmatic cohe-

sion was restored through levelling. Gk. φῡ- and Skt. *bhū-* resulted from the generalization of the weak alternant **bhū-* throughout the paradigm" (ibid., 232). Previously Mayer (1956, 115) had argued that both a full grade I **bʰewh* and a full grade II **bʰweh* could be reconstructed on the basis of Indo-Iranian evidence on the one hand and a combination of Old Irish, Latin and Lithuanian forms on the other.

However, Anttila's study of 'schwebeablaut' has now undermined 'catch all' hypotheses of this kind (see ch. 2, 1). Indeed, Anttila himself has argued as follows against PIE ablaut in this root: "for PIE we get only **bhū-* (e. g. Gk. ἔφῡ etc.), where the anomalous zero grade aorist.. speaks for its antiquity... The evidence for Brugmann's base **bhewā* is *bhávati* etc. limited to Indo-Iranian, with no reason to put it back to Proto-Indo-European. For Kuiper *bhávati* is in fact an old subjunctive (Nas. präs. 98)... In Indo-Iranian it is quite clear that if a full grade is formed on a zero grade *Cū*, it will be *Cav(i)*... The quite different presents to **bhū* in many subgroups speak against the inheritance of a Proto-Indo-European present" (1969, 141).

Yet a third alternative has been presented by Kortlandt (1984, 185-6), who has argued for original full grade **bʰeh₂w-* versus zero grade **bʰh₂u-* and explains the widespread reflexes of zero grade **bʰū-* < **bʰuh₂-* to parallel but independent post-PIE laryngeal metatheses in the branches concerned. This proposal requires a high degree of coincidence, and evidence for the original sequence alleged by Kortlandt is weak. A form such as Gk. φύσις vs. OInd. *bhū́tiḥ* can easily owe its short zero grade to reanalysis of φῡ- < **bʰuh-*C(-) elsewhere as a full grade in line with an ablaut pattern that had become productive in Greek (e. g. nsg. πῦρ, gsg. πυρ-ός "fire", 1sg. δείκνῡ-μι, 1pl. δείκνυ-μεν "I/we show"; cf. Kimball, 1988), and OIr. *both* = MW *bot* "be(ing)" < **bu-tā* can be similarly explained in terms of a productive Celtic V̄/V̆ ablaut (McCone, 1986, 226-7 and 236-7; see ch. 1, 2 and 4). Rather than implying **bʰh₂u-*, the Lith. 3rd. person fut. *bùs* "will be" has been secondarily shortened on the evidence of *bū́s-* in the rest of the paradigm (cf. Stang, 1966, 398). Although phonetically unobjectionable on its own, Kortlandt's derivation of OIr. 1/2sg. *bá* "I was, you were" < **bāw-a(s)* < full grade **bʰeh₂w-* is hard to square with the 3sg. **bow(e)* implied by MW. *bu* and OIr. *boí*, the attestations of which (see *DIL* under *attá*) clearly show it to be older than the byform *baí*. The customary postulate of a PIE zero grade **bʰuh-*, then, seems preferable.

As Anttila above and Strunk (1972, 24-5) point out, the thematic present seen in OInd. *bhávati*, Av. *bauuaiti*, OP. *bavatiy* is confined to Indo-Iranian. It and forms with a similar full grade like OInd. fut. *bhaviṣyati*

(vs. Av. *bū-šiia-*) or inf. *bhavitum* and Av. subj. *bauuat* (see 2 above) could have been generated analogically from *b(h)ū-*, *b(h)uv-* at virtually any stage (cf. Klein, 1988, 272). As long as evidence for a presumed full grade **bhéwh-* does not extend further afield, there is no good reason to reconstruct such an alternant for Proto-Indo-European itself. Moreover, since a 3sg. aor. **(a)bhavīt* < **(e)bʰewh-t* (cf. Jamison, 1988) would be a perfectly normal Old Indic type, the anomalous generalization of the zero-grade alternant envisaged by Bammesberger above is quite unconvincing.

The development of his theory about the origins of the Old Irish and Italic *ā*-subjunctive (see ch. 5, 3) subsequently led Bammesberger (1982, 69; 1984, 79), at least implicitly, to abandon his previous postulate of a PIE full grade I in favour of the "state II" **bʰwā-* < **bʰweh₂-* reconstructed by Rix (1976, 214; 1977, 153, n. 66) and others (e. g. Thurneysen, 1884, 284-8; Oettinger, 1984; Klingenschmitt, 1981, 129, n. 45; 1982, 222). Since, however, all of the attested Old Irish, Latin and Lithuanian forms alleged in favour of this, the most widely posited PIE full grade of our root, are seriously suspect of being based upon misinterpretation or sub-PIE innovation for reasons given earlier (ch. 5, 2-3), the empirical evidence for this or any other full grade in the proto-language must be regarded as flimsy.

The comparative evidence for abnormal zero-grade reflexes of **bʰuh* in grammatical contexts where standard IE ablaut rules would predict a full grade is, by contrast, impressive. Consequently a number of scholars follow Anttila as cited above in continuing to accept the anomaly that **bʰuh*, for whatever reason, lacked a normal full grade in late PIE at least.

To begin with, the only attested reduplicated perfect form listed in the previous section to offer the slightest support for the expected PIE active singular full grade **bʰe-bʰowh-* is Avestan *buuāuua* for *[buvāva]* arguably < **bu-bāv-a*. Since Italic and Indo-Iranian, like Celtic (see McCone, 1986, 233), tend to employ innovatory *i* and *u* in the reduplicated syllable of roots containing those phonemes, the *e* reduplicator seen in 3pl. OInd. *babhūvúr*, Av. *bābuuarə*, Umbr. *fefure* as well as Gk. πεφῡ- is obviously older than the *u* seen in Av. *buuāuua* and Osc. *fufens*. This has led Strunk (1972; cf. Kellens, 1984, 404) to the cogent conclusion that 3sg. *buuāuua* is merely analogical to the normal Avestan perfect pattern, the original Indo-Iranian vocalism of reduplicator and root being seen in the 3pl. *bābuuarə* with a stem corresponding precisely to the invariably zero-grade OInd. *babhūv-*. There is, then, no good evidence for a PIE perfect stem other than non-ablauting **bʰe-bʰuh-*.

Moreover, "die starre Tiefstufe dieser Wurzel tritt bezeichnenderweise nicht nur im Perfekt sondern ebenso im Wurzelaorist auf. Auch dort entsprechen Formen wie *ábhuvam*, *ábhūs*, *ábhūt* nicht dem gängigen Schema, wonach solche Positionen durchweg mit vollstufigem Wurzelstamm besetzt sind: *áśravam*, *áśros*, *áśrot*, *ákaram*, *ákar*, *ákar*. Die voreinzelsprachliche Herkunft dieser Irregularität gilt für den Aorist *abhūt* durch den genau entsprechenden griechischen Aorist ἔφῡ als gesichert. Der Wurzelaorist ist eine Formenkategorie, zu deren morphologischen Merkmalen seit alters die Wurzelabstufung zwischen bestimmten Personalformen gehört: ved. 3. Sg. *ákar*, 3. Pl. *ákr-an*, gr. 3. Sg. ἔβη, 3. Pl. ἔβαν. Wenn die Verbalwurzel **bhuə* weder im Vedischen noch im Griechischen diesem Abstufungszwang folgt, also etwa kein **ebhewət* gebildet hatte, so erweist sie sich jedenfalls in ihrer ältesten Geschichte als invariabel tiefstufig" (ibid., 24). Starting from the relevant Greek forms, Kimball similarly argues that "the agreement in root vocalism shown by πέφῡκα : ἔφῡν is paralleled in Sanskrit *babhū́va* : *ábhūt*, suggesting it is old. The long vowel of ἔφῡν should go back to a sequence **uH*. Sanskrit *ábhūt*, Greek ἔφῡν and Latin *fuī* (which should reflect the old aorist stem) suggest that the aorist **ébhuHt* had generalised the zero-grade by late Common IE. The zero-grade of *babhū́va* and πεφῡ- suggests that the perfect had also generalized the zero-grade" (1988, 248; cf. Klein, 1988, 272).

The clear Greek and Indic evidence for non-ablauting PIE **bʰuh* is corroborated, or at any rate even by the most rigorous standards not contradicted, by Latin *fu-it* "was", Oscan *fu-s-t* "will be" and the originally aoristic Lithuanian infinitive stem seen in *bū́-ti* "to be", *bū́-siu* "I will be" etc.. As Leumann (1924, 72) noted, the Latin form could perfectly well go back to an older root aorist 3sg. **bʰū-t*, 3pl. **bʰuw-ent*, although an erstwhile ablauting paradigm cannot be definitely ruled out in view of a possible intermediate **fuw-e/o-* secondarily thematised from a 3pl. that had exchanged productive **-ont* for **-ent* (cf. ch. 3, 1, and 3pl. *s-unt* for **s-ent* < **hₜs-énti* etc.). Levelling in favour of a zero-grade alternant is presumably also thinkable in the case of Lith. *bū-*, but the full grade (< **dō-* < **dehₓ-*) seen in a parallel formation like Lith. *dúo-ti* "to give" makes non-ablauting **bʰū-* a more credible starting point for the Lithuanian as well as the Oscan formations (cf. Jasanoff, 1988, 232-3, with n. 13).

The already strong case for invariably zero-grade PIE **bʰuh* is put beyond reasonable doubt by the earlier comparison between Celtic subj. **bweti* and OInd. aor. subj. *bhúvat*. As has been seen (2 above), in the very likely event that these are cognate not only with each other but also with the Av. aor. subj. *buuat* and Lat. fut. *-bit*, they are to be derived from a

PIE root-aor. subj. **bʰúh-e/o-* with abnormal zero grade. At the very least they presuppose an anomalous PIE root-aor. ind. base with invariable **bʰuh-* in both sg. and pl. act. It remains to consider the implications of deriving OIr. pret. *boí* etc. from the root-aor. ind. securely attested for this verb in Proto-Indo-European.

7. To begin with, the suffixless preterite inflection of PIE perfect origins (*VKG* II 381-2) displayed by OIr. *boí* is no more inimical to taking it as an old root aorist than are the modified perfect endings characteristic of originally root aorist Lat. *fuit*, 3pl. *fuēre* etc. Neither of the two certain reflexes of this formation in Old Irish preserves its inherited inflection intact. The broad 3sg. of *do:cer* "fell" < **kerat* < **kerh-t* seems to have triggered initial assimilation to the pattern of the *t*-pret. with its 3sg. conj. *-bert* etc., whence 2sg. *-torchair* with an analogical palatal final (cf. 2sg. *-birt* etc.) that can hardly be regarded as a scribal error with Thurneysen (*GOI* 437). Since, however, the *t*-preterite had already mostly adopted the plural inflection of the suffixless preterite in Old Irish (*EIV* 76), its sole *t*-less representative soon began to adopt the latter's less synchronically anomalous forms in the singular too, as in 3sg. *do:rochair* beside older *-torchar*.

More to the point, whether taken as an old thematic aorist or, as seems more likely, a secondarily thematised root aorist (see 4 above), *luid* (3pl. *lotar*) "went" had been fully assimilated to suffixless preterite inflection by the time of Old Irish despite the fact that its earlier paradigm must have been **ludet(i)*, **ludont(i)*. That being so, the synchronically suffixless pret. inflection of OIr. *boí* "was", 3pl. *bátar* "were" etc. seems quite compatible with an older thematic paradigm **bowet(i)*, **bowont(i)* of root aorist origins. Both conj. **lud-et* and **bow-et* would regularly have become **lud-e* and **bow-e* by the change *-t* > *-þ* > *-h* > *-Ø* (McCone, 1982, 24-5), thus acquiring a base 3sg. ending identical with that of old perfects such as *(-)cechain* "sang" < **kɛkan-e* (PIE **-e*). This could well have triggered a merger in the rest of the paradigm.

The thematised root aorist ancestry just posited for *boí* and *luid* provides a welcome key to the at first sight puzzling prehistoric Irish remodelling of the presumably inherited 3pl. perfect ending *-Vr* (Lat. *-ēre*, Hitt. *-er*, Av. *-arə*, OInd. *-ur*) to the **-ontVr* that underlies OIr. suffixless (and later also *t*-) pret. 3pl. *-atar* and subsequently caused the reshaping of the 1pl. to give OIr. *-am(m)ar* (*VKG* II 381). According to Pedersen "die 3. Pl. hatte im Idg. wohl die Endung *-r* skr. *ca-kr-ur* 'sie haben getan'. Diese Endung ist im Italischen und im Keltischen mit einer *-nt-* Endung konta-

miniert worden: lat. *uīde-r-unt*, ir. *-cechnatar*" (ibid., 382). While the suffixing of a typical 3pl. *-ont* to the synchronically isolated *r*-ending in Latin seems understandable, the reverse order of the morphemes in Old Irish is more surprising. However, it is readily explicable on the assumption that, on going over to the suffixless inflection, **bow-od* and **lud-od* (< **-ont*) compromised by suffixing the latter's anomalous -V*r* to their own perfectly normal inherited ending rather than jettisoning the latter completely. Hence the **bow-od*V*r* and **lud-od*V*r* underlying OIr. *bátar*, *lotar* (< **lododar* by syncope). Once established in two particularly common suffixless forms, the distinctive new ending **-od*V*r* sharing a 3pl. **-od(-)* marker with the *s*- and *t*-preterites could easily replace inherited -V*r* in the bulk of OIr. suffixless preterites based on old perfects.

The postulate of secondarily thematised **bow-et*, **bow-ont* obviously raises the question of the shape of the original athematic root aorist paradigm thus implied. Of the two theoretically possible PIE prototypes with normal ablaut, "state I" 3sg. **b^{h}éwh-t* vs. 3pl. **b^{h}uh-ént* would presumably have produced Celtic **bewa-t*, **buw-*V*nt* and developed like the similarly shaped **kera-t*, **kar-*V*nt* underlying OIr. *do:cer* "fell". If so, OIr. sg. **-bó* should have resulted and the actually attested 3sg. *boí* as well as 1 and 2sg. *bá* would have to be due to analogy. The "state II" alternative with 3sg. **b^{h}wéh$_{2}$-t* vs. 3pl. **b^{h}uh$_{2}$-ent* should have yielded a Celtic **bwā-t*, **buwa-nt* most likely to lead to a generalised **bw-a-* or **buw-a-*. If the former, 2sg. *-bá* is straightforward, but the 3 and (probably) 1sg. plus the whole plural must be analogical. If the latter, we should again arrive at quite unattested **-bó* throughout the sg. The morphologically dubious assumption of generalised **bwā-* would cover the 2sg. and all of the pl. but still leave the crucial 3sg. *boí* unexplained.

On the other hand, an irregular non-ablauting PIE paradigm with 3sg. **b^{h}úh-t* and 3pl. **b^{h}uh-ént*, must have resulted in Proto-Celtic **bū-t*, **buw-*V*nt* (V = *e/a/o* according to the PIE laryngeal involved). Celtic replacement of 3pl. **-ent(i)* or **-ant(i)* not segmentable as suffix **-a-* plus **-nt(i)* (cf. ch. 3, 1 and 4; McCone, 1986, 228) then yields 3pl. **buw-ont*, which in turn becomes the base for a new thematic paradigm with **buw-e/o-* throughout in the normal way. Subsequently **bow-e/o-* arises through the Celtic change *uw* > *ow* before a vowel other than *i* (cf. Gaul. *Iouinc-*, OIr. *oac*, OCo. *iouenc*, W. *ieuanc* "young" < **yowankos* < **yuwankos* < **hyuh$_{1}$nkos*). The hitherto problematical OIr. 3sg. *(-)boí* now derives quite regularly < **bow-e* < **bow-et* and the one early stressed 2pl. form, if *-baid* with hiatus as tentatively suggested by Thurneysen (*GOI* 483), can continue **bowe-te* or **bowa-te* with the minor adjustment of *a* for *o* under

pressure from unstressed *-(ro)baid* < **bwate* < **bowate* by syncope (see below).

Like Greek, (Insular?) Celtic seems to have developed a 2sg. **-as* corresponding to the 1sg. **-a* inherited from the PIE perfect (*VKG* II 381; McCone, 1986, 238). Accordingly a pre-apocope transfer of **bow-* to the suffixless pret. should have resulted in 1sg. **(-)bow-a* and 2sg. **(-)bow-a* (< **-ah* < **-as*) expected to give OIr. **-bó*. Replacement of this by actually attested 1/2sg. *-bá* is, however, in full accord with the analogical process evinced by the invariable occurrence of unstressed *-a/* stressed *-á* in those persons of all OIr. vowel-final suffixless pret. stems (*EIV* 74-5).

That leaves 1pl. *(-)bámar* and 3pl. *(-)bátar*, unstressed *-bammar* and *-batar* respectively. The originally athematic suffixless pret. 1 and 2pl. obviously acquired a predesinential vowel in prehistoric Irish (cf. McCone, 1986, 238), either a normal thematic *o/e* generated by the 3pl. or *-a-* from the 1 and 2sg. with the further possibility that 3pl. **-od*V*r* was then remodelled to **-ad*V*r*. The unstressed forms *-bammar*, *-batar* would presumably be the regular outcome of -(C)V**bwa/om*V*r*, -(C)V**bwa/od*V*r* syncopated from -(C)V**bowa/om*V*r*, (cf. OIr. *Conall*, arch. *Conual* < **Kuno-walos*; see Cowgill, 1967b, 130), but stressed **bowa/o-d/m*V*r* could hardly have resulted in other than OIr. **bó-mar/-tar* (cf. *córae* "justice" < **kowariā*; ibid., 130). That being so, we might envisage an analogical proportion 1sg. unstressed *-ba* : stressed *-bá* = 1pl. unstressed *-bammar* : x (x = stressed *-bámmar*).

In conclusion, the hypothesis of descent from an invariably zero-grade PIE root aorist **b^{h}úh-t*, **b^{h}uh-ént* strongly favoured by the comparative evidence (see 6 above) seems to offer a perfectly plausible explanation of the substantive verb's preterite paradigm in Old Irish. Allowing for the possibility that the copula's 3sg. *-bo*, *-bu* may reflect precociously apocopated **bow* < **bowe* (*GOI* 283), its pret./ipf. (see ch. 5, 2) is basically a proclitic equivalent.

8. Although a strong stem **(b^{h}e-)b^{h}úh-* will undoubtedly have been morphologically anomalous in a PIE (perfect or) root aorist, a stressed zero grade was certainly no longer synchronically inadmissible as such in late Proto-Indo-European. Indeed, on the strength of cases like Gk. πατράσι, OInd. *pitṛ́ṣu* < loc. pl. **ph$_{2}$tŕ̥su* "(among) fathers" or OInd. *vṛ́kaḥ*, Goth. *wulfs*, Gk. λύκος < **wĺ̥k^{w}os* (or metathesised **lúk^{w}os*), it is generally conceded that the regular correlation between stress and full *e*-grade usually ascribed to an earlier phase of PIE had already broken down to some extent by the time of the final phase reconstructed through

the comparative method. This consideration has understandably led a number of scholars (e. g. Kimball, 1988, 248; Klein, 1988, 272) to conclude that, for some obscure reason, *b^huh must have lost its ability to ablaut normally at a relatively late PIE stage.

However, the mere admissibility of stressed zero grades in some late PIE categories hardly suffices to account for the replacement of a strong stem *$(b^he\text{-})b^h\acute{e}/\acute{o}wh_2$- still quite normal in kinetic athematic (perfect and) root-aorist paradigms by a new and morphologically outlandish *$(b^he\text{-})$ $b^h\acute{u}h$-. In view of this difficulty and the notorious conservatism of the verb 'to be' in many languages, one might be forgiven for wondering whether the synchronically irregular zero grade of this frequently occurring fientive associate was an archaism rather than an innovation in late PIE.

The opportunity for an explanation of non-ablauting *b^huh as a residual archaism in post-syncope PIE is presented by Schmidt-Brandt's thesis "daß das Indogermanische vor Wirkungen des quantitativen Ablauts reine Vokale von reinen Konsonanten unterschied, also nicht, wie in der durch äußere Rekonstruktion zugänglichen Periode seiner Entwicklung, eine dritte Klasse von Lauten, die sogenannten Sonanten kannte, die je nach Umgebung entweder als Konsonanten oder durch Verbindung mit nichtphonematischem *Schwa sec.* als Vokale fungieren. Die Laute *w* und *y* gehörten in jener früheren Periode des Indogermanischen zu den Konsonanten und unterschieden sich somit von den Lauten *u* und *i*, die... zu den Vokalen zählten" (1973, 79).

In line with his basic theory that the weak grade of *e*R or R*e* was not truly syllabic Ṛ but R plus reduced vowel ('shwa secundum', schematically ˛R or R˛), Schmidt-Brandt himself (e. g. ibid., 50) sought to derive a zero grade like *$b^h\bar{u}$ from *$b^h{}_{\text{˛}}w$ rather than *b^huh. However, his hypothesis concerning the purely vocalic status of *i* and *u* prior to the emergence of PIE quantitative ablaut is logically independent of these two unconvincing postulates and is accordingly free to be combined with more conventional assumptions about PIE vocalism. If the PIE syllabic allophones *i,u,ṛ,ḷ,ṃ,ṇ* of 'sonant' *y,w,r,l,m,n* first arose only by syncope of ER or RE accompanied by samprasāraṇa, then it follows that these phonemes were invariably consonantal in the pre-syncope phase of the proto-language. However, it does not necessarily follow that this stage only knew the vowel(s) *a/e/o*. There is, for instance, no typological objection to positing the additional vowels *u* and *i* phonemically distinct from consonantal *w* and *y* as in many attested languages, including English.

As we have seen, Schmidt-Brandt makes such an assumption and further argues "daß die indogermanischen Kurzdiphthonge, die ausschließlich mit kurzem *i* oder *u* quantitativ ablauten, sekundär zu den *i*- bzw. *u*-haltigen Formen hinzugebildet wurden" (ibid., 29-30). In other words, whereas PIE *ṛ,ḷ,ṃ,ṇ* are phonetically regular reductions of E*r/l/m/n* in certain environments, E*y/w* are due to analogical upgrading of *i,u* alternants on the model of the relationship established between ER and Ṛ by syncope in the previous set. Once Schmidt-Brandt's claim that *ī*, *ū* regularly resulted via ˛*y/w* from weakened *ey/w* is discounted, at least some instances of *i* and *u* may be ascribed to syncope of E*y* and E*w*, thus increasing pressure towards the analogical upgrading of pre-syncope *i* and *u* to E*y* and E*w* respectively in appropriate contexts. The corollary, of course, would be that it is difficult or impossible to distinguish pre-syncope from samprasāraṇa *i* or *u* in most cases. Nevertheless, the analogical origin proposed for the full grades of the former makes the sporadic survival of synchronically exceptional zero grades with *i* or *u* into late PIE and beyond a distinct possibility, the likelihood of this increasing with the frequency of the root or stem concerned. If, then, we posit pre-syncope 3sg. *$b^h\acute{u}h$-*t*, 3pl. *b^huh-*ént* etc., analogical upgrading of the stressed stem to *$b^h\acute{e}wh$-*t* and so on does not seem inevitable in so common a verb, and it may be noted that *g^wih_3 "live", for which Klein has recently (1988) claimed a similar non-ablauting status, is of the same basic type.

For present purposes the above speculation need be no more than conceivable, since the compelling comparative evidence for invariably zero-grade *b^huh can only be legitimately discounted if such a pattern is quite unthinkable for Proto-Indo-European. As it is not, we may confidently posit a PIE *b^huh "become" lacking both a present stem (cf. Risch, 1985, 408) and normal ablaut in its aorist and perfect forms. It almost certainly formed a root aorist indicative *$b^h\acute{u}h$-/*b^huh-' with a corresponding subjunctive *$b^h\acute{u}h$-*e/o*- in PIE, and reflexes of both formations probably occur together not only in OInd. aor. ind. *ábhūt*, subj. *bhúvat* but also in Lat. 'perf.' *fuit*, fut. formans *-bit* and OIr. pret. *(-)boí* "was", subj. *beith*, *-bé* "may be" = Gaul. *bueti(d)*.

CHAPTER SEVEN

The Old Irish futures and the problem of the PIE reduplicated desiderative

1. What may be broadly termed the 'desiderative-future' or 'desiderative-prospective' area of Indo-European verbal morphology has been the subject of widely divergent scholarly opinions. These have ranged, through all manner of intermediate positions, from denial that whole or part of it was covered by a distinct formal category independent of the pres./aor. aspectual dichotomy in the parent language to the claim that at least six such formations coexisted. Apart from general agreement that an *s*-suffix of some sort was always involved, the morphological structure and grammatical function ascribed to the types variously proposed for this slot in Proto-Indo-European encompasses an alarmingly broad spectrum, as appears from the following list of notable candidates with (strong and weak, where different) stem shape illustrated by a convenient CERC root.

(A^1) acrostatic non-ablauting full-grade athematic: C*é*RC-*s*- (K. H. Schmidt, 1966 [subj.-fut.]; Hollifield, 1981, 182 [desid.-fut. act.]; cf. W. P. Schmid, 1963, 32-59 ['modal'] and Kortlandt, 1984 [old *s*-aor. inj.]; G. Schmidt, 1986, 57-8 ['futuroid']).

(A^2) acrostatic athematic '*s*-present' with Narten ablaut: C*é*RC-*s*-, C*é*RC-*s*- (Jasanoff, 1988, 234 [> desid./fut.]).

(B) proterokinetic athematic: C*é*RC-*s*-, CR̥C-*és*- (Pedersen, 1921 [fut.]; G. Schmidt, 1986, 58 ['futuroid']).

(C^1) amphikinetic athematic: C*é*RC-*s*-, CR̥C-*s*-′ (Rasmussen, 1985 ['prospective']).

(C^2) amphikinetic athematic: C*é*RC-h_1*s*-, CR̥C-h_1*s*-′ (Puhvel, 1960, 48-9 [desid.]).

(D) reduplicated zero-grade athematic: C*í*-CR̥C-*s*- (Hollifield, 1981, 182 [desid.-fut. act.]; Kortlandt, 1984 [old '*s*-pres.' inj.]; G. Schmidt, 1986, 57-8 ['futuroid']).

(E[1]) *y*-'semi-thematic': C(*e*)RC-*s(i)-/-sye/o-* (Stang, 1942, 203-4).

(E[2]) full-grade *y*-thematic: CeRC-*sye/o-* (e. g. Schulze, 1904; Brugmann, 1916, 383-9; Pedersen, 1921, 9; Thurneysen, 1920; Scherer, 1954, 207-8 [fut.]; Hollifield, 1981, 185-8 [desid.-fut.]; Meillet, 1937, 214-5 [desid.]; Poultney, 1967, 878-80; Jasanoff, 1988, 232-3 [desid. '*s*-pres.']).

(E[3]) full-grade *y*-thematic: CeRC-h_1*syé/ó-* (Puhvel, 1960, 47-8 [desid.])

(F[1]) full-grade thematic: CéRC-*se/o-* (e. g. Schulze, 1904 [fut.]; Meillet, 1937, 214-5; Watkins, 1966b, 80; Rix, 1977, 148 [desid.]; Poultney, 1967, 878-80; Jasanoff, 1988, 232-3 [desid. '*s*-pres.']; Hollifield, 1981, 182 [desid.-fut. mid.]; G. Schmidt, 1986, 57-8 ['futuroid']).

(F[2]) full-grade thematic: CéRC-h_1*se/o-* (Puhvel, 1960, 45-6 [desid.]).

(G[1]) reduplicated zero-grade thematic: C*i*-CRC-*se/o-* (e. g. Zimmer, 1890, 127-8; Schulze, 1904; Brugmann, 1916, 344-60; Thurneysen, 1920; Watkins, 1966b, 80; Rix, 1977, 147; McCone, 1986, 248-59 [desid.]; Hollifield, 1981, 182 [desid.-fut. mid.]; Poultney, 1967, 878-80; Jasanoff, 1988, 232-3 [desid. '*s*-pres.']; G. Schmidt, 1986, 57-8 ['futuroid']).

(G[2]) reduplicated zero-grade thematic: C*i*-CRC-*hse/o-* (Puhvel, 1960, 43-6; Rasmussen, 1985, 388-9 [desid.]).

(H) thematic C(*e*)RC-*es-e/o-* (G. Schmidt, 1986, 43 ['futuroid']).

For obvious reasons no single scholar has ever proposed anything like the full array of above types with claims upon PIE desiderative or prospective-future function that enjoy and/or have enjoyed some degree of support. G. Schmidt comes closest with six (B, source of already PIE A[1], D, F[1], G[1] and H), followed by Hollifield with a minimum of five (A[1], D, E[2], F[1] and G[1]) and Puhvel with a possible four (C[2], source of perhaps post-PIE E[3], F[2] and G[2]). No less than three such formations are posited by Schulze, Poultney (E[2], F[1] and G[1]) and Jasanoff (A[2] [the source of later A[1] and E[2]], F[1] and G[1]). Even scholars basically content with two are by no means agreed as to which these should be: Brugmann and Thurneysen opt for E[2] and G[1], Meillet for E[2] and F[1], Rasmussen for C[1] and G[2], Watkins and Rix for F[1] and G[1], the latter also admitting the possibility of athematic forms (1977, 148, n. 45). Among the smaller band of 'monodesideративists' Strunk (1968, 298-306) shares Leumann's (1952, 44-7) reservations about the Indo-Iranian reduplicated desiderative's claim to go back to PIE, doubts the PIE status of broadly future *-*sye/o-*, but accepts that the parent language probably had an unreduplicated desiderative.

The present writer, on the other hand, has argued that the only non-aorist *s*-formation likely to go back to Proto-Indo-European is the G[1] thematic reduplicated desiderative supported by Indo-Iranian and Old Irish evidence.

We thus encounter wildly different opinions not only as to how many, if any, of the *s*-formations in question are of PIE provenance but also as to whether these were unreduplicated or reduplicated, non-ablauting or ablauting (and, if so, how), thematic or athematic, had an *-s-* or an -h_1*s-* suffix, primary or, as Kortlandt in particular maintains, secondary endings. This virtual free for all bears eloquent testimony to one thing at least, namely the inadequacy of the comparative evidence. One can but sympathise with Szemerényi's (1989, 307-12) healthy scepticism as to whether any of the attested or inferred sigmatic desiderative/prospective-future formations goes back to the parent language apart from the plain thematic subjunctive of the *s*-aorist. At the very least drastic slimming seems to be called for in order to prevent a surfeit of PIE in the sky here.

2. Insofar as they discuss the matter at all, the arguments deployed by 'polydesideративists' to justify the reconstruction of two or more such formations in the parent language are essentially of two types. The most economical approach is to posit a semantic difference, most straightforwardly desiderative vs. future, between just two formations recognised as PIE. Thus Brugmann claimed a PIE redup. *-*se/o-* desid. and unredup.*-*sye/o-* fut., while considering the Gk. full-grade *-*se/o-* type a probable old *s*-aor. subj. Thurneysen (1920, 146) accepted the same pair of prototypes, suggesting that the unreduplicated *-*se/o-* fut. had arisen "im Westindogermanischen" by simply adapting the inherited *-*sye/o-*, which remained unaltered "im Ostindogermanischen", to the suffix of the reduplicated type. A similar functional contrast is posited for PIE by Rasmussen, but this time between a reduplicated zero-grade *-*hse/o-* desiderative and an amphikinetic athematic *s*-'prospective'.

An alternative view of formal diversity is taken by Poultney, who, in effect, asks "why not?" and then uses internal reconstruction to generate two desiderative morphemes *-*se/o-* and *-*sye/o-* that "to some extent stood in free variation with one another" (1967, 880) in late PIE and subsequently became futures in some of the daughter languages: "although the most productive desiderative type, the Sanskrit desiderative represented by *pipāsati* 'he wants to drink', *yuyutsati* 'he wants to fight', is a reduplicated formation, there is no reason in principle why this should

have been the only desiderative type. It is easily conceivable that unreduplicated stems in either *-so-* or *-syo-* could have developed the notion of future intention from present volition, as in Eng. *I will*. Gk. δώσω and Skt. *dāsyati* may then be viewed as formations in which the present tense suffixes *-o-* and *-yo-* respectively were added to a combination of root plus *s*. . . The future, as originally a present of volition, in all probability added to the root plus *s* a suffix borrowed from present formations in *-o-* or *-yo-*, and the generalization of *-syo-* in Indo-Iranian and Baltic and of *-so-* in Greek and Italic was secondary" (ibid., 278-9).

The argumentation here is essentially the same as that of W. P. Schmid (see ch. 4, 1), who, however, ascribes only the as yet undifferentiated athematic *s*-formation (A^1) to PIE and considers that various extensions of this probably first occurred independently in the daughter languages. In similar vein Rasmussen makes a PIE athematic *s*-'prospective' (C^1) the base for an extension by 'durative' *-yá-* < **-yé/ó-* in Indo-Iranian or perhaps earlier to produce the *-syá-* future, concluding "das Denominativsuffix wäre demnach nichts anderes als das bekannte durativierende "Präsens"-Suffix, das die Opposition zu einem unmarkierten Aorist ausdrückte" (1985, 396).

Puhvel seems rather non-committal as to whether the various derivatives of his basic type arose before or after the break-up of PIE, but hints at a preference for the latter scenario: "there is little doubt that the type *karişyáti* represents a relatively late categorization of *-yé-* derivatives from desiderative stems of a type **k^{w}er-Es-*, comparable to the likewise productive addition of *-yé-* to verbal stems generally, to form the Sanskrit passive, and to the intensives like *varīvṛtyáte* beside *varīvartti*. The suffixal accent is characteristic of productive categories. . . regardless of radical vocalism (see Kuryłowicz, *L'accentuation des langues indo-européennes*^{2} 101 [Wrocław, 1958]). What remains obscure is the reason for full-grade root vocalism. It is probably somehow related to the type *mókṣate*; perhaps in a nonthematic stem **k^{w}er-Es-* (> *kariṣ-*): *k^{w}ṛ-Es-* (> **kīrṣ-*) the full grade form was made the basis of derivation under the influence of the thematic type seen in *mókṣate*, while weak grade forms like **k^{w}ṛ-Es-énti* (> **kīrṣanti*) were supplanted by reduplicated thematised counterparts (*cíkīrṣanti*)" (1960, 48). If this is meant to imply that reduplication here is a post-PIE development in both Indo-Iranian and Celtic separately, this is not only intrinsically improbable but also inconsistent with the view (ibid., 45; see end of 4 below) that both formations agree so precisely that their main features, including reduplication, must be inherited directly from the parent language.

Hollifield also applies internal reconstruction to the elaborate desiderative-future polymorphism he postulates, albeit without motivating an alleged dichotomy between athematic active and thematic middle: "there existed a future-desiderative base in Indo-European formed by adding *-s-* as a root enlargement to the verbal root. Depending on the verb involved, one of several different present stem formations was chosen to create a future-desiderative from this base, as, for example, for a CeT root, one of the form (activa tantum) *CéTsti* (e. g. OIr. **-tess* "I will run"), *CiCeTsti* (e. g. OIr. *gigis* "will pray"), (media tantum) *CéTsetor* (e. g. Gk. τέξεται "will bear"), *CiCTsetor* (Gk. νίσσεται "will return", Ved. *īkṣate* "sees")" (1981, 181-2). As for **-(h$_1$)sye/o-*, "since there were athematic root future-desideratives of the form *Cé(R)Ts-ti*, *CéRə$_1$s-ti* in Indo-European, continued by a small number of Old Irish futures like *reiss* < **relsti*, **teiss* < **tek^{w}sti*, etc., and probably also by the Osco-Umbrian future, one could perhaps assume that the denominative suffix **-ye/o-* was added secondarily at some point onto this type of stem as another mark of desiderativity" (ibid., 186).

Jasanoff combines a reductionist evolutionary approach to two of the types he posits with the vague suggestion of a semantic or distributional difference between the remaining formations: "the *s*-presents of the IE languages present a bewildering variety of formal types. The most widely distributed are the productive desiderative/future formations, of which four varieties can be distinguished: 1) the Indo-Iranian and Baltic future in **-sye/o-*, normally accompanied by a full grade of the root. . .; 2) the Indo-Iranian desiderative and Old Irish future in **-se/o-*, with original zero grade and *i*-reduplication. . .; 3) the Greek future in **-se/o-* with full grade and, in a number of cases, unmotivated deponent inflection. . . and 4) the unreduplicated athematic *s*-future of Baltic, Old Irish, and Osco-Umbrian, again with apparent full grade. . . Of these, 1) and 2) are clearly independent of each other and of the other two types; in the parent language they presumably differed in distribution or in some nuance of meaning which can no longer be recovered. Types 3) and 4), on the other hand, bid fair to rest on the same original formation" (1988, 232-3).

The notion of a polymorphic PIE desiderative or the like can hardly be objected to in principle, given the incontrovertible comparative evidence that the parent language had developed a considerable number of different present stems and at least two main types of aorist formation by the time of its final phase. The extent to which these may have been in lexically, semantically, formally and/or locally conditioned complementary distribution is inevitably difficult to establish in a reconstructed lan-

guage, and some degree of free variation can scarcely be ruled out. Internal reconstruction then becomes a legitimate, if inevitably rather speculative, instrument of inquiry into the origins of this morphological complexity. That said, however, the deployment and continued tolerance of diverse morphemes in the creation and maintenance of a fundamental present/aorist dichotomy is rather easier to accept than a similar latitude in the considerably more marginal desiderative/future. The virtual inflectional homogeneity of the likewise relatively peripheral PIE perfect is, perhaps, worth bearing in mind in this connection.

More to the point, each of the major present and aorist formations posited for PIE is widely and more or less directly attested in the daughter languages, whereas this is simply not the case with the various allegedly desiderative or prospective *s*-formations. That fact alone should urge caution and parsimony. Under the circumstances, reconstructions like A^2, B and $C^{1/2}$ are especially suspicious because they rest upon speculative inferences from markedly different attested paradigms. The general inadequacy of the evidence for any athematic PIE formation(s) of this type (A^1-D) has already been argued (ch. 4, 1 and 4-5; ch. 5, 2) with particular reference to allegedly athematic OIr. subj., fut. and/or ipv. *s*-formations, which have tended to figure quite prominently (A^1-B) or even centrally (C-D) in such speculations but turn out on closer inspection to have been originally thematic (ch. 4, 6-10). E^1 is simply the unsubstantiated projection of an extraordinary paradigm assumed to underlie the Lithuanian future back into PIE, and as such a classic explanation of *obscurum per obscurius* that is further vitiated by fundamental misconceptions about the OIr. forms relied upon quite heavily to support it. Accordingly variants A^1-E^1 can be eliminated from the field, the further shortcomings of $A^{1/2}$ and $C^{1/2}$ in relation to the problem of the Old Irish unreduplicated *s*-future being reserved for later comment (see below).

3. More or less direct descendants of all of the thematic types listed above (E^2-H) are arguably attested, but only in the case of the full-grade **-se/o-* type (F^1) can well attested finite forms in three branches, namely Celtic, Italic and Greek, be plausibly claimed in support (Rix, 1977, 148 and 151-3). Since, however, as Bammesberger points out (1982, 67; cf. McCone, 1986, 256-8 and ch. 4, 3 end), the relevant Latin futures are very probably and the Greek ones quite possibly old *s*-aorist subjunctives, the Celtic evidence assumes crucial importance. It has already emerged that the Celtic subj. and ipv. formations in question are considerably less problematical as old *s*-aorist subjunctives (see ch. 4, 2 and ch. 5, 5-8), and

it will be argued (see below) that the OIr. unreduplicated *s*-future cannot be adequately explained as an old full-grade thematic desiderative either. If so, that leaves only two Greek future formations as likely candidates, and one should hesitate to reconstruct a separate PIE category on so narrow a basis, especially if these too can be reasonably accounted for as old subjunctives divorced from innovatory indicatives, mostly aorist, that then developed new synchronically congruous modal forms.

An indisputably non-desiderative instance is what can only be an old pres. subj. ἔδεται "will eat" (< **h₁éd-e/o-* corresponding to athem. pres. ind. seen in 3sg. OInd. *át-ti*, Lat. *ēs-t*). Its middle inflection can be motivated by the need to distinguish it from the secondarily thematised pres. ind. seen in (Hom. 3pl.) ἔδουσι "they eat". Once this or the new stem ἐσθ(ι)ει "eats", presumably extrapolated from a 2sg. pres. ipv. ἔσθ(ι)ε thematized from *ἔσθι < (acrostatic) **h₁éd-dʰi*, had developed a concomitant 'hyperthematic' subj., ἔδεται was left as a distinctive future with a middle inflection that perhaps influenced further futures developed from subjunctives.

Proto-Greek subjunctives such as **leikʷ-e/o-*, **eleuth-e/o-* corresponding to root aor. ind. **(e)leikʷ-t*, **(e)likʷ-ont* (earlier **-ent*) and **ĕleus-t*, **ĕluth-ont* (for **-ent*; see ch. 6, 4) will have been cut adrift when the latter were thematised from the 3pl. to **(e)likʷe/o-*, **ĕluthe/o-* (> ἔλιπε "left", ἐ/ἠλ(υ)θε "went") and acquired the new synchronically predictable 'hyperthematic' subjunctives underlying Gk. λίπῃ, ἔλθῃ. Once independent of the aorist stem, a form like **leikʷe/o-* could become the base for a convenient new thematic pres. ind. **leikʷe/o-* (> λείπει) and a fut. **leikʷse/o-* (> λείψει) on the model of existing oppositions of the type pres. λεγε/o- "pick" vs. fut. λεξε/o- (still aor. subj. too). Once a few of these displaced subjunctive-futures had generated distinctive sigmatic futures in some such way or simply for formal differentiation from otherwise identical full-grade thematic presents (e. g. pres. φεύγει "flees", fut. φεύξεται, aor. ἔφυγε), a homogeneous and clearly characterised class could be constituted by similarly transforming the remainder into **eleuth-se/o-* (> ἐλεύσεται) etc.

The inherited 2 and 3sg. of the unaugmented root aor. ind. and the aor. subj. of CERH roots were presumably only rather weakly distinguished by secondary and probably only optional primary endings respectively in Proto-Greek, e. g. 3sg. ind. **gʷéle(t)*, **éla(t)*, **stéro(t)* (< **gʷélh₁-t*, **h₁élh₂-t*, **sterh₃-t*) vs. subj. **gʷéle(t)i*, **éla(t)i*, **stéro(t)i* (< **gʷélh₁-e-ti*, **h₁élh₂-e-ti*, **stérh₃-e-ti*). That being so, it seems quite likely that the otherwise normal relationship between root aor. ind. and subj.

(e. g. **l(é)ik^{w}-* vs. **léik^{w}-e/o-*) triggered new synchronically regular subjunctives like **g^{w}ele-e/o-*, **ela-e/o-*, **stero-e/o-*. These too will have been cut loose by thematization or sigmatization of the associated indicatives to **(e)g^{w}al-e/o-* (from 3pl. **(e)g^{w}al-ont* for **(e)g^{w}al-ent* < **(e)g^{w}l̥h$_1$-ent*, but see ch. 2, 4), **ĕlas-*, **steros-* (later > *stores-*). Hence attested ἔβαλε, ἤλασε/ἔλασε, ἐστόρεσε and the creation of the synchronically predictable preforms underlying aor. subj. βάλῃ, ἐλάσῃ, στορέσῃ. Adjustment of the vocalism to that appearing in other parts of the paradigm, which must in any case be posited on the desiderative hypothesis entailing **g^{w}élh$_1$-se-ti*, **stérh$_3$-se-ti* etc., then yields preforms capable of accounting for fut. βαλεῖ, στορεῖ and ἐλᾷ in **g^{w}ale-e/o-*, **store-e/o-* and unaltered **ela-e/o-*.

Once established in a significant number of synchronically CER roots with CERH antecedents, this distinctive hiatus (later contract) future could easily spread to old CER roots, whence **ker-ee/o-*, **men-ee/o-* (> κερεῖ "will cut", μενεῖ "will remain") to *ker-*, *men-* and so on. All of this can, of course be motivated in terms of a drive towards making displaced subjunctives with partial future functions into hitherto lacking distinctive futures. Even so, a good many as yet formally undifferentiated subj.-fut. forms continued to exist, e. g. in Homer. In those dialects that subsequently expanded the Common Greek nucleus of formally unambiguous futures, whether old desideratives or *s*-aorist subjunctives, two main trends can be discerned. One was acquisition of a 'hyperthematic' subj. by the *s*-aorist to make the old short-vowel formations exclusively future, as mostly in Attic, and the other a spread of the hiatus/contract type to *s*-formations as a distinctive 'Doric' future (cf. Hollifield, 1981, 165-6).

In the absence of good extra-Greek evidence for a full-grade **-se/o-* desiderative, considerations of economy surely favour the admittedly more complicated derivation of the relevant Greek futures from old aorist subjunctives, as long as this is at all viable. Furthermore, the best evidence for desiderative origins, that provided by the μενεῖ type of future (cf. Schulze, 1904 = *Kl. Schr.*, 10..), is dependent upon the hypothesis that the two or three alleged PIE desiderative/ future formations either had a suffix **-h$_1$s(y)e/o-* or had generalised a presuffixal laryngeal (rather surprisingly, *h*$_1$) from CERH to CER roots, whence **men-h$_1$se/o-* > PGk. **men-ese/o-* > *menee/o-* etc. (e. g. Rix, 1977, 153). As we shall see, this is an intractably problematical assumption about the parent language and, if the crucial support supposedly provided for it by the Old Indic *-(i)sya-* fut. and the reduplicated desid./fut. common to Indo-Iranian and Old Irish should evaporate (see 5-6 below), the only evidence for

the C*é*R-*h$_1$se/o-* desiderative needed to explain Gk. μενεῖ etc. directly is the μενεῖ type itself - an obviously unacceptable vicious circle. If, however, CER roots had a C*é*R-*se/o-* desiderative in PIE, this has absolutely no advantage over an *s*-aorist subjunctive as an explanation of a Greek future like μενεῖ. All things considered, the existence of a PIE full-grade desiderative with **-(h$_1$)se/o-* suffix must be regarded as very doubtful indeed (cf. Rasmussen, 1985, 390, n. 23; McCone, 1986, 259).

Provisional exclusion of F^1 and F^2 brings us to E^2. Although a direct relationship with the Baltic future seems to be ruled out (see ch. 4, 1) and the phonetic impossibility of Lindeman's (1965) identification of the Greek future suffix as **-(h$_1$)sye/o-* has been pointed out by Hollifield (1981, 165-7), the Indic *-sya-* future's chances of continuing a PIE **-sye/o-* formation has been somewhat improved by the mostly recent discovery of likely Gaulish desideratives or futures with the same suffix (cf. K. H. Schmidt, 1983, 78; Hollifield, 1983, 97). These are *marcosior* "I want to/ shall ride" (Meid, 1980, 16 and 24), *pissiiumi* "I want to/shall see" (Chamalières, l. 10; see ch. 6, 2), 3sg. *bissiet* (conditional?; ibid., 11) and, a good deal more doubtfully, 3pl. *toncsiiontio* (relative?; ibid., 8), *petidsiont* (Larzac 2 b 9). Since Celtic and Indo-Iranian are the only branches to preserve the undoubtedly PIE reduplicated desiderative (see below), this additional resemblance between them in the desiderative-prospective area is at least suggestive. Accordingly one might envisage a scenario in which a PIE reduplicated zero-grade **-(h)se/o-* desiderative and unreduplicated full-grade **-(h)sye/o-* prospective or future survived more or less intact into Indo-Iranian and Celtic. Subsequent generalization of the former in Insular Celtic or Goedelic will then have produced the OIr. fut., whereas the latter became a general desid./fut. in Gaulish or Continental Celtic.

However, there are difficulties. Firstly, if **-sye/o-* could be generally suffixed to finite verbs it PIE, it most probably formed some sort of future, but in that case the widespread loss or replacement of so clearly characterised and useful a category in the daughter languages is rather surprising (see Strunk, 1968, 298-306, on the lack of convincing evidence for a separate PIE future). Secondly, there is a formal discrepancy. Whereas the Indo-Iranian formation typically has full grade of the root, the one probable Gaulish example involving a normal primary verb shows zero grade *pis-* rather than full grade **pēs-* of the root **k^{w}e(e)is* "see". However, if *bissiet* is from non-ablauting **bu-* "be(come)", its vocalism could have been adapted to that of pres. **b(w)i-(ye-)* (see ch. 6, 3), thus establishing a pattern spread to other verbs. If so, it might have

replaced a **bū-sye-* comparable with the stem seen in the fut. participles Av. *būšiiant-* (OInd. *bhaviṣya-* with innovatory full grade), Lith. *būsiant-* and OCS. *byšǫšt-* "about to be" (cf. Schulze, 1904 = *Kl. Schr.*, 107; Jasanoff, 1975, 97).

Given the coexistence of **-e/o-* and **-ye/o-* as present suffixes, one could significantly modify Poultney's theory (see 2 above) to generate a new specifically future **-sye/o-* independently in two or even three IE branches (cf. Rix, 1976, 225) from an inherited aor. subj. **-se/o-* with future connotations (cf. Strunk, ibid., 304). Such a process would be even easier to motivate if **-sy(e/)o-* already had a marginal existence in the parent language itself. In the light of the above correspondences, one possibility might be that **b^huh*'s anomalous behaviour extended to the formation of a unique *-syé/ó-* desiderative, and another that PIE had developed a non-finite **-syónt-* that eventually gravitated as a 'suppletive' participle to finite reduplicated desideratives. We could then posit an Indo-Iranian skew responsible for new reduplicated desiderative participles and finite *-sya-* forms (> futures) according to the first scenario but proceding from **$b^hūšya$-ti* "will/wishes to be" vs. **ninī-šati* "will/wishes to lead" etc. to new byforms **$b^hib^hū$-šati* (OInd. *búbhūṣati*), **na(y?)i-šyati* (Av. *naēšiia-*, OInd. *neṣyáti*) etc. according to the second.

The participial alternative also suggested by G. Schmidt (1986, 54) would be the more convenient for Balto-Slavic, especially Baltic. It would also tie in quite nicely not only with Puhvel's comment that "what is known as the Indo-Iranian future is exceedingly rare in the Rig-Veda (17 finite forms and about thirty participles from fifteen different roots, mostly in the more recent mandalas)" (1960, 47) but also with Kellens' observation that in Avestan too "le participe est beaucoup mieux attesté" (1984, 162). If Hom. κείε/ο- "will lie" really is an isolated Gk. vestige of desid. **key-$h_1$sye/o-* (cf. OInd. fut. part. *śayiṣyánt-*), as suggested by Hollifield (1981, 173-85), its finite forms could presumably have been extrapolated from the well attested participle κείοντ-. Be that as it may, the upshot of these tentative speculations is that there is no compelling reason to posit a finite PIE **-sye/o-* desiderative or future.

G. Schmidt (1986, 43) sees a reflex of H in the Latin fut. perfect *leg-er-o* etc. and takes Italic ipf. subj. **-es-e-* as a secondary subjunctivization of this formation, whereas the Osco-Umbrian *-es-t* fut. is based upon B. The 'contract' Greek futures such as μενεῖ are also derived from this **-ese/o-* formation rather than **-$h_1$se/o-*: "wegen ital. **-es-* liegt im griech. Fut. Att. auf -έω vielmehr idg. **-es-* vor, soweit es sich nicht um Set-Wurzeln auf idg. **-H_1-* handelt" (ibid., 47). However, this can hardly be

accepted in the absence of any explanation for the distribution of **-es-* vs. **-s-* in the Greek futures, while the Latin data offer only indirect support for a correspondingly speculative PIE 'futuroid' with (full-grade?) root plus *-ese/o-* Moreover, if this formation was a thematization of B with assumed proterokinetic inflection and strong stem CéRC-*s-* vs. weak CR̥C-*és-*, as Schmidt seems to believe, the combination of the former's radical with the latter's suffixal full grade is rather puzzling. The Greek futures can be otherwise explained, as pointed out above, while the Italic formations adduced look like relatively late innovations geared to the restructuring of the verbal system there and are anyway quite insufficient to bear the weighty inferences Schmidt draws from them.

Where not due to more fundamental implausibility, the failure of the claimants reviewed so far to pass muster has been caused by a lack of the unambiguous and circumstantial morphological correspondences needed to compensate for the limited distribution of the supposed cognates in any given instance. Characterised as it would seem to have been by a quite distinctive and directly attested combination of *i*-reduplication, zero-grade root, **-(h)se/o-* suffix and primary endings, our final Indo-Iranian and Old Irish aspirant (G^1 or G^2) to the PIE desiderative title looks a good deal more promising in this respect than its rivals.

4. Zimmer's (1890, 127-8) formally satisfying genetic comparison of the reduplicated OIr. *s*-future with the similarly formed OInd. *-sa-* desideratives was rejected by Pedersen in favour of a hopelessly vague alternative then fancifully, if tentatively, extended to the OIr. *a*-future: "wahrscheinlicher ist es, daß wir es mit einer Konjunktivbildung des Perfekts zu tun haben; das *-s*-Futurum ist dann mit dem lat. Futurum exactum (*tutudero*, *pepulero*) verwandt, und es wäre vielleicht zu erwägen, ob nicht das lat. *-ā-:-ē*-Futurum trotz der fehlenden (geschwundenen?) Reduplikation und dem (sekundären?) Anschluß an den Präsensstamm mit dem keltischen *-ā-:-ē*-Futurum zusammenhängt" (*VKG* II 365).

With regard to the eastern end of things, Leumann (1952, 44-5) based a rejection of PIE origins upon the Indo-Iranian desiderative's lack of homgeneity, as witnessed (1) by full or zero grade of a long-vowel (i. e. laryngeal-) root like *pā-* in *pipāsati* or *pipīṣati* "wishes to drink", (2) by shwa (i. e. laryngeal) incrementation of roots with final *i,u,r* in *jigīṣati* "wishes to conquer" (*ji-*), *cikīrṣati* "wishes to make" (*kṛ-*) etc. but normal zero grade in those with a final stop such as *bibhitsati* "wishes to split" (*bhid-*) or *didṛkṣati* "wishes to see" (*dṛś-*), and (3) by a full-grade type *pipatiṣati* (AV) "wishes to fly" (*pat-*), *jigamiṣati* (TS) "wishes to come" (*gam-*) etc.

contrasting with an unreduplicated type with *i* for *a* characteristic of stop-final roots, e. g. *pitsati* (*pat-*), *śikṣati* "wishes to be able" (*śak-*) or *dipsati* "wishes to harm" (*dabh-*). Av. *zixšnāŋha-* (OInd. *jijñāsa-* "wish to know"), *jījiša-* (OInd. *jigīṣati*), *susrūša-* (OInd. *śuśrūṣati* "wishes to hear"), *diβža-* (OInd. *dipsati*), *sixša-* (OInd. *śikṣati*) pushed the reduplicated CiCReH-*sa-*, CiCR(H)-*sa-* and CiT-*sa-* variants at least back as far as Indo-Iranian, but hardly any further: "diese Desiderativbildung ist nach der ganzen Art ihres Auftretens eine Neuerung des Indo-Iranischen" (ibid.).

Despite formal similarities, the Old Irish reduplicated *s*-future was then dismissed as a valid comparandum on account of a lack of precise individual correspondences ("Wortgleichungen") and a difference of function (ibid., 45). Finally, the shwa increment of aniṭ roots was plausibly ascribed to the model of seṭ roots within Indo-Iranian (ibid., 47). For Strunk (1968, 305, n. 51) the typical Indo-Iranian desiderative's double characterization by reduplication as well as *s*-formans spoke against great antiquity. Noting a residue of OIr. unreduplicated *s*-futures (see 8 below), Meid (1977, 121) also expressed some doubt as to whether the reduplicated desid./fut. of Indo-Iranian and Old Irish really went back to a similar PIE prototype, and Szemerényi (1989, 309-10) saw an indication of the relatively recent creation of most Old Irish strong futures in their synchronic status as reduplicated or (formerly reduplicated) long-vowel counterparts of the *s*- and *a*-subjunctives.

However, none of these negative appraisals can gainsay the semantic compatibility and circumstantial morphological agreement of the Indo-Iranian and Old Irish formations with each other. These "complex equations in morphophonemics" were duly emphasised by Watkins (1966b, 76, n. 1) in support of a modest claim for "at least predisposition" towards a reduplicated desiderative in PIE (ibid., 80). Brugmann was more emphatic, remarking that their cognate status as descendants from a similar PIE protoype "kann kaum bezweifelt werden bei der dreifachen Übereinstimmung in der *i*-Reduplikation, dem *s*-Formans und der auf die Zukunft gehenden (voluntativen) Bedeutung" (1916, 344). Güntert (1912, 133-4) added some Old Irish evidence for an original zero grade of the root as in Indo-Iranian. Thurneysen maintained for reasons similar to Brugmann's that "die Bildungen - Reduplikation mit *i* und *s*-Erweiterung des im wesentlichen thematisch flektierenden Stammes - stehen sich zu nahe" (1920, 144), and further pointed out (ibid.) that the apparently athematic 3sg. of the OIr. redup. *s*-fut. was no more problematical than in the originally thematic *s*-subj., where it was due to analogy with the *s*-pret. There followed the vital new observation (ibid., 145-6) that the hitherto problematical Old Irish reduplicated *a*-future could be neatly explained by means of the normal **-se/o-* suffix preceded by the shwa (= laryngeal) increment postulated by Schulze on the basis of the Indo-Iranian and Greek desideratives or futures to roots with final resonant.

Thurneysen's later summary (*GOI* 414-5) of the main arguments for equating the Old Irish strong future with the Indo-Iranian reduplicated desiderative may be partly restated and partly quoted as follows.

(1) OIr. long-vowel futures reflect either the regular outcome (e. g. *-céla* "will hide" < **cechla-* < **kiklā-*) or analogical replacement (e. g. subj. *-cela* : fut. *-céla* = subj. *-bera* : fut. *x* [*x* = *-béra* "will bear" instead of **-bebra* < **bibrā-*]) of originally reduplicated formations.

(2) In CeRT roots there seems to be complete agreement in structure (Ci-CRT-*se/o-*) between, say, OInd. 3sg. *bi-bhit-sa-ti* "will split" and OIr. 3pl. *fo:lilsat* "will endure" < **li-lux-so-nt(i)* vs. subj. *fo:lósat* < full-grade **lewx-so-nt(i)*.

(3) In CERH and CER roots this agreement seems to extend even to the non-radical laryngeal reflex displayed by the latter in Indo-Iranian (see above), e. g. 3sg. *lilith* "will cling" < **li-lī-se-ti(-)* < **li-lih₂-se/o-* (seṭ **(h₂)leyh₂*; see ch. 1, 1) and the arguable 'Wortgleichung' OInd. *jighāṃsati* = OIr. *génaid* "will kill" (< **gignāse-ti*) < **gʷʰi-gʷʰn̥-h-se-ti* (aniṭ **gʷʰen*). Crucially, "the loss of *s* and the contraction of *a* with a following vowel must have given rise to many forms which had the same endings as the *a*-subjunctive; and this in turn led to the entire flexion being levelled under that of the *a*-subjunctive" (ibid.).

(4) "Assuming that weakening of the root was the rule originally, there are nevertheless several Irish forms which clearly show an unweakened root; e. g. *fo:cicherr*.., theoretically < **kikerd-s-t-*, not **kikṛd-s-t-*; *-gignethar*.. < **gigena*.., not **gignā-*. Similar instances are also found in Sanskrit, e. g. the form *jijaniṣate* itself. But it is quite possible that all such forms have developed independently in each language; e. g. *-cicherr*, *-gignethar* by analogy with subjunctive *-cerr*, *-genathar*, where the normal grade of the root is regular" (ibid., 415).

(5) "To this originally uniform future formation the only exceptions (besides *rega-*..) are the six verbs... which have no reduplication. They correspond in their thematic forms to the Greek future; cp. *ress-* and Gk. ὀρέξω, *less-* and λέξομαι, also Lat. *faxo*" (ibid.).

The structural correspondences are indeed striking, but problems still remain. Of these a desiderative > future semantic shift that any speaker of English will willingly accept is quite trivial. So too is the discrepancy

between reduplication of C*ew*(C) roots by *i* in Old Irish *-cechladar* "will hear" < **ki-xlow-ā-por* (< **ki-kluw-ăse-tor* in place of **kiklŭ-se-tor*; see end of 6 below) but *u* in Old Indic *śuśrūṣate* etc. The latter was a productive reduplicative pattern in Indo-Iranian, and the Avestan desid. stem *cixšnuša-* (*xšnu-* "satisfy") beside *susrūša-* (*sru-* "hear") looks like a precious relic of once general Indo-Iranian *i*-reduplication in agreement with the Celtic evidence (cf. Kellens, 1984, 196). That being so, a PIE precursor of the Indo-Iranian and Old Irish forms just quoted will have been **ki-klu-(h)se/o-*.

Furthermore, the OIr. *s*-future's at first sight athematic 3sg. must once have been thematic on account of the futures of guttural-final roots. As a preform like **li-lux-s-t(i)* would have resulted in a perfectly viable *t*-fut. **(fo)-lilucht* etc. (see ch. 4, 7), the **li-luss* underlying actually attested *fo:lil* "will endure" can only be satisfactorily explained as an analogical replacement of **li-luss-et* < **li-lux-se-t(i)*, the latter then structurally parallel to the indubitably thematic *a*-fut. type *bebaid* "will die" < **bibă-se-ti(-)* < **g^{w}i-g^{w}h$_2$-se-ti* as expected (see ch. 5, 6). The argument here is essentially the same as that advanced earlier in the case of the *s*-subj. (see ch. 4, 8-9). Indeed, the latter's acquisition of a new 3sg. with 'zero-ending' alongside *-e/o-* in the rest of the paradigm provides the obvious trigger for a similar remodelling of the adjacent desid./fut., e. g. subj. 3pl. **lōss-ont(i)* : 3sg. **lōss(-i)* = desid./fut. 3pl. **liluss-ont(i)* : 3sg. *x* (*x* = **liluss(-i)*). In this way all the prehistoric Irish *s*-formations developed a conveniently homogeneous inflectional pattern.

More serious difficulties are presented by the forms with a full grade of the root, which Zimmer (1890, 128) seems to have erroneously considered the normal inherited type in both OIr. and OInd. A good reason has yet to be produced to explain why the full-grade subj. normally correlating with a redup. fut. should have influenced the latter's vocalism in a few cases only but had no such effect under the virtually identical conditions obtaining in many more. Furthermore, the half dozen unreduplicated sigmatic exceptions to the otherwise uniform actual or erstwhile reduplicated pattern of OIr. strong futures prompt the question as to how a different formation came or continued to characterise this small group of verbs with basically C*e*T root shape in isolation.

However, by far the greatest problem is constitued by the postulate of a shwa or, in modern parlance, laryngeal increment of CER roots in the PIE thematic future(s) and/or desiderative(s). Schulze (1904 = *Kl. Schr.*, 101-5) first propounded this theory on the strength of the Gk. future type (Hom. 3pl.) μενέουσι "will remain" (anit *men-*) < (in modern notation)

**men-h$_1$so-nti*, OInd. futures (3sg.) like *bhariṣyáti* "will bear" (anit *bhṛ-*) < **b^{h}er-hsye-ti* and desideratives like *búbhūrṣati* "wishes to bear" < **b^{h}ib^{h}ṛ-hse-ti*. An obvious weakness of this hypothesis was its dependence upon three semantically similar but morphologically diverse formations, each with only a single witness to the incrementation of a root-final resonant by shwa. However, this was changed by Thurneysen's (1920, 145; point 3 above) demonstration that an OIr. *a*-fut. like *-béra* "will bear" could be traced back via **bibrāse-ti* to **b^{h}ib^{h}ṛ-hse-ti*, thus manifesting the same structure with incremental laryngeal. Since then this remarkable correspondence between the sole widely separated witnesses to the reduplicated desiderative has generally been regarded as conclusive by those prepared to recognise such a category, whether with thematic or athematic inflection, in PIE. In Rix's judicious formulation, "hinter Wurzeln auf Resonant erscheint in beiden Sprachen gleicherweise der Reflex eines Laryngals, der also mindestens in Ansätzen schon grundsprachlich gewesen sein muss" (1977, 147; cf. Hollifield, 1981; Kortlandt, 1984; McCone, 1986, 248-9).

Neither the Old Irish nor the Indo-Iranian formations in question enable the non-integral laryngeal to be specified, but the Greek CER futures with *-e-* demand *h$_1$*. Consequently theories denying the latter's roots in a PIE full-grade desiderative (e. g. Rasmussen, 1985, 388-90; McCone, 1986, 248-59) need not, indeed cannot, go beyond reconstructions such as C*i*CṚ-*hse/o-* and/or C*e*R-*hsyé/ó-* (vs. C*i*CṚC-*se/o-* and/or C*e*RC-*syé/ó-*). However, standard current laryngeal theory combined with recognition of a PIE full-grade type with direct Greek reflexes can only imply C*é*R-*h$_1$se/o-* (vs. C*é*RC-*se/o-*) and, if recognising one or both of the other types as PIE too, further entail C*i*CṚ-*h$_1$se/o-* and/or C*e*R-*h$_1$syé/ó-*. This is precisely the conclusion drawn by Hollifield: "in Indo-European the basic future-desiderative morpheme *-s-*, alone or as part of a complex suffix, had the allomorph *-ə$_1$s-* after a resonant or glide" (1981, 166; cf. Rix, 1977, 153).

Accounting for this extraordinary total or partial neutralization of CERH and CER reflexes in favour of the former in this one area of PIE verbal morphology has proved quite a different matter. While insisting that the phenomenon was old, Schulze candidly confessed himself baffled: "diese Verlängerung gewisser Wurzeln vor dem *s* des Futurums und des Desiderativums, deren Gründe ich nicht weiter aufzuhellen vermag, ist natürlich älter als die Hauptmasse der Akzentwirkungen, die wir unter dem Namen des Ablauts zusammenfassen, reicht also tief in die indogermanische Urzeit hinein" (1904 = *Kl. Schr.*, 105). Writing just

before Thurneysen's observation on the OIr. redup. *a*-fut. was published, Brugmann took the generalization of set reflexes to be PIE in the full-grade **-se/o-* and **-sye/o-* types without further explanation (1916, 384-6) but limited a similar transfer in the reduplicated type to Proto-Indo-Iranian (ibid., 344). Regarding the latter, the present writer noted in a similarly vague vein that "perhaps the most circumstantial correspondence of all is seen in the Sanskrit and Old Irish reflexes of a peculiar zero grade CR̥ < CRH of CER as well as CERH roots, where it presumably originated and whence it presumably spread to CER structures" (McCone, 1986, 248-9). Thurneysen, Rix and others maintain a discreet silence, but Hollifield uses inexplicability as an argument for remarkable antiquity: "since no explanation can be given for the alternation of *-s-* and *-ə₁s-*, it is likely to have been quite ancient already in the time of Proto-Indo-European. The morpheme *-s-* (*/-ə₁s-/*) is probably a remnant of the inflectional system of the verb thousands of years before Proto-Indo-European" (1981, 181, n. 31).

If the laryngeal incrementation of specifically CER desideratives and/or futures was already a feature of PIE, the only imaginable source seems to be a resegmentation of corresponding CERH formations as *CiCR̥-Hse/o-* and/or *CeR-Hs(y)e/o-* instead of original *CiCR̥H-se/o-*, *CeRH-s(y)e/o-* respectively. Such a development presupposes loss of laryngeals in certain positions, e. g. before vowels, to generate the requisite measure of confusion between the two types, e. g. in thematic presents or subjunctives. However, this precondition, which could only have been met after the separation of the precursor of Anatolian, seems a doubtful proposition for late Proto-Indo-European (cf. Adams, 1988, 15). In any case the necessary analogy remains hard to motivate as long as laryngeals were retained as separate segments between a sonant and a consonant, as they certainly were down to late PIE and beyond. Thus, even if CER and CERH roots had developed convergent CER-V-forms through laryngeal loss, pressure to resegment, say, *CiCR̥H-se/o-* would still be countered not only by the obvious demarcation of the suffix seen in the *CeRC* roots' *CiCR̥C-se/o-* but also by laryngeal retentive categories such as verbal adjective *CR̥H-tó-* vs. *CR̥-tó-*.

These almost insuperable problems are made even worse if the relevance of the Greek futures is insisted upon, since it then becomes necessary to specify h_1 as the laryngeal increment spread to CER from CERH formations, where it was realized as h_1, h_2 or h_3 according to the root consonant. Even if a late PIE resegmentation could be made to work, one would be hard put to explain why **-h₁s(y)e/o-* should have been preferred

not only to **-h₃s(y)e/o-* but also to the **-h₂s(y)e/o-* arising from resegmentation of the far commoner CERh_2 roots. Since it appears that h_1, unlike h_2 and probably h_3 (see now Melchert, 1987), was generally lost in Anatolian, it might be supposed that a similar difference of treatment in some positions at least in PIE made CER(h_1) roots the only source of a resegmented **-h₁se/o-* capable of spreading to CER roots. However, even if these highly speculative *ad hoc* premises are granted, there is, as G. Schmidt rightly observes (1986, 46-7), no motivation for a quite infrequent **-h₁se/o-* becoming productive in the face of overwhelmingly preponderant *CeRh₂₃-s(y)e/o-*, *Ce(R)T-s(y)e/o-*, *CeR-s(y)e/o-* and so on *mutatis mutandis* for the reduplicated type.

In short, the idea that an original desiderative or future suffix **-s(y)e/o-* somehow developed a post-resonant variant **-hs(y)e/o-* or perhaps specifically **-h₁s(y)e/o-* in the parent language rests upon a tissue of improbabilities or worse. Small wonder that some scholars have argued that **-h₁s(y)e/o-* or **-hs(y)e/o-* was actually the oldest form of the suffix(es) in question.

The pioneer here, Puhvel (1960, 41-52), objected to Kuryłowicz's (1956, 253-4) otherwise tenable view (cf. Leumann above) that within Indo-Iranian "the set features had been generalised from set roots proper, in other words, *jighāṅsati* contains an analogical adjustment to, e. g., *titīrṣati*, in place of the primitive type" on the strength of "Celtic, which presents future formations of such compelling similarity to the Indo-Iranian desideratives that the whole problem is transported to a wider level" (ibid., 43). Since the presumed CER root reflexes of *CiCR̥Hse/o-* could not be explained as a Proto-Celtic or prehistoric Irish innovation (see 5 below), "we must conclude that the seemingly perfect concordance of, e. g., OIr. *génaid* : Ved. *jighāṅsati* should be projected back to Indo-European" (ibid., 45). The by now familiar equation of the handful of OIr. unreduplicated *s*-futures with the Gk. δείξω and μενέω types led Puhvel to posit a basic desiderative suffix **-h₁s-* for both formations that might be considered a zero grade of **h₁es* "be" (ibid., 45-6 and 51-2).

However, the poles are thereby merely reversed. General reflexes of **-h₁se/o-* after sonants are no longer a problem, but we now lack an explanation for loss of the laryngeal after stops in the *Ce(R)T-s(y)e/o-* and *CiC(R̥)T-se/o-* types. Puhvel seeks to explain the Greek distribution as follows (note his E and A = h_1, h_2 in more usual notation): "especially next to a nonsyllabic semivowel *H* shows a tendency to leave vocalic reflexes in Greek (witness the 'prothetic' vowel). Thus one should consider the

possibility that in Proto-Greek there existed here an environmental variation *-s-*:*-es-* (*-ə₁s-*, pointing to **-Es-*), reflected in, e. g., πείσομαι < **kʷendh-Es-*, πεσέομαι < **petḛ-Es-*, ἐμέ(σ)ω < **wemḛ-Es-*, περά(σ)ω < **perᾰ-Es-*" (1960, 46). Problematical even in relation to the Greek evidence, this approach leaves the crucial Celtic and Indo-Iranian data unexplained.

In order to cover the two or three branches involved effectively, the conditions determining the proposed deletion of *h* between stop or other laryngeal and *s* need to be at least rooted in PIE. Accordingly Rasmussen (1985, 388-9) derives *CiC*(R̥)T-*se/o-* from *CiC*(R̥)T-*hse/o-* by means of a rule that reduplication somehow impeded the laryngeal's vocalization and so brought about its later loss between non-syllabic segments. Since this formulation excludes a change of full-grade unreduplicated *Ce*(R)T-*h₁se/o-* to *Ce*(R)T-*se/o-* (cf. G. Schmidt, 1986, 53), it is concluded that this desiderative type did not exist in the parent language. Rasmussen (ibid., 396) resolves the problem of *Ce*RT-*sye/o-* by making it a probably post-PIE derivative of his athematic amphikinetic *s*-'prospective' without post-resonant laryngeal insert (see 2 above and ch. 4, 1).

Kuiper (1961) restricted his doctrine of a peculiar laryngeal loss caused by composition or reduplication to Old Indic, Beekes (1969, 242-5) then raising the possibility of PIE origin. Rix (1969, 186) voiced considerable scepticism and it must be said that, at least as far as reduplication is concerned, such a postulate for PIE creates far more problems than it purports to solve. Be that as it may, Rasmussen's view that reduplication ultimately caused loss of a laryngeal only when it was not preceded by a syllabic sonant entails a quite arbitrary new restriction on the rule, particularly since it can only apply to a laryngeal in the suffix and not the root if it is to avoid flat contradiction by forms like OInd. *jigīṣati* "wishes to go" (see 5 below on desid. *i* > *ī* in Indo-Iranian) and cognate OIr. *bebaid* "will die" (lit. "go, pass away") < **bibăseti*, both < **gʷi-gʷh₂-(h)se-ti*.

It thus appears that the allomorphy between -T-*s-* and -R-*hs-* central to most PIE desiderative/future reconstructions since Schulze's contribution utterly defies plausible explanation. The overwhelming difficulties associated with the post-resonant laryngeal inevitably pose a single urgent question: can the PIE desiderative be rid of this troublesome insert, which cannot be due to analogy and can be cogently assigned to neither root nor suffix?

5. To begin with, even in the doubtful event that PIE had a future or desiderative suffix **-(h)sye/o-*, evidence for a non-radical laryngeal after resonants is confined to Old Indic. The Avestan forms like *sraēšiia-* (OInd. *śrayiṣyati* "wishes to resort") are ambiguous because of the loss of interconsonantal laryngeals without trace in Iranian medial syllables (cf. Kuryłowicz, 1956, 254), as in Av. *zą-hiia-* but OInd. *jani-ṣyáti* "will beget" < **ĝenh₁-(h)sye/o-* (see Kellens, 1984, 160-2). Consequently this feature may or may not be as old as Indo-Iranian, but certainly does not have to be projected any further back. There is no trace in the sometimes alleged Celtic or Baltic comparanda and, if it really does belong here, Greek χειε/ο- is perfectly compatible with **ḱey-sye/o-*.

Only Greek offers potential support for a presuffixal or suffixal laryngeal after resonants in the particularly suspect unreduplicated full-grade **-(h₁)se/o-* desiderative. However, it has just been seen that recognition of this type as PIE makes it quite impossible to account for the extra laryngeal, regardless of whether **-se/o-* or **-h₁se/o-* is the starting point. In view of this intractable problem and the availability of an alternative derivation from a normal thematic *s*-aorist subjunctive, the existence of such a desiderative would be highly questionable even if an allomorphous PIE suffix **-(h)se/o-* could be established beyond reasonable doubt for the reduplicated zero-grade formation. Should the latter hypothesis prove less than compelling, the case for PIE desiderative *CéR-h₁se/o-* and *Cé*(R)T/H-*se/o-* would collapse, no reprieve being available from a PIE *CéR-se/o-* incapable of directly yielding the Greek futures at the heart of this reconstruction.

Everything, then, seems to hinge on the Old Irish and Indo-Iranian evidence for reduplicated *Ci-*CR̥-*hse/o-* vs. *Ci-*CR̥T-*se/o-* and so on. Confining himself to the Indo-Iranian and Greek forms, Kuryłowicz ascribed the apparent shwa reflexes to well motivated post-PIE developments in both branches independently: "il est erroné d'attribuer à la langue-mère un suffixe à valeur désidérative *-əs(i)o-*. C'est ce que fait M. J. Puhvel (*Laryngeals and the I.-E. Desiderative*, Language XXIX, 1953, p. 454 sq.). L'élément ə, tout comme la voyelle de grec *-e(s)sa* ou *-é(s)o*, a été dégagé de la racine verbale précédente. Sa généralisation est un simple conséquence de la disparation de ə antévocalique (surtout au présent en *-e/o-*) et de la loi d'implication (évincement d'un suffixe par voyelle "de liaison" + suffixe)" (1956, 254). Leumann (1952, 47) similarly posited an Indo-Iranian remodelling of aniṭ (CER) to originally seṭ (CERH) patterns in the Indo-Iranian desiderative.

Although Avestan spelling fluctuations leave at least some room for doubt (Kuryłowicz, ibid.), the balance of probability favours an Indo-Iranian date for this homogenization, e. g. *dīdarəša-* (aniṭ *dar* "hold") =

OInd. *didhīrṣa-* < common **dʰi-dʰr̥šа-*, *susrūša-* (aniṭ *sru* "hear") = OInd. *śuśrūṣa-* apparently < common **ćućrūša-* (see Kellens, 1984, 196-8). Because of a probable early reduction of fut. **-ayəs-* > **-ais-* (cf. Schulze, 1904 = *Kl. Schr.* 105), *i*-roots offer a promising starting point, e. g. (using OInd. forms for convenience) seṭ fut. *neṣya-* : desid. *ninīṣa-* = aniṭ fut. *jeṣya-* : desid. *x* (*x* = *jigīṣa-*). Once established here, this characteristic desiderative lengthening could easily be generalised to other root-final syllabics, whence *śuśrūṣa-* corresponding to fut. *śroṣya-*, *didhīrṣa-* to **dharṣya-*, *bubhūrṣa-* (< **bʰibʰr̥šа-*) to **bharṣya-* (aniṭ *bhṛ* "bear"), *cikīrṣa-* (< **ćikr̥šа-*) to **karṣya-* (aniṭ *kṛ* "do"), and *jighāṁsa-*, *jigāṁsa-*, *mimāṁsa-* to *haṁsya-*, **gaṁsya-*, *maṁsya-* (aniṭ *han* "smite", *gam* "come", *man* "think") vs. old seṭ *siṣāsa-*, *vivāsa-* (*san* "gain", *van* "win") = Av. *išāŋha-*, *viuuāngha-* < **si-sn̥h-se/o-*, **wi-wn̥h-se/o-* correlating with fut. *saniṣya-*, *vaniṣya-*.

As pointed out, by G. Schmidt (1986, 47-8), the last group is instructive because the old CENH roots display regular C*i*-C*ā*-*sa-* < C*i*-CN̥H-*se/o-* corresponding to equally regular fut. C*a*N*i*-*ṣya-* < C*e*NH-, whereas the old CEN roots have an analogical C*i*-C*ā*-N-*sa-* (cf. Macdonell, 1916, 199). Insler's (1968, 62) hypothesis of original C*i*-C*ā*N-*sa-* throughout and remodelling to *siṣāsa-*, *vivāsa-* from vbal. adj. *sātá-*, *vātá-* < **sn̥h-tó-*, **wn̥h-tó-* involves the uneconomical assumption of, say, **si-sn̥h-se/o-* > **si-šā-sa-*, analogically remodelled first to **si-šān-sa-* and then back to **si-šā-sa-*. It also begs the question as to why, say, vbal. adj. *ga-tá-* < **gʷm̥-tó-* did not have a similar denasalising effect upon *ji-gāṁ-sa-*. The distribution of the two types is, then, very hard to justify if the CEN verbs had inherited precisely parallel C*i*-C*ā*-*sa-* < C*i*-CN̥-*hse/o-* and C*a*N-*iṣya-* with reflexes of a PIE laryngeal increment. However, this discrepancy presents no difficulty if they had inherited plain aniṭ C*i*-C*a*-*sa-* < C*i*-CN̥-*se/o-* and then remodelled it in the normal way under the combined influence of the lengthening principle and an old aniṭ future stem C*a*N-*sya-*, leaving old C*i*-C*ā*-*sa-* < C*i*-CN̥*h*-*se/o-* with its already lengthened vowel unaltered.

Indeed, if we posit a Proto-Indo-Iranian stage at which N̥*h* had already become *ā* but N̥ had not yet become *a*, Ñ in, say, **ji-gñ-sa-ti* secondarily lengthened from **ji-gm̥-sa-ti* might regularly have become *ā*N to give OInd. *ji-gāṁ-sa-ti* and so on. As G. Schmidt puts it, "wenn man aber *-ān-* (*-ām-*) vor Konsonant hat, muß das auch auf **-ñ̄-* (**-ñ̥-*) zurückgehen: Die älteren **-ñ̄-*, evtl. **-ñ̥-* (nennen wir sie die "primären") sind in gemeinsamer indoiran. Entwicklung zu *-ā-* geworden, die jüngeren ("sekundären") später zu ai. *-ān-* (*-ām-*) . . .. Die Aniṭ-Wurzeln sind also vor dem Desid.-Suffix erst sekundär seṭ geworden als urind.,

höchstens indoiran. Neuerung, die mit einem idg. **-Hs-*, das man im Air. und Griech. zu finden glaubt, nichts zu tun haben kann" (1986, 48).

The wheel came full circle when the homogeneous pattern established in the desiderative triggered the widespread replacement of old aniṭ by new seṭ futures, quite likely in Indic only, whence actually attested *dharišya-*, *bharišya-*, *karišya-*, *hanišya-*, *gamišya-* corresponding to the reconstructions or byforms above. Since their later attestation make aniṭ *haṁsya-*, *maṁsya-* above secondary in relation to *hanišya-*, *manišya-*, even *śroṣya-* may well have replaced a still older **śraviṣya-*. This, however, does no affect the argument for at least an early Indo-Iranian dichotomy between aniṭ C*a*R-*sya-* and seṭ C*a*R*ə*-*sya-* futures.

Overall, then, there seems to be no serious obstacle to accounting for this generalization of CERH reflexes in the reduplicated *-sa-* desiderative and unreduplicated *-syá-* future as an innovation of Indo-Iranian and/or Old Indic. Indeed, desid. *jighāṁ-sati* "wishes to smite", *jigāṁ-sati* "wishes to come" and *mimāṁ-sate* "wishes to think" seem to provide positive grounds for such a thesis insofar as the only obvious explanation for them presupposes PIE preforms **gʷʰi-gʷʰn̥-se-ti* **gʷi-gʷm̥-se-ti*, **mi-mn̥-se-tor* without non-radical laryngeal insert. The next question is whether the generalised CERH reflexes underlying the cognate Old Irish *a*-futures can also be plausibly accounted for as a Celtic innovation. If so, the assumption of well motivated and roughly parallel developments in Indo-Iranian/Indic and Celtic/Goedelic independently will offer a highly desirable avenue of escape from the imponderables associated with C*i*CR̥H*se/o-* for CER as well as CERH roots in PIE. If not, we will be forced to accept that this was the pattern contrasting with C*i*CR̥T*se/o-* in the parent language, however inexplicable such a distribution may be.

6. Puhvel was prepared to ascribe the apparent desiderative/future reflexes of (C*i*-C)R̥-*hs-* to independent innovations in Indo-Iranian and Old Irish, if a plausible model similar to the one sketched by Kurylowicz above for the former could be made to work for the latter too: "if we project the Old Irish strong futures back to Proto-Celtic, the possibility of a **gignāseti* replacing **gigṇseti* is worth considering. At this point one might conjecture subjunctival interference of a different type, not involving endings but stems, the proportion subj. **(p)er-ā-* : fut. **(p)iprā-s-* leading to, e. g., **gen-ā-* : **gignā-s-* instead of **gigṇ-s-* or **gigen-s-* with secondary full grade. . .. But the analogy of the *-s-* futures and *-s-* subjunctives. . . rather contradicts such an assumption. There is no likelihood that any influence of the *-ā-* subjunctive on the future

extended further back than the lenitional loss of *-s-* in the future and the consequent assimilation of its endings to those of the of the subjunctive in pre-Old Irish. Only then did the proportion redupl. *-s-* future : nonredupl. *-s-* subjunctive : nonredupl. *-s-* future (*les-*) come to match, e. g. *ebra-* : *-era*, and make possible a 'future' like *regaid*. However, at that stage a replacement of, e. g., **gigés-* by **gignā-* would be, as one saw, quite out of the question" (1960, 44-5).

G. Schmidt's (1986, 52) claim that **-hs-* is an unnecessary postulate in Old Irish on account of influence from an irreducible *ā*-subj. upon the corresponding futures is vitiated by his failure to supply badly needed further specifics and by the fact that his two best examples for this alleged process (ibid., n. 76), namely the full-grade *-gignethar* "will be born" < **gi-gen-ā-* accomodated to subj. **gen-ā-* and suppletive *-rega* "will go" < Celt. **rig-ā-* < PIE **rĝʰ-ā-*, must be otherwise explained (see 7 and 12 below).

That said, Puhvel's justified objections to such an approach only apply to the opposition of a reduplicated zero-grade desiderative with **-se/o-* suffix to an unreduplicated full-grade subjunctive with irreducible **-ā-* suffix cognate with the main Italic subjunctive formans. As chapter five should have shown, the OIr. *a*-subjunctive's suffix was not irreducible but went back to earlier **-ăse/o-* also underlying the British *h*-subjunctive. Obviously this derivation opens up avenues for formal subj.-fut. interaction that were closed to the traditional one utilised by Puhvel and Schmidt.

In its original form propounded by Rix (see ch. 5, 2), the **-ăse/o-* hypothesis derived the *a*-subjunctives and corresponding futures of Old Irish from full-grade unreduplicated and zero-grade reduplicated desideratives respectively, e. g. CERH subj. *-era* < **perh₂-se-ti*, fut. *-ebra* < **pi-prh₂-se-ti* (pres. *-ern* "gives" < **per-n-h₂-ti*) and CER subj. *-bera* < **bʰer-h₁se-ti*, fut. *-béra* < **bʰi-bʰr̥-hse-ti* (pres. *-beir* "bears" < **bʰer-e-ti*) or subj. *-gona* < **gʷʰen-h₁se-ti*, fut. *-géna* < **gʷʰi-gʷʰn̥-hse-ti* (subj. vocalism secondarily adapted to pres. *-goin* "slays" < **gʷan-e-ti* < **gʷʰn̥-*). Since this theory relies upon an inherited suffixal isomorphism between the unreduplicated and the reduplicated types, it too is unable to dispense with an at least incipient PIE allomorphy between -(R)T/H-*se/o-* and -R-*h₍₁₎se/o-*.

It has already been argued that the unreduplicated full-grade desiderative must give way to an *s*-aorist subjunctive in order to provide an integrated and efficient account of the Celtic *s-*, British *h-* and Old Irish *a*-subjunctives (see 3 above with further references). In a previous argument to this effect (McCone, 1986, 260), presumed PIE laryngeal incre-

mentation of the reduplicated desideratives from CER roots was made the crucial trigger of CeR-*ăse/o-* for CeR-*se/o-* in the corresponding Insular Celtic subjunctives: "the essential formal difference between desiderative and subjunctive thus resides in the shape of the root (vocalism, reduplication), after which the two display an isomorphism indicative of their interdependence. In old CERH roots a similar post-radical isomorphism would apply, as in **gi-gn-āse-tor* (later **gi-gen-..*)/**gen-ase-tor* (OIr. *-gignethar*, *-genathar*: *-gainethar* 'be born', IE **ĝenH₁-*), **di-dm-āse-ti* (later **di-dem-*)/**dem-ase-ti* (later **dam-*; OIr. *did-maid*, *damaid*: *daimid* 'endures', IE **demH₂-*), **bi-bl-āse-ti*/**bel-ase-ti* (OIr. *-béla*, *-bela*: *at:baill* 'dies', IE **gʷelH₁-*), **mi-mr-āse-ti*/ **mer-ase-ti* (OIr. *méraid*, *meraid*: *marnaid* 'betrays', IE **merH₂-*. . .). In the foregoing examples and some others both desiderative and subjunctive have regularly developed presuffixal *-ā-* (CiCR̥H-*se-*) and *-a-* respectively, but in old CER roots of essentially the same shape in the synchronic system presuffixal *-ā-* will have arisen regularly in the desiderative (< CiCR̥+H-*se-*) only and not in the (originally aorist) subjunctive (CéR-*se-*). Hence pairs like **ki-kl-āse-ti*/**kel-se-ti* (OIr. *célaid*, *celaid*: *ceilid* 'hides', IE **kel-*), **bi-br-āse-ti*/**ber-se-ti* (OIr. *béraid*, *beraid*: *beirid* 'bears', IE **bher-*), **gʷi-gʷn-āse-ti* (later **gʷi-gʷen-*)/**gʷē-se-ti* (< **gʷen-s-*; OIr. *gign-*, *gonaid* with **gʷan-* for *gʷen-*: pres. *gonaid* 'kills'). The anomalous suffixal imbalance between desiderative and subjunctive in this group could easily be remedied on the model of the closely related previous one to produce the **kel-ase-ti*, **ber-ase-ti*, **gʷen-ase-ti* etc. underlying the Old Irish *a*-subjunctives in question. The outcome would be *-ase-* if **bel-ase-ti* (< **gʷelH₁-se-ti*) etc. had remained unchanged but **-āse-* if the presuffixal vowel had already been lengthened to bring it fully into line with the corresponding desideratives. The basic proportion is, of course, as follows: **bi-bl-āse-ti* : **bel-ăse-ti* = **ki-kl-āse-ti* : *x* (*x* = **kel-ăse-ti*)".

However, in the present study an attempt has been made to show that the essential synchronic identity of the present and preterite CER reflexes of old CERH and CER roots in (Insular?) Celtic could have produced sufficient pressure for adaptation of the latter group's inherited CeR-*se/o-* subjunctive to the CeR-*ase/o-* originating in its larger erstwhile CERH counterpart (see ch. 5, 7). That being so, the generalization of subj. **-ăse/o-* no longer depends upon the influence of inherited laryngeal reflexes in the corresponding reduplicated desideratives/futures of resonant-final roots. We are then free to posit the secondary spread of set reflexes to anit CER roots in the *a*-desid./fut. as well as in the closely related *a*-subj.

To the basic 'set' patterning pres. **mel-e-t(i)*, **ser-na-t(i)* (> OIr. *-meil* "grinds", *-sern* "strews"; PIE roots **melh*, **sterh₃*), *l*-pret. **mil-t(i)*, **sir-t(i)* (> OIr. *-melt*, *-sert*), subj. **mel-ă̄se-t(i)*, **ser-ă̄se-t(i)* (> OIr. *-mela*, *-sera*), desid./fut. **miml-ă̄se-t(i)*, **sisr-ă̄se-t(i)* (~ OIr. *-méla*, *-séra*) there will have corresponded a less common 'aniṭ' type pres. **ber-e-t(i)*, pret. **bir-t(i)*, subj. **ber-re-t(i)* (< **bʰer-se-t(i)*), desid./fut. **bibar-re-t(i)* (< **bʰi-bʰr̥-se-ti*). The pressure exerted by identical pres. and pret. structures to convert morphologically opaque **berre-ti* into synchronically convenient subj. **ber-ă̄se-t(i)* (see ch. 5, 7) could easily have applied eventually to desid./fut. **bibarre-ti* too with its anomalous vocalism and suffixation. Remodelling of the subj. gave rise to an obvious proportion for the well motivated transformation of the semantically close desid./fut., namely **mel-ă̄se-t(i)* : **miml-āse-t(i)* = **ber-ă̄se-t(i)* : *x* (*x* = **bibr-āse-t(i)*). This explanation will cover any old CER root with final liquid, and reconstruction of a subj. **-ă̄se/o-* going back at least as far as Insular Celtic circumvents Puhvel's problem with the suffixal incompatibility between presumed subj. **-ā-* and desid. **-āse/o-*.

The OIr. *i*-future (*EIV* 45-6) is perfectly regular in the old CE*y*H roots mostly or even exclusively concerned, e. g. 3sg. *-riri* "will sell" < **h₂ri-(h₂)rih-se-ti* (see ch. 2, 6, and note that in a case like this C*ī*-C- < HC*i*-HC- was remodelled to synchronically normal C*i*-C-). In the unlikely event that one or two plain CE*y* roots are also involved, C*i*-C*i*-*se/o-* will yield *i*-fut. forms just as well as C*i*C*ī*-*se/o-*, although analogical adaptation of the former to the latter as in Indo-Iranian would also be easy enough to envisage.

7. Whereas the shape of the vast majority of OIr. reduplicated futures either demands or at least does not preclude reconstruction of a zero grade of the root in essential agreement with the oldest Indo-Iranian evidence, full grade appears to be characteristic of the OIr. fut. of CEN(H) roots. The best examples are provided by *-daim* "suffers" (subj. *-dama*), *-laimethar* "dares" (*-lamathar*), *-gainethar* (*-genathar*) with future **didma* < **di-dem-ă̄se-t(i)*, *-lilmatar* (3pl., a necessary and palaeographically straightforward emendation of Ml. 69ᵇ3 *lib matar*; cf. *GOI* 402) < **li-lem-ă̄so-ntor* and *-gignethar* < **-gi-gen-ă̄se-tor*. Absence of lowering of *i* to *e* in the reduplicator contradicts the preforms **di-dam-a-*, **li-lam-a-* proposed by Watkins (1966b, 77).

The future of *-goin* "smites" (subj. *-gona*) constitutes an exception, if *génaid*, *-géna* really can be directly compared with OInd. *jíghāṁsati* "wishes to smite" and so derived < PIE **gʷʰi-gʷʰn̥-hse-ti* as is usually assumed (e. g. *GOI* 414; Puhvel, 1960, 45; Rix, 1977, 147). However, we have already seen reason to doubt the PIE status of the apparent laryngeal reflex in the OInd. form (see 5 above), and there is no obvious reason why *-goin*'s future should lack the *e*-grade structure typical of other similarly shaped roots. Fut. *gén-* occurs only in manuscripts written in or after the Middle Irish period, when the *é*-future's productivity is clear from forms such as *-déma* "will endure", *-lémaither* "will dare", *géntair* "they shall be born" in place of OIr. *-didma*, *-lilmathar*, *gignitir* (*EIV* 243). Consequently such sources scarcely provide trustworthy evidence that the OIr. future of this verb was indeed *gén-*.

The older form may survive in the twelfth-century Book of Leinster text of the rather older saga *Cath Maige Mucrama*, which offers a quite isolated *no-t:gignether* "thou shalt be wounded" (O'Daly, 1975, 42, l. 73). Whereas the shift from *gign-* to productive *gén-* would be understandable enough in Old or Middle Irish, the reverse can only be put down to a hypercorrection of *gén-* "will slay" through scribal awareness that, say, current *-génathar* corresponded to 'correct' OIr. *-gignethar* "will be born". While the latter possibility cannot be ruled out, *-gignether* seems, *pace* Thurneysen (*GOI* 404), more likely to be a stray survival of the oldest formation than a hypercorrect innovation. Even if it is merely hypercorrect and *gén-* had already arisen in Old Irish, it is still quite likely that the latter established itself particularly early (but, of course, after late prehistoric Irish *gʷ* > *g*) in order to resolve an awkward ambiguity between passive **-gignethar* "will be slain" and deponent *-gignethar* "will be born". There is, then, no compelling ground for doubting that the older fut. of *-goin* had the typical CEN(H) root shape **gʷi-gʷen-ă̄se/o-*.

The next question is obviously how roots of this particular shape came to acquire an *e*-grade rather than the standard zero-grade reduplicated desiderative/future. In this connection it seems unlikely to be a coincidence that Proto-Celtic *a*N (including < N̥; see McCone, 1991) regularly became *e*N (phonetically *ɪ*N; see ch. 3, 4) before *s* or a stop in prehistoric Irish, e. g. *géis* "swan" < **gensis* < **gansis* < **gʰans-*. Accordingly, if CER roots lacked an incremental laryngeal in the PIE desiderative, **gʷʰi-gʷʰn̥-se-ti* should have yielded Proto-Celtic **gʷi-gʷan-se-ti* and then prehistoric Irish **gʷi-gʷen-se-t(i)* corresponding to subj. **gʷen-se-t(i)*. Likewise presumably desid./fut. **iy-em-set(i)* "will take" (< **hₓi-hₓm̥-se-ti*), **si-sem-set(i)* "will beget" (< **si-sm̥-se-ti*), **li-lem-setor* "will dare" (< **li-lm̥-se-tor*) vs. subj. **em-set(i)*, **sem-set(i)*, **lem-setor*. Unlike the liquid-final category, then, old CEN roots would have developed identical vocalism in future and subjunctive.

It has already been suggested above that transfer of originally CERH *-ăse/o- to the subjunctive and then desiderative of CER roots probably began where a final *l* or *r* had combined with the *s* of the suffix as *-ll-* or *-rr-*, thus obscuring it. The British *h*-subj. and OIr. subj. *-cana* "may sing" < **kanaset(i)* indicate that generalization of subj. CVR-*ase/o-* preceded Goedelic *aNs* > *eNs* and goes back to Insular Celtic at least. On the other hand, there is no need to place the parallel process in the desiderative/future any further back than Goedelic, and the remodelling of the CEN roots' future seems best located after Goedelic *aNs* > *eNs* but before *eNs* > *ēs*. We may assume that *-ăse/o-* simply replaced *-se/o-* in these verbs without affecting a root vocalism so conveniently like that of the corresponding subjunctives, whence **g^{w}i-g^{w}en-se/o-* > **g^{w}i-g^{w}en-ăse/o-* (OIr. *gign-*, later *gén-* "will slay") matching subj. **g^{w}en-ase/o-*, *li-lem-se/o-* > **li-lem-ăse/o-* (OIr. *lilm-*, later *lém-*) matching subj. **lem-ăse/o-*. In the case of the non-ablauting *a*-root *-cain* "sings" < **kan-e-t(i)* (Lat. *canit*) the same basic principle will have triggered **ki-ken-se/o-* > **ki-kan-ăse/o-* (OIr. *cechn-*) matching subj. **kan-ăse/o-*.

The outcome of **iyem-se-t(i)* > **iyem-ăse-t(i)* was presumably either a weakly characterised and anomalous **-iema* prone to be syncopated to *-ema* in unstressed position or perhaps to be reduced to *-ema* generally. This form would have been identical with the corresponding subjunctive, and arguably survives in OIr. fut. 1sg. *du:em*, 3sg. *du:ema* "will protect" (Ml. 37^{c}20, 67^{c}5). These, of course, could represent *du:ém(a)* through obvious enough assimilation to the *é*-future normal in stems of this shape, as assumed by Thurneysen (*GOI* 396). However, ambiguous *-em(a)* provides a better motive for the otherwise surprisingly early acquisition of an *f*-future by this verb, as witnessed by 3sg. *do:emfea*, 3pl. *do:emfet* (Ml. 128^{c}8, 112^{c}1). Since it only survives compounded with two preverbs, notably *to* plus *ess* or *uss*, the fut. **-siema* < **si-sem-ăse-t(i)* must invariably have been syncopated to *-sem-*, the transformation of which to *-sém-* in 3sg. pass. *do:fuisémthar* "will be begotten" (Wb. 4^{c}7) could well be an early and well motivated instance of the *é*-future's productivity in unstressed syllables (*EIV* 244-6). In view, however, of the development seen in *Ériu* "Iréland" < **ier'u* < **iweryū*, obl. **iweryon-* (W. *Iwerddon*, Lat. *Hibernia*), *-(s)ém-* may have been the regular outcome of **-(s)iem-*.

It is hardly surprising that, once established in a number of CEN verbs, the synchronically straightforward pattern subj. CeN-*ăse/o-* vs. fut. **CiCeN-ăse/o-* should be spread to the remainder with CENH origins. Hence remodelling of inherited **gi-gn-āse-tor* (< **ĝi-ĝn̥h$_1$-se-tor*), which was in any case identical with the fut. passive **gi-gn-āse-tor* underlying

OIr. *-géntar* "will be done" (pres. *-gní*), to the **gi-gen-āse-tor* responsible for OIr. *-gignethar* "will be born" vs. subj. *-genathar* < **-gen-ăse-tor* (< **ĝénh$_1$-s-e-tor*). Likewise **di-dm-āse-t(i)* (< **dí-dm̥h$_2$-se-ti*) gave way to **di-dem-āse-ti* matching subj. **dem-ăse-t(i)* (< **démh$_2$-s-e-t(i)*), whence pre-syncope **didema(-)*/**dema(-)*. After the former had already been syncopated to *didma(-)*, the latter was changed to *dama(-)* under the influence of pres. *-daim* (< **dm̥h$_2$-ye-ti*).

As for the fut. *-cechladar* of *-cluinethar* "hears", once its inherited subj. **klow-se-tor* had been remodelled in the normal way to the **klow-ăse-tor* underlying OIr. *-cloathar* (see ch. 5, 7), the corresponding future/desiderative, whether **ki-klu-se-tor* or secondarily lengthened **ki-klū-se-tor*, was eventually remodelled to **ki-kluw-ăse-tor*. The regular outcome of this would be **-céladar*, but such *é*-futures appear to have been avoided in the OIr. deponent as opposed to the normal active. An obvious model for irregular retention or subsequent restoration of *cechl-* was to hand in forms such as *-cechna* "will sing" < **-ke-xan-ā-* and *-cechra* "will love" < **-ke-xar-ā-* (probably originally **ki-kr-āse-* but transformed to **ki-kar-āse-* on becoming a weak verb prone to keep its root shape unaltered throughout the paradigm; see ch. 5, 8-9).

In conclusion, the e-grade reduplicated futures of CEN(H) verbs in Old Irish, like the nasal in the OInd. CEN desideratives *jighāṁsati*, *jigāṁsati* vs. CENH *vivāsati*, *siṣāsati* (see 5 above), can hardly be satisfactorily explained except in terms of a PIE prototype C*i*-CN̥-*se/o-* without laryngeal increment. Since there now appears to be no difficulty in ascribing apparent C*i*CR̥-*hse/o-* reflexes of other CER roots to well motivated analogy in the separate prehistories of Old Indic and Old Irish, consistency demands Proto-Indo-European C*i*-CR̥-*se/o-* desideratives for all CER roots. This, of course, obviates the need to encumber the parent language's desiderative(s) with either an inexplicable laryngeal increment after resonants or an unworkable *-hse/o-* suffix.

8. CERT roots where R is a liquid constitute a further category with a 'subjunctive' grade of the root in the OIr. future. The only certain attestations are 3sg. *fo:cicherr* "will put" < **ki-kerre-t(i)* or 1sg. *fo:cichur* < **ki-kerr-ū* as opposed to the **fo:ciurus* expected < **ki-kriss-ū* < **ki-kr̥d-se/o-* and 3sg. *-iarr* "will slay" or 2sg. *irr* < **i-orre-si(-)* rather than the **iris* expected < **iriss-esi(-)* < **h$_3$i-h$_3$rĝ-se/o-*. However, it seems likely that the couple of other roots of this shape, notably *melg-* "milk", formed their futures similarly. As Thurneysen pointed out (see 4 above), there is no good reason to suppose that this or the C*i*C*e*N- full-grade type just dis-

cussed was inherited from PIE. Affecting as it did both root and suffix, the discrepancy between desid./fut. *Ci-Cl/riss-* < *Ci-Cr̥/l̥T-s-* and subj. *Cell-* Cerr- (OIr. *fo:cerr* "may put") < **Cel/r-s-* < *Cel/rT-s-* or *orr-* (OIr. *-orr* "may slay") < **or(x)-s-* < **h₃erĝ-s-* in this small group was presumably too great to be tolerated. The obvious solution, perhaps suggested by the relationship between subj. *CeNăse/o-* and fut. *Ci-CeNăse/o-* in the category just disussed, was to model a new fut. *Ci-Cerre/o-* or *Ci-Celle/o-* on subj. *Cerre/o-* or *Celle/o-*.

In the case of a *CrET* root such as the **prek̂* (Lat. *prec-or* etc.) underlying OIr. *imm:com-airc* "asks" (< **arke-t(i)* < **pr̥(k)-ske-ti*; OInd. *pr̥chati*, Lat. *poscit*) no such problem existed. Hence 3sg. ipf. subj. (rel.) *imme:chom-airsed* "who should ask" < **kom-rseth* syncopated < **kom-resseth* < **-rexse/o-* < **prek̂-se/o-* and 1sg. fut. *im:cáemros* with *cáem-* for *caeb-* on the model of pres. *com-* etc. (*EIV* 50 and 155) < **-kom-ibriss-ū* < **-ibrix-se/o-* < **pi-pr̥k̂-se/o-*. Although *e*-grade **ibrex-se/o-* would work just as well, there is absolutely no need to posit it.

It thus appears that none of the definitely full-grade OIr. reduplicated future formations is at all likely to be old, well motivated late remodellings of inherited zero-grade types providing the obvious explanation in each case. Consequently one cannot place much faith in the odd correspondence such as that between OIr. fut. *-gignethar* "will be born" and OInd. desid. *jíjanişate* "will be born", on the strength of which Watkins (1966b, 77) tentatively reconstructed PIE full-grade **ĝí-ĝenh₁-se-tor* with due acknowledgment of the possibility of parallel innovations.

Indeed, the Old Indic attestations leave no doubt in a number of cases that the full-grade type has replaced an older zero-grade formation, as in Vedic *pipāsati* "wishes to drink", Brāhmaṇic *jígamişati* "wishes to come" and Epic *didhakşati* "wishes to burn" versus Rig-Vedic *pípīşati*, Atharva-Vedic *jígāṁsati* "wishes to come" and Brāhmanic *dhík̂şate* (see 8 below) respectively. The manifestly productive full-grade reduplicated type reflects a tendency to accommodate desiderative vocalism to that of future *pā-sya-ti*, *gam-işya-ti* (see 5 above), *dhak-şya-t̨i* etc. Accordingly there is no difficulty in assuming that full-grade *cícarşati* or *cícarişati*, *jíjanişaté* have similarly replaced inherited zero-grade forms that happen to be unattested in the oldest records, where desideratives are anyway rather sparse and include no instances of the full-grade *-işa-* type so popular subsequently (Macdonell, 1916, 198).

C(R)EH full grades are probably the oldest of all, and one instance at least may go back as far as Proto-Indo-Iranian, if OInd. (AV) *jijñāsate* "wishes to know" and Av. *zixšnăŋha-* are directly cognate, as plausibly

assumed by Güntert (1912, 119) and Insler (1968, 61), rather than due to parallel modification of the reflexes of Ind.-Ir. **jíjāsa-* < **ĝíĝn̥h₃se/o-*. Either way, it is easy enough to assume introduction of *n* from full-grade *jñā-* elsewhere, as in the vbal. adj. OInd. *jñāta-*, Av. *xšnāta-* "known", an obvious remodelling of **jāta-* < **ĝn̥h₃-tó-* (cf. Strunk, 1967, 37-8, n. 47, and 52). Once desid. *jijñāsa-* from *jñā-* had become established in this way, it could generate *pípāsa-* from *pā-* (< **peh₃(y)*) alongside evidently older (RV) *pí-pī-ṣa-ti* (< **pí-pih₃-se-ti*) and so on. Theoretically, OInd. *jijñāsa-*, Av. *zixšnăŋha-* and OIr. *-géna* "will recognise" < **gignāse-t(i)* could all be derived from full-grade PIE **ĝí-ĝneh₃-se/o-*. However, such a systematically unjustifiable reconstruction would be quite gratuitous, since the OIr. fut. is formally just as compatible with a normal zero-grade **ĝí-ĝn̥h₃-se/o-*.

On the whole, then, considerations of relative chronology tend to vitiate Leumann's (see 4 above) argument that the Indo-Iranian desiderative is too morphologically diverse to be old. With the notable exception of the *CiT-se/o-* type to be discussed below, this diversity is almost certainly recent in both Celtic/Goedelic and Indo-Iranian/Indic. As Güntert (1912) cogently argued long ago, manifestly innovatory strata can be peeled away to reveal a substantial core in both branches reflecting a satisfactorily homogeneous structure *Ci-CH-se/o-* (CEH roots), *Ci-CR̥-se/o-* (CER), *Ci-CR̥H-se/o-* (CERH) and *Ci-CR̥T-se/o-* (CERT) that can hardly be other than a PIE inheritance.

9. That brings us to the CET roots so far left out of the discussion. With the exception of *guidid* "prays" < **gʷʰedʰ-ye-ti* with redup. *s*-fut. *gigis* apparently < **gʷʰí-gʷʰedʰ-se-ti*, the OIr. primary or 'strong' continuants of such roots, including *aneg-* "protects" with its obscure prefixed *a-* (but see Klingenschmitt as reported by Joseph, 1982, 40 n. 10), regularly show an unreduplicated *s*-future that is for its part confined to this small group. Thus OIr. *a-t:reig* "raises himself, rises", *-teich* "flees", *-anaig* "protects", *-reith* "runs", *-feid* "leads", *-laig* "lies" (3pl. *-legat*), *-said* "sits" (3pl. *-sedat*) have fut. stems *ress-*, *tess-*, *aness-*, *ress-*, *fess-*, *less-*, *sess-* identical with those of the corresponding subjunctives, e. g. 3sg. conj. *ní-s:n-ain* "will not protect them", *fu-m:ré* "will help me" (*fo:reith*), *a-t:ré* "will rise" (3pl. *a-ta:resat*), abs. *seis* "will sit", cond. 1sg. *do:fessind* "I would lead back" (*VKG* II 362; *GOI* 410-1; *EIV* 43).

This anomaly has inevitably been the subject of much speculation. Pedersen (ibid.) simply posited the analogical spread of unreduplicated forms that had arisen regularly by syncope of the reduplicating syllable

in post-tonic position. However, any such development in these few common verbs alone is highly improbable, given the failure of a similar post-tonic loss of the reduplicator to affect stressed forms elsewhere, e. g. stressed 1sg. *-ninus* "I shall wash" despite syncopated *do:fo-nus* < **-fo-ninus* (*GOI* 409). This was duly pointed out by Thurneysen, who preferred a direct comparison with the unreduplicated Greek futures: "vielmehr haben wir hier offenbar genau dieselbe Futurbildung wie im Griechischen, und drei Beispiele entsprechen sich unmittelbar: *less-* und λέξ-ομαι, *sess-* und att. καθ-έσω, *-ress-* und ὀρέξω" (1920, 145). In Thurneysen's view (ibid., 146) PIE had had two desiderative-future formations, namely a zero-grade reduplicated Ci-C(R)C-*(h)se/o-* and a full-grade unreduplicated Ce(R)C-*(h)sye/o-* prone to become Ce(R)C-*(h)se/o-* in the "western" IE ancestor of Greek, Celtic etc. by replacing *-(h)sye/o-* with the other formation's **-(h)se/o-* suffix (see 2 above). In essence, then, all Old Irish futures were reflexes of the reduplicated type apart from this small group, which for some unexplained reason continued its otherwise ousted unreduplicated rival.

As already intimated (ch. 5, 1-2), variations on this theme have generally held the floor since. Thus K. H. Schmidt (1966b) saw the handful of OIr. unreduplicated *s*-futures as relics of an as yet undifferentiated and unreduplicated PIE full-grade athematic *s*-subj./fut. elsewhere restricted to subjunctive function by the prehistoric Irish 'temporalization' of reduplicated *s*-desideratives expanded from a PIE core as new distinctive futures. Watkins (1966b, 80) deviated but little from Thurneysen in deriving this small minority from a full-grade unreduplicated PIE *-se/o-* desiderative in contrast with the vast majority of OIr. futures descended from a zero-grade reduplicated PIE desiderative. Rix (1977, 147-53) combined the same view of the futures with the novel claim that the unreduplicated *s*-type shared PIE full-grade desiderative origins with the OIr. *s*- and *a*-subjunctives (e. g. ch. 4, 2), which Watkins had explained as shifted *s*-aorist indicatives and *a*-modals à la Trubetskoy respectively (see ch. 4, 1 and ch. 5, 1).

Kortlandt proposed a still more ambitious blanket solution, claiming that "all subjunctive and strong future formations of Old Irish can be derived from a single athematic paradigm with secondary endings. This unitary flexion combined with six types of stem. . ... From an Indo-European point of view the full grade forms can be compared with the sigmatic aorist injunctive and the zero grade forms with the injunctive of the *s*-presents" (1984, 183). Rasmussen (1985, esp. 388-90) and Jasanoff (1986, 133-4, n. 3 and 5; 1988, 232-5) agree in deriving the OIr. *s*-subjunctives from a PIE thematic *s*-aorist subjunctive, the OIr. reduplicated and long-vowel futures from a PIE reduplicated zero-grade thematic *s*-desiderative, and the few OIr. unreduplicated *s*-futures from an acrostatically (Jasanoff, A^2) or amphikinetically (Rasmussen, C^1) inflected athematic future or 'prospective' *s*-formation (see ch. 4, 1-2).

Since over half of the OIr. unreduplicated *s*-futures are formed from guttural-final roots, theories involving an original athematic paradigm come up against the by now familiar problem (see 4 above and ch. 4, 7) that 3sg. **tek^{w}-s-t(i)*, **aneg-s-t(i)*, **reg-s-t(i)*, **leg-s-t(i)* should have given OIr. *t*-fut. **-techt*, **-anacht*, **-recht*, **-lecht*. Although this looks quite intractable for a pan-athematic approach to the OIr. *s*-formations like Kortlandt's, the chances of analogical escape increase with the number of old fully thematic *s*-formations posited, Rasmussen's or Jasanoff's readiness to admit an originally thematic *s*-subj. and redup. *s*-fut. having evident potential in this respect (see ch. 4, 2 and 7). However, this need for analogy in the crucial 3sg. (as opposed to 3pl. *a-ta:resat* "will rise" < **rex-so-nt(i)* etc.) seriously undermines the one positive argument for an athematic paradigm and makes it far simpler to assume that we have here yet another case of thematic **tek^{w}-se-t(i)*, **reg-se-t(i)* etc. regularly > **tesseþ*, **resseþ* etc. but then analogically adapted to the **tess*, **ress* underlying OIr. *-té*, *-ré* etc. in conformity with a pattern originating in the *s*-preterite (see 4 above and ch. 4, 9).

Furthermore, whether athematic or thematic, none of the prototypes from which this very restricted unreduplicated OIr. *s*-future has hitherto been derived can be at all securely reconstructed. There is a lack of compelling comparative evidence not only for any sort of athematic '*s*-modal', '*s*-prospective' or the like (esp. ch. 4, 1 and 4-5; ch. 5, 2) but also for an unreduplicated full-grade *-(h)se/o-* desiderative (see 3-4 above). Finally, even if these substantial obstacles are discounted, the simple fact remains that none of the above proposals can explain the precisely regulated distribution of the actually or originally reduplicated futures typical of all but CET roots and the unreduplicated future characteristic of the latter only. Indeed, only Kortlandt has made any attempt to do so, suggesting that "the existence of a non-reduplicated *s*-future of basic verbs ('lie', 'sit', 'run', 'flee', 'arise', 'protect') makes it probable that the entire category must be derived from an athematic subjunctive paradigm with secondary endings" (1984, 180).

The implication here seems to be that these roots were so semantically fundamental and correspondingly frequent that their *s*-formations were able to resist the rise of the more clearly characterised reduplicated

type in late PIE, a state of affairs then continued down into Old Irish. The same notion might be applied to K. H. Schmidt's interpretation of this small class as relics of an undifferentiated PIE subj./fut. elsewhere reduced to subj. only by the prehistoric Irish shift of reduplicated desid. > fut. Alternatively it might help to explain the survival of an archaic athematic future or 'prospective' paradigm in this particular niche à la Rasmussen and Jasanoff or at least partially justify Rix's hypothesis that an unreduplicated *-se/o-* desiderative isomorphous with the thematic *s*-aorist subjunctive succeeded in retaining future meaning here alone. A further possibility might even be that these seven allegedly basic roots were a solitary area in which the *s*-aorist subjunctive's subordinate future function inherited from PIE (cf. Strunk, 1968, 304) succeeded in keeping above a rising tide of distinctive reduplicated futures from old desideratives.

However, all of this comes to grief on two jagged rocks. Firstly, 'basic' is too vague a term to be useful here. For instance, as a glance at the relevant *DIL* entry shows, *teichid* "flees" is not very well attested in Old or Middle Irish, whereas *guidid* "beseeches, prays" with redup. fut. *gigis* occurs a good deal more frequently. It is, moreover, hard to see in what sense **tek^{w}* or, for that matter, any of the other roots involved is more 'basic' than, say, the enormously common OIr. *-cí* "sees" < **k^{w}is-e-t(i)* with its old reduplicated *s*- (later *i*-) future seen in 3sg. pass. *ad:ciches-tar* "will be seen" < **k^{w}i-k^{w}is-s-*. Secondly and still more importantly, all of these so-called 'basic' verbs are old CET roots, the reflex of only one such root (*-guid* "prays" < **g^{wh}ed^{h}-*) failing to form an unreduplicated *s*-future. This simple fact surely creates a very strong presumption indeed that root shape and not semantics was the determining factor here. Since none of the theories considered so far can plausibly account for the endowment of specifically CET roots with unreduplicated *s*-futures in contrast with all other shapes' correlation with originally reduplicated futures in Old Irish, we must obviously look for an explanation that can.

10. Since for all root shapes other than CET a close match has already been established between Old Irish futures and Indo-Iranian desideratives pointing to an ancestral PIE reduplicated C*í*-C(R)C-*se/o-* formation, considerable potential significance surely attaches to the fact that the oldest desiderative of CET roots was unreduplicated in Indo-Iranian as in Old Irish. This is the well attested C*í*T-*sa-* type sometimes lengthened to C*í*T-*sa-* in Old Indic, presumably on the model of *īpsa-ti* "wishes to obtain" (< **h$_1$i-h$_1$p-se/o-*, *pace* Insler, 1968; pres. *ap-nó-ti*) but anyway in

a manner comparable with occasional reduplicated C*í/ú*-C(R)C-*sa-* (Ved. *mīmāṁsa-*, *tū́tūrṣa-*) alongside normal C*í/ú*C(R)C-*sa-*. The main examples are Av. (see Kellens, 1984, 196-8) *tixša-* (*tac* "run"), *hixša-* (*? hac* "accompany"), OInd. *dípsa-ti* (also *dhīpsa-ti*; *dabh* "harm") = Av. *diβža-* (*dab*), OInd. *śíkṣa-ti* (*śak* "be able") = Av. *sixša-* (*sac*), OInd. *dhíkṣa-te* (later *didhakṣa-ti*; *dah* "burn"), *pitsati* (*pad* "go"), *bhíkṣa-te* "wishes to divide, share" > "begs" (*bhaj* "divide, share"), *lípsa-te* (also *līpsa-te*; *labh* "take"), *síkṣa-ti* (*sah* "prevail").

The highly circumstantial and unmotivated correspondences between Old Iranian and Old Indic leave no doubt that this C*í*T-*sa-* desiderative was already typical of C*a*T roots (C here = any consonant but a laryngeal, T = stop) in Proto-Indo-Iranian (cf. Insler, 1968, 58). There are good morphological reasons for the proposal of Brugmann (1892, 1028 = 1916, 348), Güntert (1912, 93-106) and others (e. g. Schindler, 1976, 632; G. Schmidt, 1986, 34) to derive this formation from a reduplicated zero-grade formation C*i*-CT-*se/o-* of the normal type. Indo-Iranian C*í*T-*sa-* could then have arisen through dissimilation of the second of two identical tautosyllabic consonants, at least when it was also the first constituent of a complex group further consisting of stop and *s* (cf. Güntert, ibid., 96-7). While regarding an explanation along these lines as "scharfsinnig" (1952, 44), Leumann nevertheless preferred to ascribe the forms in question to the analogical influence of the synchronically unusual desiderative *dítsa-* of the CEH root *dā* "give" < **deh$_3$*: "das Verhältnis von jüngerem Präsensstamm *dad-* zu desid. *dítsati* bildete nun weiter nach meiner Meinung bereits in indoiranischer Zeit das Muster fur die Bildung einsilbiger Desideративstämme mit *i*-Vokal zu als Präsensstämmen gebrauchten Wurzeln des Typus *pat*, also für *pad* und *pat*: *pitsati*" (ibid., 47).

Since, however, Av. desid. *dīša-* to *dā-* "give" (Kellens, 1984, 197) can perfectly well reflect Indo-Iranian **di-də-sa-* < **di-dh$_3$-se/o-* through normal Iranian loss of interconsonantal shwa or laryngeal, there is no compelling reason to project *dítsa-* further back than Old Indic. As Güntert points out (1912, 85 and 102), the original desiderative formation of *dhā* "put" < **d^{h}eh$_1$* is seen in OInd. *didhiṣati* < **d^{h}í-d^{h}h$_1$-se-ti* alongside analogical *dhítsati*. Consequently OInd. *dítsati* and *didāsati* (see 7 above on *pipāsati* for older *pípīṣati* etc.) likewise stand a good chance of being different remodellings of an inherited **dídiṣati* "wishes to give" that happens not to be attested. Given that both roots have an *a* rather than the usual *i* reduplicator in present *dadh-* "put" and *dad-* "give", Leumann's argument can easily be converted back to Güntert's (ibid., 103)

position that OInd. desid. *ditsa-*, *dhitsa-* were simply generated analogically from the proportion pres. *dabh-* "harm", *bhaj-* "divide" : desid. *dípsa-*, *bhíkṣa-* and so on inherited from Indo-Iranian in CET roots (see Insler, 1968, 64 for an alternative analogical explanation). Since it is hard to see how or why an isolated and anomalous desiderative *ditsa-* from *dā* "give" could have triggered a similarly anomalous analogical *CíTsa-* throughout *CaT* roots in Indo-Iranian, the older explanation of the latter as a dissimilated reduplicated formation is clearly preferable (cf. Burrow, 1955, 359).

That said, however, it seems far from inevitable that this process occurred no earlier than Proto-Indo-Iranian, as has usually been assumed. Güntert rightly insisted that these 'shortened' desideratives, like their reduplicated counterparts, regularly underwent dissimilation of aspirates by Grassmann's law, and plausibly suggested that root-initial aspiration was first analogically reintroduced to differentiate *dhitsa-* (*dhā* "put") from *ditsa-* (*dā* "give"): "was die Hauchdissimilation bei der Desiderativbildung betrifft, so ist oben in anderem Zusammenhang bereits bemerkt worden, dass im Veda anlautend Media erscheint, wenn auch bei dem Verschmelzen mit dem *s*-Suffix eine Aspirate untergegangen ist: *jugukṣa-* zu *guh-*, *dípsa-* zu *dabh-*, *dudukṣa-* zu *duh-*, *dudrukṣa-* zu *druh-*. Dies ist auch der lautgesetzliche Zustand, den auch Formen wie *bapsati* zu *bhas* 'kauen', *jakṣ-* zu *ghas-* 'essen' und *has-* 'lachen' zeigen" (1912, 131). A similar import attaches to Schindler's more powerful formulation: "a new surface allomorph, BUT-*s*-, now existed in addition to BUDH-R, BUD-DH, BHUT#. By analogy BUT acquired the aspiration of the only other allomorph in final T, namely BHUT#" (1976, 631).

The present writer has claimed that "it is clear from Iranian that Bartholomae's Law converted prevocalic voiced aspirate stop + *s*... to voiced stop + *zh* in Indo-Iranian (see Burrow, 1955, 89 and 94). In Indic such sequences were replaced by voiceless stop + *s* in line with the preconsonantal treatment and to normalize the suffix: e. g. desiderative *dípsa-*, **díkṣa-*, *dúdukṣa-* (Rig-Veda: *dabh-*, *dah-*, *duh-*) replacing **dibžha-* (> Av. *diβž-*), **dígžha-*, **dúdugžha-* on the model of forms like fut. **dhapsyá-*, *dhakṣyá-*, *dhokṣya-*. Thus the *-zha-* variant of *-sa-* was eliminated, and the aspiration seen in post-Vedic desiderative *dhīpsa-*, *dhīkṣa-*, *dudhukṣa-* was eventually triggered by the futures etc. Since the sequence of developments **dhí-dhbh-za* > **dhíb-zha-* > **díb-zha-* is just as plausible (cf. past participle *dab-dhá-* 'harmed' < **dhab-dhá-* etc.) as **dhí-dhbh-za-* > **dí-db-zha-* > **díb-zha-* and so on, dissimilation of C_1i-C_1T-*s-* > $C_1íT$-*s-* could have preceded or followed the operation of Grassmann's law. ... In other words, Indo-Iranian merely provides a *terminus post quem non* for creation of the *CíT-* desiderative" (McCone, 1986, 250; see Schindler 1976, 632 for a different explanation of the invariably aspirated initial of the futures and residual resistance to this secondary process by the less morphologically homogeneous desideratives).

In the likely event that Bartholomae's law applied in PIE itself (see Mayrhofer, 1986, 115-7), Güntert's formulation (1912, 97) of the basic change as **dʰidbzʰa-* > **dʰibzʰa-*, the form underlying Av. *diβža-* and OInd. *dipsa-*, seems preferable to the one just given. Since the loss of the stop is clearly Indo-Iranian at least, it must have preceded 'Grassmann' on the evidence of Av. *xumba-* vs. OInd. *kumbha-* "pot" < Ind.-Ir. **kʰumbʰa-* (e. g. Schindler, 1976, 626). However, this by no means excludes the possibility of projecting the dissimilation responsible for desiderative *Cí-CT-se/o-* > *CíT-se/o-* back beyond Proto-Indo-Iranian into late Proto-Indo-European, should this prove necessary or desirable. Indeed, a PIE dissimilatory simplification of a group of two stops plus *s* very similar to the one just posited seems to be implied by Lat. *posco*, OIr. *arcu* (W. *archaf*), OInd. *pṛcháti* "asks" < **pṛ-ske/o-* rather than the **pṛk-ske/o-* iterative/present that must initially have been formed in PIE from the root **prek* (Lat. *prec-or*).

11. Obviously the age of the CET roots' *CíT-se/o-* desiderative can only be determined in the light of relevant formations outside Indo-Iranian, i. e. in Old Irish as the only other IE language to preserve indubitable descendants of the PIE reduplicated desiderative from which the Indo-Iranian *CíT-sa-* type ultimately derives. It is not altogether clear whether Güntert's (1912, 135) comparison of the OIr. unreduplicated é-fut. *-céla* "will hide" < **ki-kl-ā-* etc. with the OInd. *dípsa-* type was intended to prove the latter's PIE status or merely to serve as a typological parallel for secondary loss of reduplication. If the former, it can be ruled out for the simple reason that the OIr. formation is not only based upon quite different CER(H) roots (see 4 above), which have normal reduplicated futures in Indo-Iranian, but also resulted from a loss of reduplication so recent as to postdate late prehistoric Irish lowering of *i* > *e* before a following back vowel, e. g. *-céla* < **ke-xl-ā-* < **ki-kl-āse/o-* (see 5 and 6 above).

The otherwise general tendency (apart from McCone, 1986, 249-50 and 253-5) to consider the *CíT-sa-* type an innovation of Indo-Iranian probably owes a good deal to one at first sight persuasive piece of evidence. This is provided by the unambiguously reduplicated fut. *gigis*, *-gig*

"will beseech, pray" compatible with a Proto-Celtic *g^wi-g^wed-s(e)-ti* from the CET root *g^wed* < PIE *$g^{wh}ed^h$-*, the desiderative of which might then have been *$g^{wh}i$-$g^{wh}ed$-z^he/o-*. In other words, it might be argued that the normal PIE desiderative of TET roots was full-grade reduplicated T*i*-TeT-*se/o-* (cf. Hollifield, 1981, 181-2 in 2 above) in line with a well-known tendency of TET roots to resist phonetically awkward zero grades as exemplified by OInd. vbal. adj. *dag-dhá-* "burnt" < *d^heg^w-$d^hó$-* < *d^heg^{wh}-$tó$-* or OIr. pret. pass. *-gess* "was besought" < *g^wet-to-* (< *$g^{wh}ed$-$d^hó$-*?) < *g^wed^h-$tó$-*. Since, however, such (-)TT- zero grades were obviously more problematical in initial than in postvocalic internal position, a morphologically regular C*i*-CT-*se/o-* still remains likely for PIE. Moreover, if PIE roots of this shape did form a full-grade desiderative, it then becomes much harder to account for the Indo-Iranian C*i*T-*sa*-formation. One possibility might be H/R*i*-H/RT-*se/o-* vs. T*i*-TeT-*se/o-* in PIE, with subsequent Proto-Indo-Iranian levelling to C*i*-CT-*sa-* throughout and dissimilation to C*i*T-*sa-*, followed by an already documented (see 7 above) later Indic tendency towards full-grade C*i*-C*a*C-*(i)sa-*.

This seems a disturbingly elaborate explanation to base upon a single anomalous Old Irish form contrasting with the unreduplicated *s*-futures otherwise typical of and confined to CET roots there. Since OIr. *gigis* provides the only potentially serious evidence for a Proto-Indo-European CET root desiderative other than the C*i*T-*se/o-* < *C*i*-CT-*se/o-* implied by Indo-Iranian, one might rather ask whether it can be plausibly accounted for as a relatively late Celtic or Goedelic innovation. Being an old *-ye/o-* present cognate with Av. *jaiδiia-* and OP. *jadiya-* as conclusively demonstrated by Cowgill (1980, 49-54), *g^wed-ye/o-* was the only CET root to develop *i*-vocalism throughout the present *g^wid-i(y)-* by the prehistoric Irish raising of *e* > *i* before *u*, *i* or *y* in the following syllable, whence *g^wud-i(y)-* by rounding of *i* > *u* after a labiovelar and ultimately OIr. *guidid*, *-guid* (ibid., 56-7). That being so, an inherited C*i*T-*se/o-* formation *g^wiss(-e/o)-* or the like could surely have been remodelled to a *g^wi-g^wiss(-e/o)-* future of the reduplicated type synchronically normal as a pendant to *i-* roots, e. g. pres. *lig-e/o-* vs. fut. *li-liss(-e/o)-* (OIr. *ligid* "licks", 3pl. fut. *lilsit*; PIE root *$leyĝ^h$*).

This brings us back to the rest of the CET roots with their unreduplicated *s*-futures. As is clear from the list in 8 above, these retained *e* in all (*-reig*/*-regat*, *-reith*/*-rethat* etc.) or at least part (*-laig*/*-legat* and *-said*/*-sedat*) of the present, and on this as well as straightforward statistical grounds seem more likely to have retained the original fut./desid. formation of this class than the peculiar *-guid*. A regular correlation of CET and non-CET roots with unreduplicated and reduplicated desideratives respectively is, then, an observed fact in Indo-Iranian and can be safely inferred for the recent prehistory of Old Irish, due allowance being made for some late compensated losses of reduplication and a desiderative > future shift in the latter. Since no alternative derivation has succeeded in explaining the OIr. unreduplicated *s*-futures' virtual exclusivity to old CET roots (see 8 above), it surely strains credulity to ascribe this remarkably circumstantial agreement to coincidence.

There is, then, at least a presumption that, say, Av. desid. *tixša-* (*tac-* "run") and OIr. fut. *tess-* (*tech-* "run away") ultimately reflect a PIE desid. **tik^w-se/o-* to the root **tek^w* undoubtedly underlying both verbs. Indeed, it would be tempting to see a phonetically regular continuation of this very desiderative in Celtiberian *amPi-TiseTi* on the Botorrita inscription, were a connection with *tek^w* not rendered unconvincing by the nearby 'infinitive' *(a)mPi-TinCounei* of what looks like the same verb (see ch. 4, 8 end). There is nonetheless one apparently fatal objection to equating an OIr. future like *tess-* with an Indo-Iranian desiderative like Av. *tixš-*: the relevant OIr. formations imply a shape C*e*T*s-*, whereas the Indo-Iranian evidence clearly shows a C*i*T*s-* infinitely preferable as the PIE prototype on account of its ready explicability as the dissimilated outcome of expected C*i*CT*s-*.

However, this formal discrepancy is not as great as at first sight appears. To begin with, an OIr. fut. like 1pl. *-ressam* or 3pl. *-ressat* (*-reith* "run" or *-reig* "rise") can just as easily be from **riss-omos*, **riss-ont* by regular lowering as directly continue the **ress-omos*, **ress-ont* undoubtedly underlying the corresponding OIr. subj. *-ressam*, *-ressat*. Furthermore, whether the fut. was originally *-Cess-* or *-Ciss-*, it and the corresponding subj. should both have been *-Ciss*(-) in prehistoric Irish unstressed syllables owing to an earlier change of *es* > *is* there (see *GOI* 49; McCone, 1978, 30-1; ch. 5, 5). In the case of disyllabic *aneg-* "protect", this development would cause the subj. **aness-* and putative fut. **aniss-* to fall together as **aniss-* even when the root was stressed.

Since raising and *u*-epenthesis seem not to have affected *e* over voiceless *ss* (cf. *GOI* 47-8 and 106), 1sg. fut./subj. stressed *a-tamm:res* and unstressed *-é-r(i)us* "I may/will rise" would seem to derive from **ressū* and **rissū* respectively. If the latter form were the regular outcome of both subj. **ressū* and fut. **rissū* owing to unstressed *es* > *is*, it might then be supposed that the former reflects the analogical introduction of a similar identity into its stressed counterpart by replacing fut. **rissū* with originally subj. only **ressū*. In other words, by late prehistoric Irish a pre-

sumed formal difference between unredup. *s*-fut. and *s*-subj. would have been neutralised throughout in unstressed position as (-)VC*iss*- and in the stressed 1 and 3pl. as C*ess*- by regular sound change. Since the difference between fut. C*iss(-)* and subj. C*ess(-)* surviving in the sg. and 2pl. of the stressed paradigm could not be reintroduced into the 1 and 3pl. without producing a now phonetically inadmissible C*iss-o-*, the obvious course was to abandon this defective distinction between two semantically adjacent categories by generalising the statistically preponderant subjunctive's C*ess*-, which was already established in the 1 and 3pl. of the unredup. *s*-fut. anyway.

It now becomes possible to equate OIr. *tess*- via **tix-se/o*- with Av. *tixša*- and trace both back to PIE **tik*^{w}*-se/o*-. Similarly with OIr. *sess*- < **sid-se/o*-, *less*- < **lix-se/o*- < **liĝ-z*^{h}*e/o*-, *ress*- < **rit-se/o*- and so on. This explanation has the crucial advantage over alternatives involving C*e*T-*s(e/o)*- prototypes that it alone can adequately account for the distribution of the unreduplicated and actually or recently reduplicated futures in Old Irish. Quite simply, the PIE desiderative emerges as a once thoroughly homogeneous formation characterised by accented *i*-reduplication, zero grade of the root, *-se/o-* suffix and primary endings, whence C*i*-C(R̥)H-*se/o*- (CE(R)H), C*i*-CR̥(T)-*se/o*- (CER(T)) and C*i*-CT-*se/o*- (CET). Before the end of late Proto-Indo-European, however, the last of these was dissimilated to a synchronically unreduplicated C*i*T-*se/o*- that yielded the C*i*T-*sa*- desiderative of Indo-Iranian C*a*T roots directly and the unreduplicated *s*-future of Old Irish CET roots through confusion, triggered by regular sound change and completed by analogy, with the corresponding *s*-subjunctives. Despite its admittedly greater phonetic complexity this explanation of the OIr. unreduplicated *s*-future must be preferred to its various rivals as long as these remain morphologically dubious and, above all, fail to explain its distribution at all convincingly.

12. There remain two Old Irish future formations that have not yet been considered. The first of these is the suppletive future of *téit* "goes" and its compounds, e. g. 3sg. *-riga* (Wb.) or *-rega* (Ml.), 3pl. *-regat* or *-rigat* (both Ml.). This has usually been taken as an old *a*-subjunctive of the root appearing in ipv. *eirg* "go!" and compared with Gk. ἔρχεται "comes, goes" on the assumption of **reg-ā-* < **rig-ā-* < **(h$_1$)rĝ^{h}-* (cf. *GOI* 473; K. H. Schmidt, 1966b, 19; Watkins, 1966b, 77-8; G. Schmidt, 1986, 52-3, n. 76). Rix's (1970, 98-9; 1976, 69 and 213) far from certain alternative comparison of the Gk. verb with OInd. *ṛ-chá́ti* and derivation of both from PIE **h$_1$ṛ-ské-ti* would rob OIr. *-riga* of an otherwise obvious cognate and

raise doubts about the precise final PIE guttural involved. Watkins (1975, 19) suggests that, if Rix's derivation of the Greek verb is accepted, it might be possible to derive the Irish forms from the **h$_1$e/orĝ^{h}* seen in Hitt. *arg-* "mount" and the PIE *i*-stem *h$_1$órĝ^{h}is* underlying Gk. ὄρχιες, OIr. *uirgge* "testicles" etc. However, none of this would effect the morphological analysis significantly.

The traditional explanation of *-rega* etc. is incompatible with the theory of the OIr. *a*-subjunctive's origins advanced in chapter 5 for two obvious reasons. Firstly, there is strong evidence that Insular Celtic never had a plain **-ā-* subjunctive morpheme comparable with that of Italic but based virtually all of its subjunctives upon originally aoristic **-(a)se/o-* < **-(h-)se/o-*. Secondly, since the allomorphs **-se/o-* and **-ase/o-* basically occurred after stops and resonants respectively, an originally subj. **rig-ase/o-* rather than **rig-se/o-* would be quite extraordinary. Furthermore, the zero rather than full grade of the root would be anomalous in an **-ā-* as well as an **-(a)se/o-* subjunctive. Still more problematical is the common early variant *rig-* alongside *reg-*, the form expected throughout by lowering of *i* > *e* before a following *ă̄*, whether < **-ā-* or **-ăse/o-* originally. Whatever else it may be, *-riga*, *-rega* is hardly an old subjunctive, and its *a*-inflection looks suspiciously like a secondary acquisition after the relatively late prehistoric Irish lowering had ceased to operate. Although avoiding the pitfalls associated with an old *ā*-subjunctive, Watkins' tentative suggestion that "le futur *regaid pourrait* être dérivé d'un **ṛghāyeti* (celt. **rigāti*) identique au véd. *ṛghāyáte*" (1975, 19) still fails to account for *rig-* alongside *reg-* by lowering before old *-ā-*.

There is only one reasonable explanation for the *rig-/reg-* alternation, and that is its origin as an old thematic of the type responsible for, say, pres. 3sg. *-dlig* "deserves" < **dlig-e-t(i)* vs. 3pl. *-dlegat* < **dlig-o-nt(i)*. An old '*tudáti*' thematic present with zero-grade root can then be envisaged, namely **rig-e-t(i)*, **rig-o-nt(i)*, most likely a standard secondary thematization of earlier root athematic **erx-ti*, **rig-onti* < **h$_1$érg-d^{h}i*, **h$_1$rg^{h}-énti* (cf. ch. 3, 1). English expressions such as "I go home tomorrow" illustrate the ease with which verbs like this can acquire future sense, and a particularly good parallel for the sporadic shift of such a present to the future is provided by the suppletive Attic Gk. fut. εἶσι "will go" of ἔρχεται "goes". This verb's original present function is not only still apparent in Homer but is also clearly indicated by precise cognates such as OInd. *éti*, Lat. *it* "goes". We may, then, plausibly suppose that in Celtic or Goedelic a pres. **rig-et(i)*, **rig-ont(i)* became a suppletive fut. to pres. **tēg-* "go" and retained its thematic inflection down beyond the operation of low-

ering, whence 1sg. **rig-ū*, 2, 3sg. and 2pl. **rig-e-* but 1, 3pl. **reg-o-*. Subsequently, however, this anomalous inflection was replaced by the *a*-inflection (< **-ăse/o-*) typical of all other asigmatic futures to give **rig-ā-* or **reg-ā-* throughout. Since *rig-* and *reg-* thus ceased to be distributed in accordance with the vocalism of the following syllable, they simply became free variants, whence, say, *reg-* alongside original *rig-* in the 3sg. and *vice versa* in the 3pl. (McCone, 1986, 255).

13. The last OIr. future formation to concern us is the *f*-future, which was beginning to spread beyond its primary locus with *e/o/u*-hiatus and weak verbs in Old Irish and became extremely productive in Middle Irish (*EIV* 40-2, 241-2). Notwithstanding its expansion within the early historic period and beyond, however, the prehistoric origins of this formation are notoriously problematical (cf. Watkins, 1966b, 67).

On the face of it, the *-f-/-b-* formations of Italic provide an obvious point of comparison. Of these the Latin-Faliscan future in **-be/o-*, *-fe/o-* respectively, both < **-b^h(w)e/o-*, seems the semantically obvious counterpart, the formal problem being that the OIr. forms point rather to **-b^{h}wā-*. Given the latter's 1sg. *-(i)ub* apparently < **-bū* < **-b^{h}wō* and the close inflectional correlation between subj. and corresponding fut. elsewhere in the OIr. system (cf. 1 above), one might argue with Pedersen that the **-bā-* stem in the other persons was a late replacement of inherited **-be/o-* under the influence of the *a*-subj.: "das irische *-b*-Futurum ist, wie die 1 Sing. des Fut. compos. . .. zeig[t], ursprünglich wenigstens vorwiegend ein *-o-:-e*-Stamm gewesen; man kann also eine Grundform auf (1. Sing.) *-ā-bhō*, *-ī-bhō*, (3 Sing.) **-ā-bhet*, *-ī-bhet* u. s. w. konstruieren und direkt lat. *amā-bō* u. s. w. vergleichen. Dieser *-o-:-e*-Stamm ist dann aber später zum Teil nach dem Muster der *ā*-Futura und *ā*-Konjunktive umgebildet worden" (*VKG* II 364).

The formally more straightforward but semantically less attractive alternative of comparing the OIr. *f*-fut. with the Italic *-bā-/-fā-* imperfect on the assumption that both reflect **-b^{h}wā-* and the OIr. formation has undergone a typologically justifiable pret. > fut. semantic shift (see ch. 4, 5 end) has been most recently advocated by Quin: "taking it then that the *-ā-* of Italic and Celtic is to be referred to the preterital *ā*-formations of Balto-Slavonic I assume here that the *a*-subjunctives of Latin and Irish are originally modally used historic tenses. From this it follows that Latin *-bā-* in the Latin imperfect (periphrastic) has been preserved in its original function. . .. I now suggest that the element *bhwā* was further added periphrastically to (mainly) weak verbs to give forms identical morphologically with the Latin imperfect but in function transferred through the subjunctive to the future, forms like *-léicfea* from **lēgī-bhwā-t* comparing on this basis with Latin *mone-ba-t*, *audie-ba-t* etc." (1978, 23).

Since most of the basic assumptions underpinning this argument have already been criticised at various points in chapter 5, we may come straight to two fatal objections to any attempt to match the Old Irish *f*-fut. genetically with more or less close Italic lookalikes. To begin with, the suffix hardly ever appears as *-b(-)* except after an unsyncopated unstressed vowel, where internal *-b-* is common (e. g. 3pl. *-prid'chabat* "will preach" vs. 2sg. *-él'afae* "thou shalt escape") and final *-b* normal (i. e. 1sg. *-élub* "I shall escape" etc.). These are both contexts in which originally voiceless fricatives were prone to be voiced on the verge of the Old Irish period, and elsewhere *-f-* is overwhelmingly preponderant, e. g. 3sg. rel. *creil'fes* "who shall believe", 3pl. pass. *soifitir* "will be turned" (*EIV* 40-2; Quin, 1978, 19).

As Thurneysen (1898; 1909, 372) was the first to point out, this distribution is only compatible with earlier *-f(-)* throughout. As his final formulation puts it, "all the phonological evidence points to *f* as the original consonant, which remains after other consonants, becomes *b* (β) in syllabic auslaut, and may be either voiced or voiceless between unstressed vowels, thus corresponding exactly to *th*. . . This rules out the comparison, so frequently suggested, with the Latin future with *b* (Faliscan *f*). . .; for here the *b* (*f*) goes back to IE *bh*, which should have given *b* in Irish. . .. According to some scholars, Lat. *-b-* in the future and imperfect goes back to *-bhw-* (to the root of *fui*, etc.), and Sommerfelt suggests (Mém. Soc. Ling. xxii. 230 ff.) that Ir. *-f-* is the result of *-βw-*; but he gives no other example of such a development. Nor does the Irish flexion with *-ā-* correspond to that of the Latin future (but only to that of the imperfect). The isolated 1 sg. in *-ub* (but depon. *-far*) is certainly not a survival from an earlier flexion, but has doubtless taken its *u*-quality from the *s*-future. . .. But Ir. *f* points to *su*. . .." (*GOI* 398).

These weighty arguments were taken up and developed with further references by Watkins (1966b, 68-74). The rather meagre examples of Ir. *f* for earlier *b* = */v/* subsequently adduced by Quin (1978, 15-8) are either too sporadic, late or doubtful to constitute a remotely adequate explanation for the virtually regular appearance of *f* allegedly < *b* = */v/* after consonants in the OIr. *f*-fut. Basic *-f-* is also strongly implied by the future suffix's devoicing effect on a preceding voiced consonant seen in forms like *a:trefea* "will dwell" (pres. *ad:treba*), *do:luich'fea* "will forgive" (pres. *do:luigi*; see *EIV* 41 and 248-9). Rightly rejected as *ad hoc* by Thur-

neysen and shown to be next to impossible by Watkins (ibid., 70-1), Sommerfelt's *-bw-* > *-vw-* > *-ww-* > *-f-* has now been completely ruled out by Uhlich's (1989) conclusive demonstration that *-bw-* (< *-b^hw-*) regularly gave *-b-* = */-v-/* in Old Irish. There can, then, be absolutely no doubt that the original consonant of the suffix was an *-f-* ultimately based upon *-hw-* < *-sw-*.

The numerous dubious attempts to evade this simple phonetic fact have been motivated by one or both of two considerations, namely the attraction of a comparison with speciously similar Italic formations and the apparent hopelessness of the quest for a morphologically plausible *-sw-* morpheme. A further telling argument against the Italo-Celtic connection is the evidence that a weak verb like OIr. *-cuirethar* did not yet have a distinctive future when it became the suppletive dependent counterpart of independent *fo:ceird* "puts", since the fut. is the one part of the paradigm where the latter supplies the prototonic (*-foicherr* not **-cuirfedar*) as well as deuterotonic form (*fo:cicherr*, see *GOI* 470; McCone, 1986, 248). Since there is no good reason to place this suppletion any further back than Proto-Goedelic, the typical weak verbs' *f*-future seems likely to be due to developments in the relatively recent prehistory of Irish. That, of course, would help to explain the survival, in the face of the *f*-future's manifest productivity and in appropriately modified form, of the old reduplicated futures of a couple of erstwhile primary verbs that had gravitated towards weak inflection, namely *-cechra* "will love", *-scéra* "will separate" (cf. Watkins, 1966b, 81; *EIV* 242-3).

Whereas Thurneysen (*GOI* 398) saw no morphologically probable explanation for phonetically inevitable *-f-* < *-sw-*, Watkins (1966b, 79) drew attention to Vedic desiderative adjectives of the type *iyakṣú-* "wishing to give", *didhiṣú-* "wishing to get", *ditsú-* "ready to give" formed by suffixing *-ú-* to a desiderative stem. On this basis he speculated "that in a limited number of cases, doubtless of primary *a-* and *i*-verbs, an inherited desiderative adjective in *-su-* in Celtic, at the time of the constitution of a future tense dependent upon the subjunctive, was directly suffixed by the subjunctive and future sign *-ā-*, and that the resultant *-su+ā-* > *-swā-*, a highly characterized suffix form, was generalized throughout the derived verbs in *a* and *i* as the sign of the future tense, appearing in historical times as *-fa-*" (ibid.). The nucleus for this spread was provided by a maximum of three verbs, notably **kred-dīsw-ā-t* > *-creitfea* "will believe" (ibid., 81).

There is nothing intrinsically implausible about the small trigger thus posited, given that the majority of weak secondary verbs had not yet developed a separate future corresponding to that of the primary verbs. That said, this explanation is hostage to a formidable array of other difficulties and imponderables. Firstly, there is no reason to suppose that such desiderative adjectives in *-u-* are other than an Indic or Indo-Iranian innvoation. Certainly there is no reliable trace of them in Celtic. Secondly, even if the formation were PIE and survived into early Celtic but hardly beyond (ibid., 79), there is no obvious motive at such an early phase for it to become the base of a new fut. for a few primary verbs later destined to adopt weak inflection, since these should have inherited reduplicated desideratives perfectly capable of developing into futures in the normal way, e. g. **kred-dida-se-t(i)* > OIr. **creitid*, **-creitea* identical with the subj. and so liable to late remodelling to *creitfid*, *-creitfea*. Thirdly, if this *-swā-* formation is relatively old within Celtic, as Watkins is forced by the lack of actual desid. *u*-adj. survivals there to suggest, *-cuirethar*'s lack of a future is no more explicable than on the Italo-Celtic *b*-hypothesis.

Finally, the above hypothesis demands that this improbably extrapolated *-swā-* was added to the stem formans *-ā-* and *-ī-* (< **-iye-*) of the weak *a-* and *i*-verbs respectively. It is then very hard to explain the palatalization of a preceding consonant normal in the *f*-fut. of the OIr. *a*-verbs, e. g. 2sg. *-mairbfe* "thou shalt slay" (*-marba*), *ar:troídfe* "thou shalt restrain" (*ar:troítha*), 3sg. *-noíbfea* "will sanctify" (*-noíba*), as Watkins concedes: "since palatalization of *f* is regular in the *i*-verbs, and both variants occur in the *a*-verbs, I will assume that palatalization has spread from the former to the latter, though the analogical mechanism is obscure" (ibid., 68). Since the *f*-fut. is the only stem of the weak *a*-verbs with such basic palatal consonance, any analogical introduction of this feature would be the reverse of well motivated, whereas the converse introduction of otherwise normal non-palatal consonance into the *f*-fut. too would be easy to understand: "thus 3sg. conj. *-soir*fea* 'will deliver' but non-pal. 3sg. conditional *-soir*fad* 'would deliver', or 1sg. abs. *ain*fa* 'I shall remain' but non-pal. 3sg. conj. *-cum-*s-an*fa* 'will rest' (*an(a)id*, *con:os-*na* respectively), 3sg. non-pal. *do:lug*fa* 'will forgive' with a telltale *u* that betrays the secondary nature of the broad consonance here in comparison with the regular *do:luich*fea* of the previous paragraph" (*EIV* 41).

The raising seen in the 3sg. fut. *fo:(f)irfea* of *fo:fera* "(which) causes" is quite conclusive in this respect, since there would be absolutely no motive for changing inherited **-ferfa* < **werā-swā-* to *-firfea* with synchronically anomalous palatalization and vocalism. Obviously, then, this weak *a*-

verb's fut. *-firfea* must be the regular outcome of **wer-ĭfā-*, the clear implication being that the suffix was *-ĭfā-* for all classes of verb concerned. Since Watkins' explanation cannot explain this general *-i-*, it must be abandoned. As the only scholar to take this phenomenon seriously so far, Quin (1978, 24-5) ingeniously suggests a derivation of, say, OIr. *-mairbfea* "will kill" from a **marwī-bʰwāt* (pret. > fut.) structurally comparable with the well known Skt. *stambhī-bhavati* (pres.) type. Apart from the semantic difficulty that the Sanskrit construction is passive in sense with *bhū* "become" and requires *kṛ* "make, do" for active meaning, this derivation involves a *-bʰw-* already shown to be phonetically impossible. It too, then, must be rejected.

The foregoing discussion has narrowed down the possibilities considerably. Most importantly, it now seems that the pre-syncope shape of the suffix can only have been **-ĭfā-* throughout and that this in turn must have been based upon an original **-ĭswă(se)-*. On the evidence of *fo:cicherr*, *-foicherr* above that the secondary or derived verbs constituting the bulk of the Goedelic weak classes still had no distinct future whatever at quite a late prehistoric phase, the source of this new future suffix must be sought among primary verbs with an *f*-future. Apart from the certainly secondary spread of the *f*-future to a couple of other strong roots such as *-ic* and *-em* (*GOI* 396, *EIV* 42), these consist of a handful of originally primary weak verbs and the small class of *e/o/u*-hiatus verbs. Since it now appears that all Old Irish primary verbs had inherited futures ultimately based upon a PIE reduplicated (C*i*CR̥(T/H)-*se/o-*) or secondarily unreduplicated (C*i*T-*se/o-* < *C*i*CT-*se/o-*) desiderative, we may expect a formation of this type to have provided the source of the **-ĭswă(se)-* suffix finally responsible for the OIr. *f*-future.

There is only one candidate that seems capable of meeting these conditions, namely the common *o*-hiatus verb *so(a)id, -soí* "turns", which is well attested both as a simplex and in various frequently occurring compounds such as *im:soí* "turns round" and *do:int-ai* "turns back". The H3 group of *e/o/u*-hiatus verbs to which it belongs is the closest of all primary verb classes to a 'weak' inflectional pattern entailing *a*-subjunctive (*so(a)id*, *-soa*), *f*-future (*soífid*, *-soífea*), *s*-preterite active (*so(a)is*, *-soí*) and *-ad* preterite passive (*soíthe*, *-soad*) (see *EIV* 26). The question is, why?

The probable OInd. cognate 3sg. mid. *sū́-te* "impels" points to an original (amphi)kinetic root present of the type act. 3sg. **séwh-ti*, 3pl. **suh-énti*. From the latter's regular outcome *suv-ánti* Old Indic created a new thematic paradigm with 3sg. *suv-á-ti*, and a similar process may be posited independently in Celtic, whence a new 3sg. **suw-e-ti* (> **sowel(i)* > *so(a)id*, *-soí*) extrapolated from 3pl. **suw-onti* (for original **suw-enti* < **suh-énti*; see ch. 3, 1 and McCone, 1986, 228). As already pointed out (ch. 5, 7 end), subj. *so(a)id*, *-soa* is quite regular < **sow-ăse-* < **sewh-se-ti*. The morphological transformations exemplified earlier (see ch. 4, 4 and ch. 5, 7) should have yielded *s*-pret. **sō-ss(i)* < **sow-s-t(i)* in place of earlier **sīwa-s-t* < **sēwh-s-t* or the like. The discrepancy in vocalism between *sō-ss(i)* and pres./subj. **sow-* plus the phonotactic impossibility of **sow-ss(i)* by this stage provides adequate motivation for the creation of the new *s*-pret. **sow-ess(i)* underlying OIr. *so(a)is*, *-soí* etc., the obvious model being the formally similar but originally causative weak type pres. **log-īt(i)* (< **logʰ-éye-ti*), subj. **log-ase-*, pret. act. *log-ess(-)*, pret. pass. **log-eto-* responsible for OIr. *do:luigi* "forgives", subj. *-loga*, pret. act. *-loig*, pret. pass. *-logad*. The anomalous inherited pret. pass. **sūto-* < vbal. adj. **suh-tó-* (OInd. *sūtá-*) was then almost inevitably remodelled to **sow-eto-*, whence OIr. *-soad*.

The upshot, then, was a largely 'weak' paradigm in which the root **sow-* appeared in unaltered form in most of the temporal and modal stems (cf. *EIV* 25). However, the future stem will have constituted a notable exception to this convenient uniformity, since inherited **si-sū-se-ti* < desid. **si-suh-se-ti* presumably acquired the productive **-ăse-* suffix like the similarly shaped desideratives **ki-klŭ-se/o-* > **ki-kluw-ăse/o-* (OIr. *-cechladar* "will hear"; see end of 6 above) and **bi-bū-se/o-* > **bi-bw-ăse/o-* (OIr. *-bia* "will be"; see ch. 6, 4-5). This will have yielded a **si-sw-ăse/o-* that subsequently developed quite regularly > **sihw-ăhe/o-* > **sifā-*. All we now need to posit is that the trend towards a consistently weak pattern was consummated by endowing morphologically opaque **sifā-* with the *sow-* characteristic of the other stems, whence the **sow-ifā-* underlying this verb's actually attested fut. *soífid*, *-soífea* (cf. OIr. *oí* "sheep" < **owi-s* etc.; *GOI* 43 and Cowgill, 1967b, 134-7).

In this way a paradigm came into being that was virtually the same as the normal weak type typified by *a*-subj., *s*-pret. and *-Vth(-)* pret. pass., the notable difference being that true weak verbs still lacked a distinct future. This could not be generated from the synchronically awkward reduplicated futures or derivatives thereof brought into the weak class by a handful of old primary verbs without violating the principle of an essentially unaltered root shape. However, fut. **sow-ifā-* contrasting with subj. **sow-ā-* at last brought into being a future suffix that could be straightforwardly spread to the defective weak verbs according to the proportion subj. **sow-ā-* : fut. **sow-ifā-* = subj. **wer-ā-*, **marw-ā-*, **log-ā-*, **lēgiy-ā-* : fut. *x* (*x* = **wer-ifā-*, **marw-ifā-*, **log-ifā-*, **lēgi(y)-ifā-*, whence OIr. *-fírfea*, *-mair(b)fea*, *-luichfea*, *-léicfea*).

If the synchronically convenient *f*-fut. originated in an *o*-hiatus verb, it is easy enough to understand its spread to other members of the same H3 class but not much beyond it among primary verbs still retaining essentially strong inflection in Old Irish. Moreover, in the light of the earlier argument (ch. 5, 6) that the 1sg. of *-ā-* formations based upon **-ăse/o-* was **-ū* < **-ăū* < **-ăsū*, the 1sg. fut. of the *f*-future's trigger will have been **s(ow-)ifū* < **siswăsū*. In that case we might suppose that the well motivated analogical replacement of 1sg. **-ū* by **-ā* in most *a*-subjunctives (ch. 5, 6) spread to corresponding *a*-futures otherwise differentiated from these only by reduplication or a long vowel surrogate thereof. Hence, say, 1sg. *-didem* "I shall endure" < **didemā* replacing **didemū* < **di-dem-āsū*. Since, however, its suffixation was not identical with that of the corresponding subjunctive, the *f*-future was able to retain the original vocalism in the commonest 1sg. form at least, namely the active conjunct, e. g. *-léiciub* "I shall leave" < **lēgīfū*. Certainly the *u*-infection here is, *pace* Thurneysen (see above), far more easily understood as a survival than as an innovation somehow triggered by the inflectionally distinct and anyway non-productuve *s*-future (cf. McCone, 1982, 15-6).

Concluding remarks

In the light of the foregoing chapters it seems doubtful whether Celtic or, more specifically, Old Irish can be effectively used as an instrument for radical revision of the so-called 'Greco-Aryan' model as applied to the reconstruction of Proto-Indo-European. Nevertheless, it still has a considerable contribution to make. This may take the form of vital extra support for the PIE status of categories like the thematic present and aorist subjunctive or the reduplicated desiderative otherwise suspect of being confined to Greek and/or Indo-Iranian, but alternatively may call for some modification of the picture implied by Indo-Iranian above all, as in the case of the nasal presents. There is, of course, no methodological inconsistency here, since a 'Greco-Aryan model' cannot legitimately posit any inherent priority for the evidence of one or both of those branches in reconstruction. Instead it merely recognises their relative importance as *primi inter pares* overall on the cumulative evidence of a broad range of comparative data. That being so, each case must be judged on its own merits and there is no intrinsic reason why morphological features conclusively attested in neither Greek nor Indo-Iranian should not be ascribed to the parent language, when the evidence so demands. The 'Greco-Aryan' hypothesis can hardly go beyond the claim that the need for this does not often arise in practice.

In the case of the nasal-infix presents it was argued that, despite the overwhelming Indo-Iranian evidence for a CR̥-*né*-H- versus CR̥-*n*-H- ablaut only, a further type opposing strong C*é*R-*n*-H- to weak CR̥-*n*-H- had to be posited for PIE on the strength of Italic and, above all, Insular Celtic evidence vestigially supported by Greek and Avestan. This in turn indicated that the former type's full grade had originated in an empirically justifiable CR̥-*n*-*é*H- formed in accordance with Strunk's theory from so-called 'state II' CR*é*H- full grades along exactly the same lines as C*é*R-*n*-H- from 'state I' C*é*RH-. An originally non-ablauting nasal infix of this type had the further attraction of being consistent with the observation that quantitative ablaut in PIE verbal as opposed to nominal morphology affected only the root or the personal endings as a rule and not

derivational affixes, with the notable exception of the *-yéh₁-/-ih₁-* optative suffix.

There remained the paradox that 'state I' CéRT- full grades seemed invariably to correspond to CR̥-*n(é)*-T- nasal-infix presents. Since, however, the only good evidence for the regularity of such structures in the proto-language is provided by Indo-Iranian and this was already suspected of having virtually generalised CR̥-*né*-H- at the expense of CéR-*n*-H-, it seemed unwise to rule out the possibility of PIE CéR-*n*-T- originally correlating with CéRT-. It then transpired that the Old Irish nasal presents of a number of CéRT- roots could only be satisfactorily explained on the basis of a full grade CéR-*n*-T- rather than CR̥-*né*-T-, thus making the existence of the former type alongside CR̥-*n*-éT- from 'state II' CRéT- a distinct possibility for PIE. The corollary was that this category was originally characterised by the same pattern of nasal infixation as had been established for laryngeal- and resonant-final quadriphonemic roots.

In this area, then, the Celtic data plus some supporting evidence from elsewhere and certain systematic considerations serve to cast doubt upon the monopoly of the standard Indo-Iranian type of nasal present in Proto-Indo-European.

On the other hand, the PIE provenance of the otherwise isolated Indo-Iranian reduplicated desiderative could be demonstrated by Old Irish futures formally and semantically compatible with this highly characterised formation. Even so, closer inspection revealed that not all of the features apparently common to certain of the Indo-Iranian and Old Irish forms were likely to have been inherited from Proto-Indo-European. Thus aberrant reduplicated types with *e*-grade of the root could easily be ascribed to independently motivated innovations in both branches. An at first sight still more remarkable agreement between the two concerned reflexes of a mysterious non-radical and otherwise non-suffixal laryngeal after resonants, thus implying a PIE C*i*-CR̥-H-*se/o-* for CER versus C*i*-CR̥H-*se/o-* and C*i*-CR̥T-*se/o-* for CERH and CERT roots respectively. Thanks to both Old Indic and Old Irish data pointing to original C*i*-CN̥-*se/o-* without a systematically unjustifiable PIE laryngeal increment, this emerged as a phantom born of readily explicable separate Indo-Iranian and Goedelic developments. By way of compensation, the CET roots' typically unreduplicated *s*-futures and C*i*T-*sa-* desideratives in Old Irish and Indo-Iranian respectively could be related to each other and traced back to the same C*i*T-*se/o-* prototype. This in turn had presumably been brought into being by a late PIE dissimilation of normally formed reduplicated desiderative C*i*-CT-*se/o-*.

It thus transpires that the original stem formation and suffixation of the PIE reduplicated desiderative was quite homogeneous, being based upon C*i*-C(R̥)C-*se/o-* plus primary endings throughout. This reconstruction was based on 'Celto-Aryan' considerations, so to speak, as part of an argument casting doubt upon the PIE status of various other types of unreduplicated future or desiderative formation reconstructed on the strength of scarcely congruent Greek, Italic and Lithuanian sigmatic types above all.

The main argument of chapters four to six was that Greek and Indo-Iranian were not the only sub-families with clear reflexes of a full-grade subjunctive formed by thematising athematic and hyperthematising thematic present and aorist indicatives.

In Italic the Old Latin *dixit* future < **deyḱ-s-et(i)* and so on can only be convincingly derived from an *s*-aorist subjunctive of this type, while Lat. fut. *-bit* might reflect root aorist subjunctive **bʰúh-e-t(i)*. Moreover, Latin fut. *erit* < pres. subj. **h₁es-e-t(i)* is widely recognised, the fut. type *regel* etc. may well be an old hyperthematic pres. subj. with generalised *ē*-grade, and the original nucleus of Italic *ā*-subjunctives may have consisted of thematically subjunctivised nasal-infix and reduplicated present stems, e. g. **tl̥-n-éh₂-e-t(i)* > Lat. *tollat* and **si-steh₂-e-t(i)* > Lat. *sistat*, as well perhaps as the odd set root-aorist subjunctive, e. g. **tléh₂-e-t(i)* > OLat. *tulat*. It was further argued that all Insular Celtic subjunctives ultimately reflect thematic aorist subjunctives, the *s*- and *h*- or *a*-formations being based upon the *s*-aorist subjunctives of stop- (-C-*s*-*e/o*-) and laryngeal-final (-R-*ase/o-* < *-RH-*se/o*-) roots respectively while a solitary root-aorist subjunctive survives in OIr. *beith*, *-bé* < **bʰúh-e-t(i)*. The latter has a precise cognate in Gaulish *bueti(d)* and the former probably underlies Celtiberian forms such as *amPi-TiseTi* or *CaPiseTi*. Moreover, Gaulish *regu-c* is most likely the 1sg. of a hyperthematic present subjunctive, the other persons of which may have generalised the *-ā-* (< *-ō-*) grade in the admittedly uncertain event that Gaulish 2sg. *lubiias* belongs here.

This evidence from four separate branches surely puts the often disputed Proto-Indo-European status of a full-grade thematised present and aorist subjunctive beyond reasonable doubt. Here, then, we have a striking instance of Celtic providing crucial corroboration for a 'Greco-Aryan' reconstruction.

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Index Verborum

OLD IRISH
(unless Middle (MIr.) or Modern (ModIr.) Irish specified)

a(d):treba "inhabits" 89, 177
a:tá "is" 126, 128
a:trefea "will dwell" 177
-acht "drove (was driven)" 33, 66, 68, 74–5
ad:boind, see *-boind*
ad:ceter, -accatar "may see" 115
ad:ciat "see" 115
ad:cichestar "will be seen" 168
ad:ella, see *-ella*
ad:fét "relates" 83
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aic(c) "invoke!" 58
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-ain "will/may protect" 73–5, 165
-a(i)nf(e)a, ainfa "(I) will stay" 112, 179
-air "ploughs" 107
-airchiuri "will perish" 20
airfitiud "playing music" 48
-an "stayed" 72, 106, 111
-ana "may stay" 112
-ana "stays" 16, 91, 110–1, 179
-anacht "(was) protected" 74–5
-ánaic "arrived" 50
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-anaig (-anaich) "protects" 74, 165, 173
anais, see *-an*
aneg-, see *-anaig*
-ara, -arthar "may (be) plough(ed)" 107
ara:chrin, see *-chrin*
ara:rui-chiuir "perished" 20
arc- "ask" 171
ar:fóem "receives", see *em-*
ar:peiti, -airfiti "plays music" 48–9
ar:troidfe "you will restrain" 179
ar:troitha "restrains" 179
as:boind, see *-boind*
as:bonnar "notice is given" 43
as:ro-bair "can say" 67
as:ro-brad "has been said" 67
as:roi-llea (-llet) "may earn" 115
as:roi-lli (-llet) "earns (earn)" 115
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at:baill, see *-baill*.
at:ballat, see *-ballat*
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at:recht "arose" 68, 74–5
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at:roi-blea "may perish" 67
at:ru-balt "has died" 67
ata:resat "will arise" 165, 167
atamm:res "I will arise" 173
athair "father" 13
-aurchriat "may perish" 20
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bá(-) "was, were" 89, 128, 132–3
bad "let be" (cop.) 89
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-baid, -ro-baid "you were" 132–3
-baill "dies" 12–3, 15, 17, 19, 30, 32, 34, 159
-ballat "die" 12–3, 30