

## More on the chronology of Celtic sound changes

Graham Isaac's recent monograph (2007) deals with the chronology of Celtic sound changes. Remarkably, the author completely disregards the relative chronology which I published 28 years earlier (1979). In the following I shall discuss the main issues on which our views differ.

1. Following Thurneysen (1946: 435), Isaac derives Old Irish *-ír* 'granted' from *\*peper-* or *\*pepor-* (p. 15). I have argued that *\*p* developed into a bilabial fricative [ɸ] which was preserved into the separate languages (1982: 74-76 = 2007: 53-55). It merged with *\*w* after *\*s* in Irish and coalesced with a preceding *\*s* into *\*f* in British, e.g. OIr. *seir* 'heel', dual *di pherid*, Welsh *ffêr* 'ankle'. The loss of the labial articulation was obviously posterior to the lenition, as it was in OIr. *secht* 'seven', *necht* 'niece', *lassar* 'flame', Welsh *saith*, *nith*, *llachar*. The voiceless bilabial fricative [ɸ] merged with its voiced counterpart [β] in OIr. *-ebra* 'he will bestow' < *\*piprā-* and *-ebla* 'he will drive' < *\*piplā-* (cf. Thurneysen 1946: 403). Before *\*n*, the reflex of *\*p* merged with *\*u* after *\*o* and *\*a* but was lost after *\*e*, e.g. *súan* 'sleep' < *\*sopno-*, *cúan* 'harbour' < *\*kapno-*, *tene* 'fire' < *\*tepnet-*. These developments were more recent than the merger of *\*eu* with *\*au* and *\*ou* into *\*ou*, which was more recent than the loss of intervocalic *\*s* (cf. Greene 1976: 27) but earlier than the monophthongization of the latter into *\*ō<sub>2</sub>*, so that the merger of *\*p* with *\*u* before *\*n* can be dated between stages 2 and 3 of my chronology (1979: 39). Intervocalic *\*p* was lost, e.g. *saer* 'artificer' < *\*sapero-*, *té* 'hot' < *\*tepent-*, *ni(a)e* 'nephew' < *\*nepot-*, *iar* 'after' < *\*epi-*. Since *\*epi-* shared the monophthongization of *\*ei* to *\*ē<sub>2</sub>*, the loss of intervocalic *\*p* can be dated before stage 3 of my chronology (1979: 40). In other positions, the reflexes [h] < *\*s* and [ɸ] < *\*p* were preserved up to a later stage, e.g. in lenited *ph-* < *\*sp-*. As I pointed out earlier (1982: 75), OIr. *timme* 'heat' represents *\*tepsmiā*, not *\*tepesmiā*. The sequence *\*epe* merged with *\*ese*, yielding *\*ē<sub>3</sub>* (cf. Kortlandt 1979: 41), not *\*ī*.

I have dated the hiatal raising of *\*e* to *\*i* before back vowels, e.g. in *ni(a)e* 'nephew', gen.sg. *niath*, *niad* < *\*nepotos*, *siur* 'sister', acc.sg. *sieir* < *\*swesoram*, dual *sieir* < *\*swesore*, between stages 3 and 6 of my chronology (2007: 140), after the lenition (1) but before the (first) palatalization (7), the raising of *\*e* and *\*o* before a high vowel in the following syllable (8), and the lowering of *\*i* and *\*u* before a non-high vowel in the following syllable (11). Isaac mistakenly posits a raising of unstressed *\*e* before *\*s* anterior to the lenition in 2nd sg. *biri* 'carry' < *\*berisi* < *\*beresi* (p. 16), ignoring the original endings of the Indo-European thematic inflection (cf. Kortlandt 1979, 1984, 1997a and 2007 *passim*). He mistakenly limits the raising of *\*e* to *\*i* to the stressed syllable (cf. Schrijver 1995: 387 and Kortlandt 2007: 140). Following McCone, he mistakenly dates the shortening of long vowels in medial syllables (my stage 10) before the raising (my stage 8) in his discussion of *niad* < *\*nepotos* and *cucann* 'kitchen', Welsh *cegin* < Latin *coquina* (p. 19, cf. Kortlandt 1997b = 2007: 117-120).

2. While Isaac dates the loss of *\*p* and the raising of *\*ē<sub>1</sub>* to *\*ī* to Proto-Celtic (p. 21), I have dated these developments to early stages of Proto-Irish postdating the lenition (1979: 40). In another study (1981: 1-16 = 2007: 25-44) I discussed the Italo-Celtic shortening of pretonic long vowels discovered by Dybo (1961) and its

interpretation by Illič-Svityč (1962). I have claimed that the Italo-Celtic shortening affected pretonic  $*\bar{e}$ ,  $*\bar{a}$ ,  $*\bar{o}$  but not sequences of resonant plus laryngeal, where the long vowel had not yet originated (1981: 13f. = 2007: 4of.), and that the long vowel never originated in pretonic sequences of laryngeal plus resonant such as  $*g^wHi-$  ‘live’ and  $*b^hHu-$  ‘be’ (1981: 15f. = 2007: 43f.). The discussion was continued by Schrijver (1991: 334-357, 512-536 and 1995: 168-191). Isaac rejects the derivation of OIr. *sith-* ‘long’, Welsh *hyd* ‘length’ <  $*sH_i-$  beside OIr. *sír*, Welsh *hir* <  $*seH_i-$  (p. 24) in spite of such obvious parallels as PIE  $*d^heH_i(i)-$  ‘to suck’,  $*leH_i(i)-$  ‘to pour’,  $*peH_3(i)-$  ‘to drink’. He subscribes to the criticism of pretonic shortening by Irslinger and Rasmussen (p. 25). In fact, Irslinger misrepresents the issue by substituting  $*RH$  for  $*HR$  and by rejecting a metathesis  $*CeHU > *CeUH$  which nobody ever proposed (2002: 28). Rasmussen’s complaint that my view “is at variance with everything we know about IE syllabification” (1999: 170<sup>1</sup>) should be remedied by a conscientious study of Werner Winter’s pertinent article (1965) and by abandonment of his preconceived ideas about Indo-European, followed by a discussion of my arguments. Isaac’s dismissal of my reconstruction  $*HR$  in cases of shortening as circular is mistaken because this reconstruction is supported by full grade forms with  $*VHR$ . His peculiar comparison of Latvian *dzīvs*, Lith. *gyvas* ‘living’ with Latvian *plāns*, Lith. *plónas* ‘thin’ obscures the issue because the latter word has a full grade vowel  $*VH$ . Eventually he devises a highly unnatural, complex and unconvincing phonetic rule on the basis of a host of additional assumptions in order to explain the data without recourse to analogy. It is a typical example of paper phonetics. Isaac’s proposal to derive the short vowel of Latin *vir* ‘man’ from nom.sg.  $*vīrz < *vīrz < *vīros$  (p. 57f.) does not explain the short vowel of the Old Irish cognate *fer*.

3. Isaac presents a relative chronology of 25 sound changes from Proto-Indo-European to Celtic (pp. 62-64). He mistakenly thinks that the circumflex of Lith. *taūras* ‘aurochs’ is compatible with a reconstruction  $**taHuros$  (p. 65), cf. acc.sg. *díeverī* ‘brother-in-law’ <  $*daHiuerm$ , *piemenī* ‘shepherd’ <  $*poHimenm$ . The word is an early European borrowing from Semitic. I cannot accept all stages of Isaac’s relative chronology (pp. 69-74). I have dated the split of  $*\bar{o}$ , into  $*\bar{a}$  and  $*\bar{u}$  (Isaac 22) before the rise of  $*\bar{e}_3$  (Isaac 21) and the raising of  $*\bar{e}_1$  to  $*\bar{i}$  (Isaac 17) between these two developments (1979: 39-41 = 2007: 6-9). I think that the loss of the laryngeals (Isaac 7 and 18) can largely be dated to the Italo-Celtic period. Isaac’s anaptyctic shwa (5, 13a, 20) is a heterogeneous phenomenon which can partly be dated to the Italo-Celtic period (cf. Kortlandt 2007: 88). There was no phonetic reduction of  $*ye$  to  $*i$  between consonants (Isaac 19, cf. Kortlandt 2007: 137). The development of  $*p$  (Isaac 12a, 14, 15, 16) was discussed above. Isaac’s earlier rules are Proto-Celtic (6, 10, 11), Italo-Celtic (5, 7, 8, 9), dialectal Indo-European (3), or speculative (2, 4). I am sorry that Isaac has found it unnecessary to discuss the arguments for the chronology which I put forward earlier.

4. Isaac reconstructs  $*g^h dies > *g^h d^h yes > *g^h d^h es >$  Greek  $\chi\theta\acute{\epsilon}\varsigma$  ‘yesterday’, with loss of the dental stop in Sanskrit *hyáḥ*, Latin *herī* and German *gestern* but loss of the palatal stop in Welsh *doe* and Albanian *dje* (p. 75). He assumes metathesis in Greek  $*d^h g^h omios > *g^h d^h onyos >$   $\chi\theta\acute{o}\nu\iota\omicron\varsigma$  ‘of the earth’ and its cognate OIr. *duine*, Welsh *dyn* ‘man’ (p. 78) but not in Sanskrit *kṣám-* ‘earth’, Gothic *guma* ‘man’, Latin *humus*, *homo*, Albanian *dhe* (p. 81), to which Lith. *žėmė*, Slavic *zemlja*, Thracian  $\Sigma\mu\acute{\epsilon}\lambda\eta$  and

Phrygian ζέμελεν can be added. It seems to me that none of these examples supports the hypothesis of an early dialectal Indo-European development or later language contact. All forms can be derived from *\*tġ-*, *\*d<sup>h</sup>g<sup>h</sup>-*, with loss of the second component in Proto-Celtic times. I also reject the derivation of Latin *sitis* ‘thirst’, *situs* ‘mould’ < *\*d<sup>h</sup>g<sup>wh</sup>iti/u-* and *situs* ‘located, site’ < *\*tġito/u-* (p. 79). The former words may be related to Sanskrit *jásate* ‘be exhausted’, Greek *σβέννυμι* ‘extinguish’ and the latter to Latin *sileō* ‘be silent’ (cf. de Vaan 2008: 563f.). No conclusions can be based on the word *ursus* ‘bear’.

Following Melchert (1994: 251f.), Isaac assumes three series of velar stops in Anatolian and Proto-Indo-European (p. 83). I have argued that the plain velar series developed from depalatalization of the palatovelars and delabialization of the labiovelars (e.g. 2009: 27-32, cf. already Meillet 1894 and Steensland 1973). Melchert lists three examples of plain velar *\*k* in Luwian, viz. *karš-* ‘cut’ < *\*krs-* (cf. Kloekhorst 2008: 455), *kattawatnalli-* ‘plaintiff’ < *\*kH<sub>2</sub>et-* (cf. Kloekhorst 2008: 466), and *kiš-* ‘comb’ < *\*ks-* (cf. Kloekhorst 2008: 481f.), all of them with depalatalization of an original palatovelar before the following consonant. Contrary to Isaac’s “neutralisation of distinctive aspiration in the voiced occlusives” during a “period of contact between Celtic, Balto-Slavic and Indo-Iranian around 2,000 BC” (p. 90), I assume loss of PIE glottalization in Proto-Celtic and its preservation in Indo-Iranian, Balto-Slavic, Germanic, Italic, Greek and Armenian (e.g. 1985 and 2007: 149-151). In my view, Italo-Celtic was the first branch of Indo-European which separated from the proto-language after Anatolian and Tocharian and did not therefore participate in the more recent innovations of the central dialects such as the extended development of the subjunctive, the optative and the middle voice (cf. Kortlandt 2007: 151-157). Isaac’s view that the sigmatic formations “are patent innovations of the late Proto-Indo-European period” (p. 93) is surely mistaken. Contrary to his statement, the relative pronoun *\*yos* was not a common innovation of Indo-Iranian, Balto-Slavic, Graeco-Phrygian and Celtic but was simply replaced by *\*k<sup>w</sup>o-* in Germanic and Italic, just as it recently was in most Slavic languages. Celtic never was a central Indo-European language.

5. Isaac’s final chapter deals with palatalization in Irish, which I have discussed earlier (1979: 41-48 = 2007: 9-17 and 1997b = 2007: 117-120). He starts from McCone’s treatment (1996) without taking my criticism into consideration. Under these circumstances it seems pointless to repeat what I have said earlier about the mistakes in McCone’s account and I simply refer to my earlier work. Just for the record I only mention that McCone’s first, second and third palatalizations correspond roughly to my stages 7, 12 and 18 and the labialization of *\*i* to *\*u* in *cruth* ‘shape’ and gen.sg. *cruimthir* < *QRIMITIR* ‘priest’ to my stages 9 and 16, respectively. Eventually Isaac arrives at a chronology which is very close to mine (p. 102): first palatalization (7), lowering (11), second palatalization (12), apocope (15), labialization in *cruimthir* (16), third palatalization (18), syncope (19). Isaac’s effort to conflate “the various palatalisations of Proto-Irish” (p. 104), which is evidently meant to remedy the inconsistencies in McCone’s account, does not contribute to a better understanding of the chronological processes. There can be little doubt that the first palatalization affected initial consonants but not *\*k<sup>w</sup>r-* and *\*g<sup>w</sup>-* (cf. Kortlandt 2007: 119f.), just as the intervening *\*w* blocked palatalization of the velar obstruent by the following front vowel in Czech *květ* ‘flower’, *hvězda* ‘star’, unlike Russian *cvet*, *zvezdá*. The lowering

of \*e in Old Irish *daig* ‘flame’, dat.sg. *taig* ‘house’, *laigid* ‘lies’, but not in gen.sg. and nom.pl. *tige*, verbal noun *lige*, is a result of palatal dissimilation and must be dated after the general raising and lowering (cf. Kortlandt 2007: 141). I conclude that Isaac’s discussion has given me no reason to change my mind on any of the issues involved.

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