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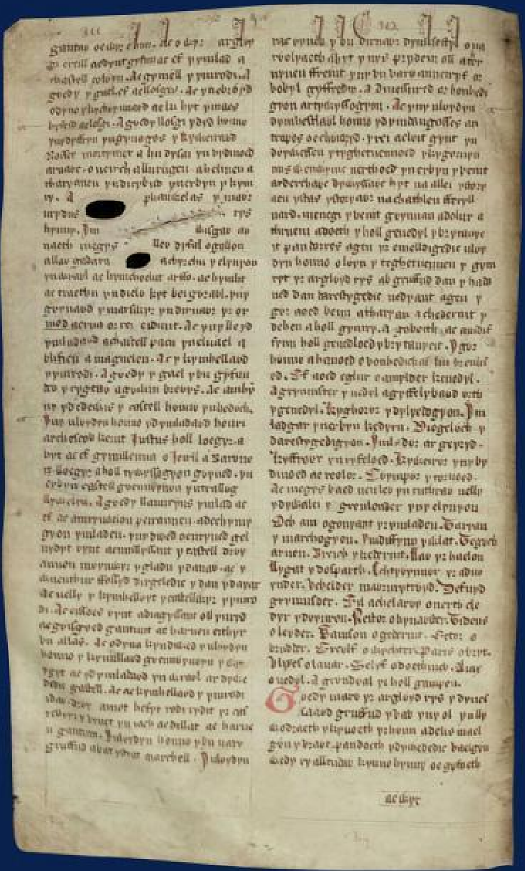
Nicholas Zair



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By

Nicholas Zair

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This book is dedicated to my parents, Elaine and Roger Zair, and to my wife Rachele De Felice.

ABBREVIATIONS

acc.—accusative
adj.—adjective
adv.—adverb
Aeol.—Aeolic
Alb.—Albanian
aor.—aorist
Arm.—Armenian
Att.—Attic
Av.—Avestan
B.—Modern Breton
Celtib.—Celtiberian
CLuv.—Cuneiform Luvian
coll.—collective
conj.—conjunct
Cret.—Cretan
dat.—dative
dial.—dialect
Dor.—Doric
f.—feminine
fut.—future
Gallo-Lat.—Gallo-Latin
Gaul.—Gaulish
gen.—genitive
Gk.—Greek
gl.—glossing
Goth.—Gothic
Hesych.—Hesychian
Hitt.—Hittite
Hom.—Homeric
impers.—impersonal
impf.—imperfect
impv.—imperative
inf.—infinitive
Ion.—Ionic
Lac.—Laconian
Lat.—Latin
Latv.—Latvian
LC.—Late Cornish
Lep.—Lepontic
Lith.—Lithuanian
Luv.—Luvian
Lyc.—Lycian
m.—masculine
MB.—Middle Breton
MC.—Middle Cornish
MHG.—Middle High German
MIr.—Middle Irish
MLG.—Middle Low German
MPers.—Middle Persian
MW.—Middle Welsh
n.—neuter
NE.—Modern English
NHG.—Modern High German
NIr.—Modern Irish
nom.—nominative
Norw.—Norwegian
NPers.—Modern Persian
OAv.—Old Avestan
OB.—Old Breton
OBrit.—Old British
OC.—Old Cornish
OCS.—Old Church Slavonic
OCz.—Old Czech
OE.—Old English
OFr.—Old French
Og.—Ogam
OHG.—Old High German
OHitt.—Old Hittite
OIr.—Old Irish
OLat.—Old Latin

OLith.—Old Lithuanian
ON.—Old Norse
OPers.—Old Persian
OPruss.—Old Prussian
opt.—optative
ORuss.—Old Russian
OS.—Old Saxon
Osc.—Oscan
OSwed.—Old Swedish
OW.—Old Welsh
p.n.—personal name
p.p.—past participle
part.—participle
pass.—passive
perf.—perfect
Phryg.—Phrygian
pl.—plural
pl.n.—place name
prep.—preposition
pres.—present
pret.—preterite
Russ.—Russian
SCr.—Serbo-Croatian
sg.—singular
singul.—singulative
Skt.—Sanskrit
Slov.—Slovenian
subj.—subjunctive
Swed.—Swedish
Toch.—Tocharian
U.—Umbrian
v.n.—verbal noun
Van.—Vannetais
voc.—vocative
W.—Modern Welsh
YAv.—Young Avestan

NOTE ON CONVENTIONS

The following conventions are used to refer in an abbreviated way to classes of phonemes:

C = any non-syllabic segment (plosives, fricatives including *-_s_- and H, R, I̯)
S = any obstruent (plosives, fricatives including *-_s_- and H)
P = any plosive
M = any non-plosive consonant (fricatives including *-_s_- and H, R, I̯)
T = any voiceless plosive
D = any voiced plosive
H = any laryngeal
R = any sonorant (*-_l_-, *-_m_-, *-_n_-, *-_r_-)
L = any liquid (*-_l_-, *-_r_-)
N = any nasal (*-_m_-, *-_n_-)
I = any high vowel (*-_i_-, *-_u_-)
E = any non-high vowel (*-_a_-, *-_o_-, *-_e_-)
V = any syllabic segment (R̥, I, E)

R̥ = a syllabic sonorant
L̥ = a syllabic liquid
N̥ = a syllabic nasal
I̯ = a non-syllabic high vowel

CHAPTER ONE

INTRODUCTION

The Reflexes of the Proto-Indo-European Laryngeals in Celtic

§ 1. *Purpose and Methodology of the Present Work*

Joseph (1982: 31) wrote that the "chapter of Celtic historical grammar which will deal with the treatment of Indo-European laryngeals has yet to be written". Up to now this has remained the case, although Joseph's article and earlier PhD. thesis (Joseph 1980) did much to introduce the laryngeal theory into the historical study of the Celtic languages, and although various aspects of the laryngeals in Celtic have been examined (e.g. de Bernardo Stempel 1987, esp. 40–47; Ringe 1988; Schrijver 1995: 168–191). The intention of the following work is to gather all the Celtic etyma which contained laryngeals, and from this data to deduce the developments of the Proto-Indo-European laryngeals between the parent language and Proto-Celtic according to phonetic environment. As will become clear, it is concluded that the laryngeals had not already been lost in all environments by the earliest stage of Proto-Celtic.

In order to do this, all the Celtic data which might possibly have contained a laryngeal was collected, after which comparison with its Indo-European cognates was used to decide whether each Celtic etymon reflected an original form with a laryngeal. Forms with original laryngeal are grouped according to environment; on the basis of this data, conclusions as to the developments of the laryngeals are made. For reasons of space, not all the data has been given where the reflexes of the laryngeals are uncontroversial; in these cases (which are noted in the text), only representative examples are given.

Reliable and up-to-date lexicographical and etymological resources are still lacking for the Celtic languages; the primary sources of data for the present work are IEW, LEIA, LIV, NIL, Delamarre (2003), and Matasović (2009), backed up by the use of major recent works on Celtic historical nominal and verbal morphology such as Stüber (1998), de Bernardo Stempel (1999), Irslinger (2002), Schumacher (2004), and on historical phonology Schrijver (1995) and McCone (1996). All quoted forms have been checked in the appropriate dictionaries: DIL for Old and Middle Irish, GPC and GPC^2 for Welsh, Fleuriot & Evans (1985) for Old Breton, GIB and GIB^2 for Middle and Modern Breton, R. Williams (1865), Morton Nance (1990) and George (1993) for Cornish.

The lexicographical resources available for Cornish are less reliable than for the other Insular languages, since the dictionaries tend to respell the original words according to different orthographies, and the latter two are aimed at providing a dictionary for speakers of Cornish rather than directly for scholars. I have checked Cornish words in the original texts; consequently I hope that not too many ghost-forms have crept in. I have not always given every attested spelling for Cornish words.

Unless otherwise stated, Irish verbal forms are given in the 3sg. All verbal forms in the Brittonic languages are given in the 1sg.,[1] unless otherwise stated, but only attested forms are given for Old and Middle stages of the languages (except that initial mutations are sometimes removed). Modern forms of Welsh and Breton are given only when the orthography differs from that of the Middle stage, or when no form in the Middle stage is attested. Late Cornish forms are only given if no Middle form exists. Modern Breton forms are given in the *unifiée/zedachek* spelling used by GIB). On the orthography of Breton in general, and Modern Breton in particular, see Jackson (1967: 825–833).

For Gaulish, the texts are collected in RIG I–IV. Delamarre (2003) is an etymological dictionary. Lepontic and Cisalpine Gaulish texts can be found in Morandi (2004). When it is finished, the online Lexicon Leponticum (Stifter, Braun & Vignoli 2011) will include an edition of all the Lepontic and Cisalpine Gaulish texts and an etymological dictionary (at time of writing, however, it has very little content).

Celtiberian texts are collected in MLH I (coin legends) and MLH IV (other inscriptions). MLH V.1 provides an etymological dictionary.

In addition to Schrijver (1995) and McCone (1996), which have already been mentioned, the main resources for the historical phonology of the Celtic languages are Pedersen (1909–1913), Morris Jones (1913), GOI, and Jackson (1953 and 1967). Sketches of the historical phonologies of the British Celtic languages are included in the articles in Ternes (2011b).

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[1] But for the problems of using the 1sg. as the citation form in Welsh see Schumacher (2000: 15–16).

The Laryngeals

§ 2. _Indo-European and Laryngeals_

For the early history of the laryngeal theory, see the references below. It can be said to have had its origin in the writings of de Saussure, who posited that the long vowels of Indo-European came from vowel plus consonant sequences, structurally equivalent to diphthongs involving *-_i_- or *-_u_- and vowel plus sonorant sequences. In zero-grade formations the *-_i_-, *-_u_-, or sonorant would act as the syllable nucleus. In this way the ablaut variation between e.g. Gk. Dor. ἵστᾱμι 'set up', στατός (p.p.) 'having been set up' could be explained as reflecting *_si-steh_$_2$_-mi_, *_sth_$_2$_-to-_ (using modern symbols for the laryngeal).

The existence of the laryngeals was confirmed by the discovery that Hitt. -_ḫ_- corresponded, at least in some environments, to the hypothesised segments (see p. 14 for some disputed reflexes of the laryngeals in Anatolian). It should be noted that the term 'laryngeal' is not used here with any significance for the phonetics of the phonemes (on which see p. 4 ff.); the original impetus for the supposition that they were laryngeals was the attempt, no longer accepted, to connect Proto-Indo-European with Proto-Semitic. De Saussure called the laryngeals 'coefficients sonantiques'.

The number of laryngeals in Proto-Indo-European has been the subject of much discussion. By far the most commonly accepted view, followed here, is that there were three, which will be represented by *_h_$_1$, *_h_$_2$, *_h_$_3$.[2] When adjacent to *-_h_$_1$-, original *-_e_- is not affected, when adjacent to *-_h_$_2$- it is coloured to *-_a_-, and when adjacent to *-_h_$_3$- it is coloured to *-_o_-.[3] Since (as far as we can tell) this colouring occurred in every Indo-European language, it is likely that it had already occurred, at least allophonically, in Proto-Indo-European. Sometimes a fourth laryngeal is posited, to explain forms like Hitt. _appa_ 'behind, afterwards; back', Gk. ἀπό 'from'; since *-_h_$_2$- normally gives _ḫ_- in Hittite, it is argued that these forms reflect an *-_h_$_4$-, which coloured *-_e_- to *-_a_-, but was lost in Hittite (for brief discussion and literature see Lindeman 1997b: 48–49). However, such forms are usually explained in other ways: either the etymologies are wrong (e.g. _appa_ may be cognate with Gk. ἐπί, ὀπι-), these forms reflect Indo-European *-_a_- (see p. 10 f.), or initial *-h_2- was lost in some environments in Hittite.

---

[2] Especially in older works, a wide variety of other ways of representing the laryngeals are found. The most common ones include (equivalent to *_h_$_1$, *_h_$_2$, *_h_$_3$ respectively): *_E_, *_A_, *_O_; *_H_$_1$, *_H_$_2$, *_H_$_3$; *_x̂_, *_x_, *x^w; and *_ə_$_1$, _ə_$_2$, _ə_$_3$.

[3] It is accepted here that *-_h_$_2$- did not colour adjacent *-_o_- to *-_a_-, as is sometimes claimed (see p. 20 ff.). Most scholars accept that *-_ē_- was not coloured by adjacent *-_h_$_{2/3}$-; the Celtic evidence is not probative (see p. 249 ff.).

An alternative view (Szemerényi 1980: 130–131) is that there was a single Indo-European laryngeal, which is preserved as -_ḫ_- in Hittite, and which did not colour adjacent vowels; *-_a_- and *-_o_- were in all cases phonemic in Proto-Indo-European. While this avoids some purely Anatolian problems, much of the explanatory force of the laryngeal theory is lost with this hypothesis, and it will not be followed here.

For the early history of the laryngeal theory, see Polomé (1965), Mayrhofer (1986: 122–123), Lindeman (1997b: 21–39), Müller (2007: 3–20).

§ 3. _The Laryngeals: Phonetics and Phonology_

The phonetic nature of the laryngeals has been much discussed, and cannot be covered at great length here (the following references are by no means exhaustive: Rasmussen 1983 [1999] and 1994; Mayrhofer 1986: 121 fn. 101; Penney 1988; Beekes 1989 and 1994; Job 1994; Gippert 1994; Kümmel 2007: 327–336). Like many Indo-Europeanists, I do not hold strong views on the phonetic reality of the laryngeals, but the present work occasionally touches on matters for which the phonetics of the laryngeals are important.

For example, I hesitantly suggest that the rule of laryngeal loss in *_CR̥HC_-sequences can be explained by the supposition that at least *-h_2- and *-h_3- were phonetically [h] in Proto-Celtic (see p. 69 ff., especially p. 84 ff.), and Schrijver's (1991a: 298–301) proposed development of the sequence *-eh_3_u̯_- > *-eh_2_u̯_- in Italic and *-eh_1- in Germanic (discussed on p. 98 f.) relies on the assumption that *-h_3- was labialised.

I follow here the mainstream view that laryngeals were only consonantal in Proto-Indo-European, that is, they could not occupy the syllable nucleus.[4] The strongest evidence for this position comes from a consideration of the Proto-Indo-European syllabification rules, which govern which in a string of segments will occupy the syllable nucleus (become 'syllabic'), as determined by Schindler (1977) and widely accepted subsequently (e.g. in Mayrhofer 1986: 162–164).[5] Proto-Indo-European had a variety of sounds which could occupy the nucleus of a syllable. Non-high vowels (*-_a_-, *-_e_-, *-_o_-) were able to occupy only the nucleus. However, high vowels (*-_i_-, *-_u_-) also had non-syllabic counterparts (*-_i̯_- and *-_u̯_- respectively) found in the syllable onset and coda. In this regard the high vowels pattern with the nasals and liquids, which can be both syllabic (*-_m̥_-, *-_n̥_-, *-_l̥_-, *-_r̥_-) and non-syllabic (*-_m_-, *-_n_-, *-_l_-, *-_r_-) depending on whether or not they occupy the syllable nucleus.

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[4] On this see Mayrhofer (1986: 122–123), Kobayashi (2004: 129–138). Although the view outlined here is probably that most commonly held, some scholars do propose that laryngeals could be syllabic. Thus Reynolds, West & Coleman (2000) argue strongly for the existence of syllabic laryngeals, which also feature in Rasmussen's (1994: esp. 343–344) model. Rasmussen notes the fact, overlooked by Reynolds et al., that the failure of laryngeals to syllabify when preceded by a sonorant or high vowel means it is necessary to suppose two rounds of the Proto-Indo-European syllabification rule: the first ignoring the laryngeals, the second applying to them.

According to Schindler, a sonorant or high vowel becomes syllabic when preceded and followed by a non-syllabic segment (i.e. anything other than *-_a_-, *-_e_-, *-_o_-) or a word-boundary; this rule is iterative and operates from right to left.[6] This rule can be seen in forms like, e.g. /h$_2$i̯u̯-h$_{(3)}$n-k̂o-/ → *_h_$_2$_i̯u-h_$_{(3)}$_n̥-k̂o-_ 'young' (see OIr. _oac_ p. 176). This means that a sequence such as /k̂un-b^{h}is/ was actually produced as *_k̂u̯n̥-b_^{h}_is_ (> Skt. _śvabhiḥ_ 'with dogs'), with the rightmost of the two possible vowels *-_u_- and *-_n_- occupying the syllable nucleus. In a sequence of the type /d^{h}uh$_2$-mo-/ or /str̥h$_3$-to-/, however, it is the high vowel or sonorant that occupies the syllable nucleus, as shown by *_d_^{h}_uh_$_2$_-mo-_ > Skt. _dhūmáḥ_ 'smoke' (not *_d_^{h}_u̯h̥_$_2$_-mo-_ > ^{x}_d_^{h}_vimáḥ_), and *_str̥h_$_3$_-to-_ > Gk. στρωτός 'strewn' (not *_strh̥_$_3$_-to-_ > ^{x}στροτός).[7] The most efficient explanation for the failure of laryngeals to occupy the syllable nucleus is that they could not be syllabic.

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[5] Although explicitly not by e.g. Beekes (1988b: 59–60) and Schrijver (1991a: 9–11), who maintain that the rules for syllabification are language-specific and cannot be determined for Proto-Indo-European. See Kümmel (2007: 16–20) for an argument for the necessity of distinguishing between syllabic and non-syllabic sonorants and high vowels in Proto-Indo-European.

[6] There are various exceptions to this rule which do not concern us here. For further discussion, see below.

[7] In Greek and Tocharian, there is some evidence for a different result of the sequence *-_IH_-, at least when the laryngeal is *-_h_$_2$- or *-_h_$_3$-. In Tocharian, preconsonantal and word-final *-_ih_$_2$-, perhaps *-_ih_$_3$-, give -(_i_)_i̯a_- (e.g. Toch. A _lānts_, Toch. B _lāntsa_ 'queen' < *_u̯älanti̯a_ < *_u̯l̥H-ōnt-ih_$_2$). It is possible, though not certain, that *-_uh_$_{2/3}$- gave *-_u_(_u̯_)_a_- (Hackstein 1995: 17–19; Ringe 1996: 22–34). In Greek, *-_uh_$_{2/3}$- and *-_ih_$_{2/3}$- underwent a similar development in word-final position (e.g. Gk. πότνια 'mistress' < *_pot-n-ih_$_2$). Before consonants, there is some evidence for a development of *-_Ih_$_{2/3}$- to *-_I̯ā/ō_- (e.g. Gk. δηρός 'long, lasting' < *_du̯āro_- < *_duh_$_2$_-ro_-), perhaps beside a short-vowel version (e.g. ἀπριάτην 'without ransom', derived from *_k_^{w}_rih_$_2$ _-to_-). These variants are discussed by Olsen (2009), who concludes that they are conditioned by the position of the accent in Greek. It might be argued that the developments to *-(_I_)_I̯ă/ŏ_- were evidence for the laryngeal acting as the syllable nucleus (as assumed for Tocharian by Beekes 1988b: 59–60 and Schrijver 1991a: 9–11), but the long-vowel reflexes in Greek suggest that this was not the case, and it is possible to explain the Greek and Tocharian developments by the appearance of a prop vowel after *-_u_- and *-_i_- and before a laryngeal (thus Rasmussen 1990–1991a [1999]; Olsen 2009: 360–361).

Other evidence for consonantal laryngeals comes from Anatolian, where **-h_2-* and **-h_3-* were preserved, in some environments, as fricatives (see below), and from Indo-Iranian, where laryngeals block lengthening of **-o-* before sonorants in an open syllable by Brugmann's law, and create closed syllables in Vedic metre when preceded by a consonant (Gippert 1997).

The greatest problem for a consonantal interpretation of the laryngeals is the treatment of laryngeals in *(-)*CHC-* sequences, which, when not completely deleted, show a vocalic reflex in almost all (if not all) Indo-European languages. This is best explained by the creation of an epenthetic vowel, so that /-CHC-/ was produced as [-CəHC-] or [-CHəC-], whence, with loss of the laryngeal, the vocalic reflex seen in the daughter languages.[8] Possible evidence for the stage [-CHəC-] may be found in Vedic Sanskrit, where a sequence *-CiC-* < **-CHC-* [-CHəC-] causes the previous syllable to scan heavy (Gippert 1997: 72).[9]

Most of the evidence for the phonetic nature of the laryngeals is indirect, based on the effect that the laryngeals had on the segments around them. Thus the colouring effect of *-*h_2*- and *-*h_3*- on adjacent *-*e*- is usually viewed as evidence for velar, uvular or pharyngeal place of articulation (colouring of *-*e*- to *-*o*- by *-*h_3*- does not require that the laryngeal was labialised; Gippert 1994: 461). On the basis of its aspirating effect on preceding stops in Indo-Iranian, *-*h_2*- had probably become [h] by this stage, presumably reflecting an earlier voiceless segment. It is often supposed that *-*h_3*- was voiced, on the basis of the apparent voicing of *-*p*- to *-*b*- when followed by *-*h_3*-. The Celtic evidence is key to this argument (see p. 215 ff.), but it essentially rests on a single form, and in my view the voicing effect of *-*h_3*- is unproven.

The only direct evidence for the phonetics of the laryngeals comes from the Anatolian languages, where the cuneiform sign used for *-*h_2*- and *-*h_3*- in the positions where they were retained in Anatolian reflects a uvular or velar fricative in Akkadian. That the laryngeals were fricatives is also suggested by the freedom of their position in the Indo-European root, which they share with *-_s_-. Roots in Indo-European more-or-less show consonants on the left margin in a sequence of equal or rising sonority towards a low vowel 'peak' before declining in sonority again towards the edge of the root (this is very similar to, and may be connected to, the Sonority Sequencing Principle found in syllables; see fn. 13, p. 8): there are various complications, but a rather simplistic schema is *(s)(P)(R)(I)E(R)(I)(s)(P)(s)-.[10] The major exception to this picture of rising then falling sonority is *-_s_-, which shares considerably greater positional freedom with the laryngeals. Some models of the phonetics, while taking *-h_2- and *-h_3- to be fricatives, reconstruct *-h_1- as a plosive (e.g. a glottal stop). There seems to be no very good evidence either way: *-h_1- was particularly articulatorily 'weak', in that it was not preserved in any Indo-European language, but this does not rule out it being a glottal stop rather than a fricative. An aspirating effect on a preceding stop in Indo-Iranian, which would presumably suggest [h] at this stage, is not certain (see Kümmel 2007: 333–334). On balance, however, it seems more likely that *-h_1- was also a fricative, since it has the same positional freedom within the root as the other laryngeals. The most plausible reconstruction of the phonetics of the laryngeals is that of Kümmel, who suggests *-h_1- [h], *-h_2- [χ], *-h_3- [ʁ].[11]

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[8] However, some scholars (e.g. Beekes 1989: 24) assume direct vocalisation of the laryngeals, without the existence of a prop vowel. For the case against this see Kümmel (2007: 335).

[9] A problem to which I do not know the answer is why, in sequences of the type **ph_2tēr* [pəh_2tēr] > Gk. πατήρ, Skt. *pitā́* (not [ph_2ətēr], which would have given Skt. ^{x}*p^{h}itār*), the loss of the laryngeal did not cause compensatory lengthening of the epenthetic vowel, as in cases like **str̥h_3-to-* [*strəh_3-to-*] > Gk. στρωτός.

§ 4. _The Indo-European Syllable_

The rules for generating Indo-European syllable nuclei, formalised by Schindler (1977) and discussed above, have several exceptions, as already observed by Schindler himself. For example, in parts of the _men_-stem paradigm which produce the sequence /-CmnV-/, the /-m-/ is not syllabic (^{x}-_Cm̥no_-), but instead is lost altogether (e.g. Skt. gen. sg. _ásnaḥ_ 'stone' < *_h_2eḱ-mn-os_). In the accusative of proterodynamic _i_-, _u_- and _r_-stems, the ending *-_m_ is never syllabic (*-_im_, *-_um_, *-_r̥m_). In the weak stems of nasal presents, the infix *-_n_- is never syllabic, even though it is between two consonants (*_i̯ung_-, not ^{x}_i̯u̯n̥g_-). The first member of the sequences /u̯r-, u̯l-, u̯i̯-/ and /mr-, ml-, mn-, mi̯-/ remained non-syllabic when the sequence was followed by a vowel.

Recent attempts to explain these exceptions have centred on the identification of the rules governing the position of syllable boundaries and the syllable template of Proto-Indo-European, largely in an optimality-theoretic framework. Thus, for example, the surprising retention of non-syllabic *u̯- and **m*- in the sequences mentioned above is perhaps to be explained by a tendency in Proto-Indo-European to maximise syllable onsets (thus Byrd 2010a: 33–37 and *passim*, 2010b, 2012; expanding on Kobayashi 2004: 17–34).[12] Other long-standing problems of Indo-European phonology are used to determine the positioning of the Indo-European syllable boundary. Thus, for example, the development of **med-tro*- to Gk. μέτρον, with loss of *-*d*- rather than the usual epenthesis of *-*s*- between two dentals, is explained by Keydana (2004: 171) as due to a Proto-Indo-European syllabification **medt.ro*-. The different development can then be attributed to the possibility that *s*-epenthesis only occurs across a syllable boundary.

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[10] As it stands, this schema would overgenerate Indo-European roots: there are a number of further constraints on root structure which it is not necessary to go into here.

[11] Although, as noted above, positing voice as a feature of *-h_3- rests on very little evidence.

Byrd takes a different view, arguing that Proto-Indo-European had a maximum syllable template consisting of two consonants in the onset and two in the coda. In the onset the Sonority Sequencing Principle (SSP) could be violated, but not in the coda.[13] According to Byrd, the sequence /medtro-/ could not become **meds.tro*- because this would break the SSP; instead the first dental is deleted, giving **met.ro*-. Byrd uses this theory to explain other deletions, such as the deletion of /-t-/ in the sequence /Hok̂tHti/ > Ved. *aśītí*- 'eighty'. Here /-t-/ could not be syllabified as a sequence /-k̂t./ breaks the SSP. For the loss of laryngeals in Byrd's theory see p. 160 ff.

Discussion is still ongoing on the question of where the syllable boundary lay in sequences of consonants in Proto-Indo-European. However, it will be necessary in this book to make certain assumptions about the position of the syllable boundary in Proto-Indo-European, at least as a starting point for further discussion. Since I do not wish to prejudge the possibilities that discussion of laryngeal reflexes may raise, I have adopted a reasonably non-specific approach. I assume that sequence */VCV/ was syllabified as *V.CV; a sequence */VCCV/ was syllabified as *VC.CV.[14] Broadly following Byrd, I accept that Indo-European syllables maximised onsets up to a maximum of two consonants; consequently, sequences of */VCCCV/ and */VCCCCV/

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[12] Expressed as an ONSET constraint in the optimality framework adopted by these scholars.

[13] The Sonority Sequencing Principle states that between any member of a syllable and the syllable peak, only sounds of higher or equal sonority are permitted (Blevins 1995: 210–212). Byrd (2010a: 25–27, 86) considers that sonority plateaus were also forbidden by the Indo-European version of the SSP. For PIE the sonority hierarchy can be expressed as low vowels >> high vowels >> liquids >> nasals >> fricatives >> plosives.

[14] This goes against Byrd's Onset Maximisation principle: he explains this by assuming that onset maximisation occurs only within a morpheme at the stem level. In a sequence */VCCV/ there would be no reason to resyllabify.

were syllabified as *VC.CCV and *VCC.CCV respectively. However, I will not take as a starting point Byrd's further claim that only syllable onsets could break the Sonority Sequencing Principle, although it will be discussed where appropriate.[15]

§ 5. _Indo-European Root Structure and Root-Initial Laryngeals_

Since Benveniste (1935: 170) it has often been assumed that the minimum Proto-Indo-European root structure was *_CeC_-. If this is correct, then roots which appear to be of the type *_eC_- must be reconstructed as *_HeC_-. Most Indo-European roots do appear to begin with a consonant, and many roots with an apparent initial vowel can be shown to have an initial laryngeal, because of evidence from Anatolian (-_ḫ_- < *-$h_{2/3}$-, perhaps vowel prothesis from *-h_1-), Greek and Armenian (vowel prothesis), or Sanskrit (where initial laryngeals are demonstrated by lengthening of preceding vowel in compounds such as _ā́sat_ 'not being' < *_n̥_-h_1_s_-_n̥t_-). However, this is not the case for all roots; the assumption that all roots ostensibly beginning with a vowel reflect *_He_- can hold only while there is no firm counter-evidence. Debate continues to exist on the (few) examples that can be put forward (in addition to the discussion, with literature, in Mayrhofer 1986: 123–124, see Peters 1986, Penney 1988: 363 fn. 2, and Willi 1999). It will be assumed here that all roots ostensibly beginning with a vowel reflect an initial laryngeal. However, there are very few instances where this is of importance for any conclusions which will be drawn; where this is the case, it will be noted.

Lehmann (1951; followed by e.g. Schrijver 1991a: 13–14) argues that Proto-Indo-European did not allow roots with an initial *_r_-, on the basis of Greek, Armenian and Anatolian. In Greek, all words which show initial ῥ- can be traced back to original *_sr_- or *_u̯r_- (or are loan words). Otherwise there is always a 'prothetic' vowel before the *-_r_-, where other languages show initial *_r_-. A similar situation pertains in Armenian, and Hittite cognates of words apparently beginning with *_r_- are found as _ar_-. On this basis, any root beginning with *_r_-, on the evidence of the remaining Indo-European languages, must be reconstructed as *_Hr_-; when we have Greek evidence, this can be reconstructed as *h_1_r_-, *h_2_r_- or *h_3_r_-, depending on the nature of the initial vowel.

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[15] Compare the syllabifications proposed by Keydana (2004: 173): *VC.CV, *VCC.RV, *VR.CCV, *VR.CRV, *V̄.CRV (Keydana includes I in R).

However, we may ask whether this state of affairs should in fact be traced back to Proto-Indo-European. It is probable that *h_1- was lost before consonants in Hittite (Kloekhorst 2006: 77–81); consequently _ar_- from *(h_1)_r_- must be due to a post-Proto-Indo-European prothesis. For Greek, the existence of three different prothetic vowels suggests vocalisation of initial laryngeals, but it is possible that roots with initial *_r_- underwent a prothesis to give *_er_- (as suggested by LIV 252), falling together with the reflex of *h_1r- (while initial *h_2r- and *h_3r- gave *_ar_- and *_or_- regularly). A similar state of affairs could also have obtained in Armenian. It should be noted that the number of roots apparently beginning *h_1r- only on the evidence of Greek is much greater than the number beginning *h_2r- and *h_3r-: a search in LIV finds 9 (with another 4 reconstructed on the basis of other languages), as opposed to 2 with *h_2r- and 4 with *h_3r-. The proportion of roots beginning with laryngeal plus another sonorant is 7 (*h_1R-), 13 (*h_2R-) and 3 (*h_3R-), while the total numbers for all roots beginning with a laryngeal are 42 (*h_1-), 83 (*h_2-) and 21 (*h_3-). In the light of this, the apparent preponderance of ἐρ- may be secondary rather than the result of *h_1r-. A firm conclusion that no Proto-Indo-European roots began with *_r_- cannot be drawn. Where the only evidence for an initial laryngeal is the fact that a root begins with *_r_-, or Greek cognates begin with ἐρ-, Armenian or Hittite ones with _ar_-, the root in question will be treated as no better than possible evidence for *_Hr_- in Celtic. It has been suggested that the prothetic vowel before *_r_- in Greek, Hittite and Armenian is in fact an areal feature, since it appears also in Turkish, Hattic, and Hurrian (Hovdhaugen 1968: 123, 131; Beekes 1969: 24). See Peters (1986: 370 fn. 20) for further discussion and references with regard to a possible prothesis.

§ 6. _Indo-European *-a-_

The discovery of the colouring of adjacent *-_e_- > *-_a_- by *-h_2- removed most examples of previously reconstructed *-_a_-. However, some examples of apparent *-_a_- are not explained so easily, for example Hitt. _alpa_- 'cloud', Lat. _albus_ 'white', which cannot go back to *h_2e-, since initial *h_2- was preserved as _ḫ_- in Hittite. Other problematic examples include forms such as Lat. _sāl_ 'salt' beside Skt. _salilám_ 'sea', which seem to imply ablauting *-_ā̆_-. Some scholars (e.g. Mayrhofer 1986: 169–170; Ringe 1996: 2, 2006: 10–11) reconstruct *-_a_- for forms like this. Others reject the idea of Proto-Indo-European *-_a_- (e.g. implicitly Kortlandt 1985: 119; Lubotsky 1989; Lindeman 1997b: 27–28). As already noted, only three laryngeals will be used here; consequently an _a_-colouring *-h_4- cannot be posited. Nominal formations of the sort reconstructed by Kortlandt and Lubotsky, which have ablauting paradigms with nom. sg. *_CeH-C-s_, acc. sg. *_CH-eC-m̥_, gen. sg. *_CH-C-es_, seem to be reconstructed largely to avoid positing Proto-Indo-European *-_a_- and are not part of mainstream scholarship (for an introduction to the standard picture see Meier-Brügger 2003: 201–218).

Henceforth, it will be accepted that some roots do indeed reflect Proto-Indo-European *-_a_- (which shows a lengthened grade variant *-_ā_-). It follows that some roots which are reconstructed here as *_h_$_2$_e_- or *-_eh_$_2$(_C_)- may in fact reflect original *-_ā̆_-. Since most cases of *-_a_- are doubtless due to adjacent *-_h_$_2$-, unless there is evidence to the contrary it will be assumed that 'Proto-Indo-European' *-_a_- reflects *-_h_$_2$-. No important conclusions rest on this assumption.

Laryngeals in the Indo-European Languages

§ 7. _General_

For surveys of the Indo-European laryngeals and their reflexes in the daughter languages see Beekes (1988b) and Mayrhofer (1986: 121–150). Treatments of the laryngeals can be found for Latin in Schrijver (1991a); for Greek in Beekes (1969) and Peters (1980); for Indo-Iranian in Mayrhofer (2005); for Germanic in Müller (2007); for Tocharian in Ringe (1996: 7–37); for Anatolian in Melchert (1994: 49–52, 64–74, 76–81) and Kloekhorst (2008: 75–82); for Albanian in Demiraj (1997: 41–67, esp. 58–61); for Armenian in Olsen (1999: 762–781). A brief discussion of more debated points follows.

§ 8. _Germanic_

In some environments original *-_i̯_- and *-_u̯_- underwent the so-called _verschärfung_ in Germanic, giving *-_i̯i̯_- and *-_u̯u̯_- > Goth. -_ddj_- and -_ggw_-, ON. -_ggj_- and -_ggv_- respectively. It is generally agreed, following Jasanoff (1978), that the _verschärfung_ is caused by a laryngeal following *-_i̯_- or *-_u̯_-; thus Goth. _waddjus_, ON. _veggr_ 'wall' < *_u̯oi̯i̯u_- < *_u̯oi̯h_$_1$-_u_-. However, Lühr (1976) argues that sonorants were also geminated in Proto-Germanic when followed by a laryngeal, e.g. OHG. _skerran_ 'scratch' < *_skerH_-. Jasanoff (1978: 88 fn. 3) argues against sonorant gemination, because of forms like OHG. _malan_ 'grind' < *_melh_$_2$- which do not show gemination, and for which Lühr's explanations are _ad hoc_.

Müller (2007: 88–95) argues that gemination occurred in both *-_VRHV_- and *-_VIHV_- clusters only when the first vowel was stressed and short, observing that Jasanoff's explanation also requires _ad hoc_ explanations for forms like Proto-Germanic *_k̂reu̯h_2-o-_ > *_hrau̯-a-_ > OHG. (_h_)_rao_ 'raw', which are held to be analogical on forms like *_k̂rēu̯h_2-o-_ > *_hrēu̯-a-_ > Dutch _rauw_ in which gemination did not occur after long vowels. It will be assumed here that lack of sonorant gemination is not evidence against a _seṭ_ root, and that gemination is evidence for one, essentially following Müller.

§ 9. _Balto-Slavic_

The development of the Baltic and Slavic accentuation systems is a very extensive topic that cannot be discussed in any depth here. References (by no means exhaustive) are given below. However, it is necessary to mention it insofar as it pertains to the laryngeals. Balto-Slavic accentuation is evidence for the existence of a laryngeal in two ways. First, Hirt's law caused retraction of an original oxytone accent to give a Balto-Slavic barytone when the preceding syllable contained the sequences *_-EHC-_, *_-IHC-_, *_-R̥HC-_, and *_-EHIC-_ (syllabified as *_-EHI̯C-_ according to Illych-Svitych). Thus Latv. _duõna_ 'hunk of bread', Lith. _dúona_ 'bread' < *_d^{h}oH-néh_2_ (cf. Skt. _dhānā́ḥ_ (pl.) 'grain'), Latv. _grĩva_ 'river mouth' < *_g^{w}riH-u̯éh_2_ (cf. Skt. _grīvā́_ 'nape of the neck'), Latv. _pil̃ns_, Lith. _pìlnas_ 'full' < *_pl̥h_1-nó-_ (cf. Skt. _pūrṇáḥ_ 'full'), Latv. _kaũls_ 'bone', Lith. _káulas_ 'bone, stalk, staff' < *_keh_2u-ló-_ (cf. Gk. καυλός 'stalk, core, staff'). Compare Latv. _tiêvs_ 'thin' < *_tenh_2-u̯ó-_ (cf. Gk. τανaός 'long, high'), SCr. _mêso_ 'meat' < *_mēmsó-_ (cf. Skt. _mā́ṁsám_ 'meat'), which do not show retraction.[16]

Hirt's law resulted in a distinction between fixed barytone accent (retracted oxytone or retained barytone root accent) and mobile accent (retracted oxytone or advanced barytone in some forms) in Balto-Slavic noun paradigms. Fixed barytone accent in Balto-Slavic compared to oxytone accent in other languages is therefore evidence for a laryngeal.

Balto-Slavic also provides evidence for the presence of a laryngeal by means of vowel tone: a circumflex tone is (usually) evidence against an original laryngeal; an acute tone is in some circumstances evidence for a laryngeal.[17] There are broadly two positions on the origin of the acute tone; what one might term the 'traditional' view (as followed by e.g. Rasmussen and

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[16] For a summary of the different accent paradigms and their associated diacritics see Schrijver (1991a: 5–9).

[17] Note that the use of acute and circumflex here does not reflect the actual diacritic used to mark the accent in individual Baltic and Slavic languages. Thus, for example, Lith. _-ĩ-_ reflects a circumflex tone, but Latv. _-ĩ-_ and _-î-_ reflect acute tones (with barytone and mobile accent respectively).

Jasanoff) and an alternative approach, largely based on the work of Kortlandt. A very concise summary of the 'traditional' view is as follows: all Balto-Slavic long vowels were acute,[18] including long vowels that resulted from compensatory lengthening in the sequences *_-ERHC-_ > *_-ĒRC-_, *_-EI̯HC-_ > *_-ĒI̯C-_, *_-EHC-_ > *_-ĒC-_, *_-IHC-_ > *_-ĪC-_ and *_-R̥HC-_ > *_-ĪRC-_. After Osthoff's law, *_-ĒRC-_, *_-ĒI̯C-_ and *_-ĪRC-_ became *_-ERC-_, *_-EI̯C-_ and *_-IRC-_ but retained acute intonation. Therefore an acute tone is evidence for an original laryngeal only in *_-ER-_, *_-EI̯-_ and *_-IR-_ sequences: *_-ERHC-_ > *_-ĒRC-_ > *_-ERC-_, *_-EI̯HC-_ > *_-ĒI̯C-_ > *_-EI̯C-_, and *_-R̥HC-_ > *_-ĪRC-_ > *_-IRC-_ sequences have acute diphthongs (diphthongs in Balto-Slavic include tautosyllabic _-E/IR-_), while original *_-ERC-_, *_-EI̯C-_ and *_-R̥C-_ > *_-IRC-_ have circumflex diphthongs. Inherited *_-Ē-_ and *_-EH-_ (and *_-IH-_) are both acute. In the main, this is the approach followed here.

To give, for our purposes, a vastly reduced picture of the differences between Kortlandt's and the 'traditional' view: Kortlandt maintains that all Balto-Slavic acutes come from laryngeals. Thus, in addition to the sources of acute tone given above, he would distinguish between (acute) *_-Ē-_ < *_-EH-_ and circumflex *_-Ē-_ < *_-Ē-_. His explanation of some exceptions to Hirt's law is discussed on p. 128 ff. According to Kortlandt, the regular result of *_-EHIC-_ clusters in Balto-Slavic is *_-EI̯C-_ with acute tone, and this development is accepted also by Jasanoff (2008: 340–341 with fn. 4). For Rasmussen (1986b [1999]: 173, 174) the regular result is *_-EI̯C-_ without vowel-lengthening, and hence with circumflex tone. According to Rasmussen, Lith. _káulas_ reflects a _vr̥ddhi_ form *_kāu̯-lo-_, which seems implausible. It is surprising that a sequence *_-EHIC-_ would cause vowel lengthening, but there is some evidence for this development. However, the question of whether an acute diphthong can reflect *_-EHIC-_ is left open here.

It should be noted that Balto-Slavic short vowels were lengthened (and became acute) before voiced stops in Balto-Slavic (Winter's law). Also, Baltic was prone to what is known as 'metatony', that is a change from expected acute to circumflex tone (_métatonie douce_) or from circumflex to acute (_métatonie rude_). According to Derksen (1996), metatony in Baltic is due to a variety of stress retractions in East Baltic, and analogical spread of accent paradigms within word-types (and is therefore limited to certain stem stypes or words of a certain phonological shape). Rasmussen (1992b [1999]) explains _métatonie douce_ as a late change of the default tone of Baltic on long vowels from acute to circumflex, so that loan-words, new words, and words which moved their accent acquired the circumflex. *Métatonie rude* reflects early morphological lengthenings such as *vr̥ddhi*.

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[18] With the exception of final, non-laryngeally generated, long vowels, and long vowels in monosyllables, which became circumflex.

References (with much earlier literature): Derksen (1996), Illich-Svitych (1979), Jasanoff (2004a, 2004b), Kortlandt (1975, 1985, 1988, 1997, 2004), Olander (2009), Rasmussen (1986b, 1992a [1999], 1992b [1999]).

§ 10. *Anatolian*

Perhaps the most controversial topic with regard to the reflexes of the laryngeals in Anatolian is the question of initial *h_3-. According to Melchert (1994: 49–52, 64–74, 76–81), *h_3- is preserved as *ḫ-* in Hittite, Palaic and Cuneiform Luvian, on the basis firstly of Hitt. *ḫarganau-* 'palm, sole', cognate with Gk. ὀρέγω 'stretch out' < *$h_3$reĝ-, and because of the twofold reflexes of *h_3- > ø and *h_2- > *x-* in Lycian identified by Kimball (1987): Lyc. *epirije-*, Hitt. *ḫappariye-* 'sell' < *$h_3$ep- beside Lyc. *xñtawa-* 'rule', Hitt. *ḫant-* 'front' < *$h_2$ent-). This is now a widely accepted position.

Rasmussen (1992c [1999]) accepts the evidence for *ḫ-* from *h_3- in Hittite, but argues that ø is also sometimes the regular result on the basis of forms like Hitt. *utnē* 'land, country', beside Gk. οὖδας 'ground, floor', Arm. *getin* 'ground'. He suggests that this reflects the fact that *-h_3- is more stable than *-h_1- but less stable than *-h_2-. He does not provide environments for preservation or loss of initial *h_3-.

Kloekhorst (2006) comes up with the following rules for *h_3-: retained before *-e- (Hitt. *ḫark-* 'perish' < *$h_3$erg-, cf. OIr. *orcaid* 'slays'); lost before *-o- (Hitt. *ārk-* 'mount sexually' < *h_3erg^h-, cf. Gk. ὄρχις 'testicle'); lost before a sonorant (Hitt. *arta* 'stands' < *h_3r̥-to). This requires a rejection of the etymology of *ḫarganāu-* given above. Kloekhorst's only plausible example of *h_3o- is *ārk-*, but the root is probably *$h_1er\hat{g}^h$- (Watkins 1975). On the basis of the data collected by Kloekhorst, I would like to suggest as a hypothesis that *h_3- was retained (> *ḫ-*) before a low vowel in Hittite, but was lost before a sonorant or high vowel. In the absence of further research, and since the whole question remains uncertain, the presence or absence of initial *ḫ-* will not be taken as probative for or against *h_3- in this book.

§ 11. *Armenian*

Much has been written about the reflexes of initial laryngeals in Armenian; the discussions of Kortlandt (e.g. 1983, 1984, 1987) and Olsen (e.g. 1985, 1999) can be taken as representative. See also Polomé (1980) for a discussion of earlier literature.

According to Kortlandt, the reflexes of initial laryngeals in Armenian are as follows: *h$_1$e- > *e- (Arm. *em* ‘am’ < *h$_1$es-mi), *h$_2$e- > *ha- (*han* ‘grandmother’ < *h$_2$en-), *h$_3$e- > *ho- (*hot* ‘odour’ < *h$_3$ed-), *h$_1$C- > *eC- (*inn* ‘nine’ < *h$_1$neu̯n̥), *h$_2$C- > *aC- (*ayr* ‘man’ < *h$_2$ner-), and *h$_3$C- > *oC- (*atamn* ‘tooth’ < *h$_3$dont-). *Ho- gives *o- (*oṙ* ‘rump’ < *h$_1$or-).[19] Variations such as *harbenam* besides *arbenam* ‘become drunk’ are attributed by Kortlandt to preservation of two ablaut grades in the root.

Olsen supposes that *h$_1$e- gives *(h)e- (*heṙ* ‘spite’ < *h$_1$erh$_2$s-, *eṙam* ‘err’ < *h$_1$erh$_2$s-eh$_2$-i̯e/o-), *h$_2$e- gives *(h)a- (*hayc^{c}em* ‘ask’ < *h$_2$ei̯s-sk̂e/o-, *ayc^c* ‘investigation’ < *h$_2$ei̯s-sk̂-) and *h$_3$e- gives *(h)o- (*hot* ‘odour’). According to her, *Ho- gives *(h)o- (*hołm* ‘wind’ < *h$_2$onh$_1$-mo-, *orm* ‘wall’ < *h$_2$ork-(s)mo-). She argues that *HC- always gives *aC- (*aloǰ* ‘she-kid’ < *h$_1$l̥mb^{h}ih$_2$, *ayr*, *akn* ‘eye’ < *h$_3$k^{w}mn̥t-).

Since the existence of otherwise identical forms with and without initial *h-* is problematic for Kortlandt’s approach, it will be assumed that forms without *h-* can also reflect full grade *h$_{2/3}$e-; Olsen’s position is also followed with regard to *HC-, although the evidence is less clear.

Celtic Sources

§ 12. *Brittonic*

For the earliest stages of the Brittonic languages (Old British, Old Welsh, Old Breton, Old Cornish), see Jackson (1953: 31–75) and now Schrijver (2011a). Old British is known only from Classical texts and Latin inscriptions of Roman and post-Roman Britain, which include Celtic names.

Old Welsh dates from the 8th–12th centuries. The evidence consists of a few short continuous texts, and otherwise glosses and names. Middle Welsh covers the 12th–14th centuries and consists of a corpus of literature including poetry, tales and romances, laws and history (Evans 1964: xvi–xliv). Modern Welsh begins around the 15th century and continues to the present day. Schumacher (2011) is a survey of the history and grammar of Middle Welsh.

Old Breton is restricted largely to glosses on Latin texts and names, and can be dated from the late 8th century to the 11th. Early Middle Breton is also poorly attested until the 15th century, when we have literary texts and a dictionary, the *Catholicon*. Modern Breton is usually dated from the mid 17th century. On the history and dating of Breton see Jackson (1967: 1–3), and for surveys of the grammar see now Schrijver (2011b) and Ternes (2011a).

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[19] But all of Kortlandt’s examples of *Ho- either reflect *h$_1$o- or may also reflect *h$_3$e-.

Old Cornish is known only through glosses and place names. The main source is the *Vocabulum Cornicum*, a list of Latin words glossed in Cornish and Old English (Campanile 1961; a better edition is that of Graves 1962). Middle Cornish is represented by a few plays and a poem, all on religious themes, written between the 15th and 16th centuries. Late Cornish consists of texts written in the 17th and 18th centuries; some of the evidence consists of words noted down by Edward Lhuyd using his own orthography, and English orthography has in general had considerable influence on the spelling of the Late Cornish texts. Brief introductions to the sources of Cornish can be found in George (1984: 21–28), Lewis & Zimmer (1990: 1–5), and now, along with a grammatical survey, N. Williams (2011).

§ 13. *Irish*

For a good summary of the sources of Old and Middle Irish, see McCone (2005: 4–8). Old Irish material in manuscripts actually dating from the Old Irish period itself (the 8th and 9th centuries) consists of glosses (of varying length) on biblical and other texts, a small number of poems, one or two short continuous texts, and names in Latin texts (included in Stokes & Strachan 1901–1903). However, there are other texts which, although originally written during the Old Irish period, are found only in later manuscripts, and were therefore subject to copying errors and updating. Especially in metrical texts (e.g. the *Félire Óengusso*, written around 800 AD), but also in some prose texts (e.g. the *Bethu Brigte* from the 9th century, and *Immram Brain*) it is possible to identify Old Irish forms. Middle Irish consists of texts written between the 10th and 12th centuries; again, many Middle Irish texts are preserved in later manuscripts. An older form of the language is preserved in inscriptions written in the Ogam alphabet, some of which go back to the 5th century (GOI 4–11; McManus 1991). Unless otherwise specified, references to Irish texts use the abbreviations found in DIL.

§ 14. *Gaulish*

Gaulish is attested mainly in inscriptions written in the Greek and Latin alphabets from Transalpine Gaul (largely modern-day France) and in the Lugano and Sondrio scripts (derived from North-Etruscan alphabets) in Cisalpine Gaul (North Italy) from around the 3rd century BC until the early centuries AD. Some words and names are found in classical authors, and a small list of words, some of which are probably originally Gaulish, exists in a manuscript from the 8th century AD (Endlicher's Glossary). For an introduction to Gaulish see Lambert (1994a).

§ 15. *Lepontic*

Lepontic is found in Northern Italy in inscriptions from the sixth to the first century BC, in the Lugano alphabet. Since Lejeune (1971), Lepontic has often been considered a separate 'para-Gaulish' Celtic language, but Eska (1998) has argued strongly that Lepontic should be considered Gaulish (a view also taken by McCone 1996: 67–69). He considers that features which appear to distinguish it from Gaulish instead reflect the fact that Lepontic is attested so much earlier than our other Gaulish inscriptions. According to him, the Cisalpine Gaulish and Lepontic inscriptions should be considered together as a slightly different dialect from Transalpine Gaulish. Uhlich (1999, 2007), on the other hand, suggests that Lepontic (possibly including Cisalpine Gaulish) and Transalpine Gaulish should be considered different languages.[20] In truth, the evidence is still too slight for certainty. I am inclined to accept Eska's view, but the traditional distinction between (Trans- and Cisalpine) Gaulish and Lepontic is retained here for ease of comparison with other works. Given the relatively meagre attestation of Lepontic and Cisalpine Gaulish, none of the analyses presented here depend on Lepontic evidence.

§ 16. *Celtiberian*

Celtiberian is mostly known from inscriptions in Spain of the 2nd and 1st centuries BC, along with personal and place names found in classical sources. The majority of the inscriptions are written in the Iberian script, but some are written in the Latin alphabet. Because of the relative scarcity of Celtiberian evidence and the difficulty of understanding it, Celtiberian forms are not often given here.

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[20] But note that his major criterion, the separate development of Lepontic **-Vns* > **-Vnts* vs. **-Vns* > **-V̄s* is probably not correct; cf. Griffith (2005).

Structure of the Book

§ 17. *Outline*

Chapters II–V collect and discuss the Celtic evidence for the reflexes of the laryngeals according to environment. Chapter II deals with laryngeals at the beginning of a word, chapter III with laryngeals in the first syllable, chapter IV with laryngeals in non-initial syllables, and chapter V with laryngeals in absolute final position. Chapter VI discusses the reflexes of the laryngeals after diphthongs and before consonants, and two laws involving laryngeals, the Saussure effect and Eichner's law. Chapter VII discusses the apparent loss of laryngeals in compounds. Within the chapter, sections on each environment are split into introduction, discussion of material divided according to the apparent result of the cluster, and conclusion. Where there is no dispute as to the result of an environment, a conclusion is sometimes not given. Where there is very little evidence, introduction and conclusion may be omitted and the evidence provided and discussed under the heading 'material'. Chapter VIII provides the conclusion in the form of a summary of results and discussion of the evidence provided by laryngeal reflexes about the proposed Italo-Celtic sub-family.

CHAPTER TWO

WORD-INITIAL LARYNGEAL

#HeC-

§ 18. _Introduction_

There is no dispute that _*h_1e-_ gave _*e-_, _*h_2e-_ gave _*a-_, and _*h_3e-_ gave _*o-_ in Celtic, as in other Indo-European languages. Consequently, for reasons of space, only a few examples are given here. There will be no conclusion at the end of this section. In many cases, the only reason to posit an initial laryngeal is on the basis of its colouring effects or on the grounds of minimum root structure requirements. For discussion of Proto-Indo-European root structure see p. 9 f.

§ 19. _*h_1eC-_

1. OIr. _ech_ (m. _o_-stem), OB. _eb_ 'horse' < _*$h_1$ek̂u̯o-_, and their derivatives in MW. _ebaul_, W. _ebol_ (m.) 'foal, colt', MB. _ebeul_ (m.) 'foal', OC. _ebol_ gl. _pullus_, MC. _ebel_ (m.) 'foal, colt', Gaul. _Epona_ (theonym), are cognate with Skt. _áśvaḥ_, Lat. _equus_, OE. _eoh_ 'horse'.

§ 20. _*h_2eC-_

1. OIr. _agaid_ 'drives, impels', MW. _a_ (3sg.), _eyt_ (3sg. abs.), OB. _egit_ (3sg. abs.), MB. _a_ (3sg.), MC. _a_ (3sg.) 'goes' < _*age/o-_ < _*h_2eĝ-e/o-_ are cognate with Skt. _ájati_ 'drives', Arm. _acem_ 'lead', Gk. ἄγω 'drive, lead', Lat. _agō_ 'drive, lead', Toch. B _āśäṃ_ 'lead', ON. _aka_ 'travel' (LIV 255–256). OIr. _aiged_, MIr. _agad_ (f.) 'face, countenance' may also come from this root (LEIA A-23–24).

§ 21. _*h_3eC-_

1. OIr. _orcaid_ 'kills, slays', Gaul. _orge_ (impv.) 'kill' < _*orge/o-_, MW. _a-m-damorth_ 'has struck me' (pret., with infixed pronoun) < _*tu-ambi-orge/o-_, MW. _dygyfwrw_ (v.n.) 'batter' < _*tu-kom-orge/o-_, and OB. _treorgam_ gl. _perforo_ < _*tri-orge/o-_ < _*$h_3$erg-_ are cognate with Hitt. _ḫarakzi_ 'perishes, dies', Arm.

harkanem ‘strike’ (LIV 301; Schumacher 2004: 499).[1] Delamarre’s (2003: 244) derivation from a root _*per(g)-_ assumes a root enlargement _*-g-_ of uncertain origin (see also LIV 473); he does not explain the _o_-grade in the Celtic verb.

#HoC-

§ 22. _Introduction_

The usual result of _*h_1o-_ and _*h_3o-_ in Celtic, and in most Indo-European languages, is _*o-_; only a representative example of _*h_1o-_ is given here. However, it is sometimes argued that the result of _*h_2o-_ in Proto-Indo-European was _*a-_ (Mayrhofer 1986: 135, with literature; Lindeman 1997b: 45–46, 70–72); the Celtic evidence suggests that the result is _*o-_.

§ 23. _*h_1oC-_

1. MIr. _orb_ (m. _o_-stem) ‘patrimony; heir’ < _*orbo-_, OIr. _orbae_ (m. _i̯o_-stem) ‘patrimony, heritage’ < _*orb(i)i̯o-_ are cognate with Lat. _orbus_ ‘deprived of, orphan’, Gk. ὀρφανός, Arm. _orb_ ‘orphan’, Got. _arbi_ ‘heir’, Skt. _árbhaḥ_ ‘small, weak; child’. It is possible that _orb_ reflects _*$h_1$orb^h-o-_, on the basis of the comparison with OIr. _erbaid_ ‘entrusts’ (McCone 1999), but it is more likely that they reflect _*$h_3$orb^h-o-_ (Weiss 2006; see OIr. _erbaid_ p. 251).

§ 24. _*h_2o-_ > _*a-_

1. OIr. _ar_ (n. _o_-stem) ‘ploughing, tilling, cultivating’, MW. _ar_ (m.) ‘ploughed land, tilth, cultivated land; ploughing’ < _*aro-_ are derived by Matasović (2009: 42) from a _nomen actionis_ _*$h_2$orh_3-o-_. However, _*$h_2$erh_3-o-_ would also be possible, and a Celtic derivation from the verbal stem _*ar-i̯e/o-_ (MIr. _airid_ ‘plough’, p. 202) is quite likely.

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[1] Unless, of course, Hittite _ḫ-_ only comes from _*h_2-_ (see p. 14), in which case we are compelled to accept that the root must be _*$h_2$erg-_, and that the Celtic verb had _o_-grade, however it is to be explained (see Jasanoff 2003: 63–90 for a reconstructed type of present with _o_-grade).

§ 25. _*h_2o-_ > _*o-_

1. MIr. _ochair_ ‘edge, border, side’ (f. _r_-stem)[2] must come from _*okVri-_ < _*$h_2$ok̂-_. MW. _ochyr_, W. _ochr_ ‘side’ (f., m.) is not regular from _*okrV-_ or _*okVr-_ because this would give ^{x}_ogr_ or ^{x}_ogVr_ respectively. LEIA (O-6) suggests a loan-word from Irish into Welsh; OB. _ocerou_ (pl.) ‘sharp edges’ could be regular from _*oker-_ or also be a loan word. Probable cognates include OLat. _ocris_ ‘rocky hill’, Gk. ὄκρις ‘jagged point or prominence’, and, with _e_-grade, Gk. ἀκή ‘a point’, Skt. _áśriḥ_ ‘edge’, Lat. _ăcēre_ ‘to be sharp’ (IEW 21; LEIA O-6). Weiss (ms: 8–10) posits direct identification of _ochair_ with U. _ocar_ ‘city’ < _*okari-_ < _*$h_2$okr̥h_2-i-_, derived from _*$h_2$ek-reh$_2$_ (cf. Gk. ἄκρα ‘headland’). MW. _hogi_ (v.n.), W. _hogaf_ ‘sharpen, whet’ < _*$h_2$ok-ei̯e-_ (with unetymological _h-_; Schumacher 2000: 158) also comes from this root, although OW. _ocet_ gl. _raster_, W. _oged_ (f.) ‘harrow’, MB. _oguet_, B. _oged_ (f.) ‘harrow’ < _*oketā_ do not belong here, since they are probably to be connected with forms including Hitt. _akkala-_ ‘furrow’, which rules out _*h_2-_ (HED 1.23; despite e.g. Matasović 2009: 297).[3]

2. Gaul. _Ogmios_ (theonym) looks similar to Gk. ὄγμος ‘straight line, furrow, path’, and Skt. _ájmaḥ_ ‘march, passage’ < _*h_2oĝ-mo-_, to the root _*h_2eĝ-_ ‘drive’ (LIV 255–256; see OIr. _agaid_ p. 19).[4] This word is used in a trope ‘great path (of a heavenly body)’ in Vedic (_mahó ájmasya_) and Homeric Greek (μέγας ὄγμος), which may explain its use in a theonym in Celtic (Watkins 1995: 16; Delamarre 2003: 239).

3. MIr. _oí_ ‘sheep’ < _*ou̯i-_, MW. _euic_, W. _ewig_ (f.) ‘hind, doe’, OC. _euhic_ gl. _cerua_ < _*ou̯īkā_, Gaul. _Ouio-_ (p.n. element) are cognate with Luv. _hawi-_, Skt. _áviḥ_, Gk. ὄϊς, Lat. _ouis_ ‘sheep’. They go back to an acrostatic paradigm _*$h_2$ou̯-i-_, _*$h_2$eu̯-i-_ (on the basis of Toch. B _ā$_u$w_, Lyc. _xawa-_; Kimball 1987; Kim 2000, with earlier literature). Since _-aí-_ and _-oí-_ began to fall together in Old Irish, and the result of _i_-affected _*-a-_ and _*-o-_ are the same in the Brittonic languages, we cannot strictly tell whether these forms come from _*au̯i-_ or _*ou̯i-_. However, OIr. _ugaire_ ‘shepherd’ < _*ou̯i-garii̯o-_ is evidence for original _*ou̯i-_, since the first vowel in _*au̯i-_ would not have been subject to raising (Uhlich 1995: 27).[5]

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[2] According to Pedersen (1909–1913: 1.23). But this is probably secondary, after the type _athair_, etc.

[3] I am grateful to Craig Melchert for drawing this form to my attention.

[4] The legendary Irish chief of the _Tuatha Dé Danann Ogma_ cannot go directly back to _*ogm(i)i̯o-_; nor can his creation _ogum_ ‘ogam’ be exactly cognate with ὄγμος (McManus 1991: 151–152).

[5] I am grateful to David Stifter for pointing this out to me.

If OIr. _úan_, MW. _oen_ ‘lamb’ < *_og^{w}no-_ are the result of influence of the word for ‘sheep’ on *_ag^{w}no-_ ‘lamb’ (see p. 22), this also provides indirect evidence for Proto-Celtic *_ou̯i-_ < *_h$_2$ou̯i-_.

4. OIr. _ol_ (adv.) ‘beyond’ < *_ol-_ is cognate with Lat. _ultrā_ ‘beyond, on the far side’, and probably Lat. _ollus_, _olle_ ‘he, that one’. The connection with OIr. _aile_ (_i̯o-_, _i̯ā_-stem adj.) ‘other’, Lat. _alius_, Gk. ἄλλος, Goth. _aljis_ ‘other’ < *_h$_2$el-_ is probable, and consequently we can reconstruct *_h$_2$ol-_ (LEIA O-18; IEW 24–25; Schrijver 1991a: 51).

5. MIr. _opunn_ (_o-_, _ā_-stem adj.) ‘quick, swift, prompt’ could reflect *_obVsVndo-_. LEIA (O-26) raises the possibility of a connection with Gk. ἄφνω ‘unawares, suddenly’, ἄφαρ ‘straightaway, forthwith’, Skt. _ahnāya_ ‘straightaway, immediately’, OCS. _abьje_ ‘straightaway’. This would point to *_h$_2$eb^{h}-_, with _opunn_ from *_h$_2$ob^{h}-_ and _abьje_ from *_h$_2$ōb^{h}-_. However, since the formation of _opunn_ is obscure, and on account of the wide range of ablaut grades required, this etymology is doubtful (see Willi 2004 for a different etymology of ἄφνω and ἄφαρ). It may instead come from *_uss-bonn_, i.e. a compound of OIr. _bann_ ‘movement’ (Russell 1988: 98).

6. OIr. _úan_ (m. _o_-stem), MW. _oen_ (m., f.), MB. _oan_ (m.), OC. _oin_ gl. _agnus_, ‘lamb’ reflect *_ogno-_. Of the Indo-European cognates, Lat. _agnus_, Gk. ἀμνός reflect *_ag^{w}no-_; OCS. _agnę_ ‘lamb’ points to *_ag^{w}no-_ or *_og^{w}no-_ (via *_āgno-_ with Winter’s law), while OE. _ēanian_ ‘lamb’ is from *_ag^{wh}no-/og^{wh}no-_ or *_ak^{w}no-/ok^{w}no-_ if it belongs here at all (IEW 9; Ernout & Meillet 1979: 15; Schrijver 1991a: 39–40). On the basis of the _a_-vocalism of Greek and Latin we might reconstruct *_h$_2$eg^{w}no-_, implying *_h$_2$og^{w}no-_ for Celtic. Ablaut variation in an _o_-stem is a little unexpected (unless it is derived from another noun with paradigmatic ablaut). Perhaps Celtic *_og^{w}no-_ is due to influence from *_ou̯i-_ ‘sheep’ (LEIA U-8; see MIr. _oí_ above); at any rate, it does not necessarily go directly back to *_h$_2$og^{w}no-_.

7. OIr. _uile_ (_i̯o-_, _i̯ā_-stem adj.) ‘all, every, the whole’ < *_ol(i)i̯o-_ goes back either to *_h$_2$ol-(i)i̯o-_ (cf. Goth. _alls_, ON. _allr_, OE. _eall_, Osc. _allo_ ‘all’)[6] or to *_polh$_1$-(i)i̯o-_ (cf. Gk. πολύς ‘many’; IEW 800; LEIA U-17–18; Nussbaum 1997: 183, 186–192; Hamp 2000).

8. OIr. _uilen_ (f. _ā_-stem) ‘elbow; angle, corner’, OW., MW. _elin_ (m., f.) ‘elbow, forearm; angle, bend’, MB. _elin_, _ilin_, B. _ilin_ (m.) ‘elbow’, OC. _elin_ gl. _angulus_,

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[6] But Nussbaum (1997: 189–190 fn. 58) doubts that Osc. _allo_ belongs here.

gl. _ulna_ < _*ŏlēnā_, are cognate with OE. _eln_, OHG. _elina_, ON. _alin_ 'ell' < _*ŏlenā_, Goth. _aleina_ (acc. sg.) 'ell' (apparently from _*ŏlīnā_),[7] Lat. _ulna_ 'elbow' < _*ŏlVnā_, Skt. _aratníḥ_ 'elbow' < _*ElEtni-_, OPruss. _alkunis_, Lith. _alkū́nė_, OCS. _lakъtь_ 'elbow' < _*ŏl-k-_. However, long _*ō-_ appears in OPruss. _woaltis_, Lith. _uolektìs_, Latv. _uôlekts_ 'elbow'. The same variation in vowel length is also found in Gk. ὠλένη, ὠλήν 'elbow', ὠλλόν 'elbow, ell', ὀλέκρανος 'point of the elbow' and Arm. _owln/owłn_ 'spine, shoulder' < _*ōln-_ vs. _ołn_ < _*ŏln-_, with the same meaning (Lubotsky 1990: 131–132; Schrijver 1991a: 78–79; Müller 2007: 139–140).

The reconstruction of these forms is very uncertain. Lubotsky reconstructs an _l_-stem _*Heh$_3$-l-/*Hh$_3$-el-_ (assuming _*Hh$_3$el-_ > _*ol-_); for him, the Latvian broken tone requires the presence of a laryngeal after the vowel in the first syllable, but an original long vowel would probably have had the same effect (see p. 12 ff.). In support of this reconstruction, Lubotsky also adduces Toch. A _āle_ 'palm of the hand' < _*HH-l-ēn_.[8]

If it does belong here, Toch. A _āle_ could equally well go back to _*h$_2$el-ēn_, and Müller argues for this root for the 'elbow' words, on the basis of Gk. Hesych. ἄλαξ· πῆχυς and Hitt. _ḫaliya-_ 'kneel down, genuflect', which was connected to the 'elbow' words by HED (3.28–29). Kloekhorst (2006: 87, 2008: 273–274) doubts the connection of the 'elbow' words with Hitt. _ḫaliya-_, partly because he believes that they go back to _*Heh$_3$l-en-_ or _*h$_3$eHl-en-_, but partly because of the semantics: "the meaning 'elbow' is very consistent throughout the IE languages" (Kloekhorst 2008: 274). However, that ἄλαξ might belong here is far more plausible semantically, since πῆχυς means 'fore-arm'.

From the point of view of nominal formation, both suggested roots are problematic. Lubotsky's reconstruction (accepted by Schrijver) requires the existence of an _l_-stem (themselves extremely rare) which was subsequently turned into an _n_-stem. However, as Schrijver points out, such an _n_-stem would not be expected to contain a stem with ablaut of the type _*Hh$_3$-el-_.[9] Consequently, Schrijver argues that the Germanic, Latin and Celtic forms with _*ŏ-_ cannot come from _*Hh$_3$-el-_, but rather reflect an _o_-grade _*HoH-l-_

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[7] Scribal error (Schrijver 1991a: 78) or different suffix (Müller 2007: 139)?

[8] Hitt. _ḫaḫḫal-_, quoted by Lubotsky as possibly meaning 'palm of the hand', in fact means 'greenery, verdure, (wild) vegetation, brush, bush', and therefore does not belong here. It has no etymology (HED 3.3–5; Kloekhorst 2008: 267–268).

[9] It is not clear exactly what framework of nominal derivation Schrijver is using. The variation in the suffix _*-ĕ̄n-_ suggests an original hysterodynamic paradigm, which ought to have had nom. sg. _*Hh$_3$-l-ēn_, gen. sg. _*Hh$_3$-l̥-n-os_.

with pretonic shortening by Dybo's rule, or with a short vowel introduced from the original _l_-stem. Müller's root *_h_$_2$_el-_ seems a simpler starting point (and must be correct if Gk. Hesych. ἄλαξ belongs here), but again there is no obvious source for a lengthened _o_-grade in the root in an _n_-stem for forms like Gk. ὠλήν 'elbow', without resorting to influence from something like an acrostatic root noun with nom. sg. *_h_$_2$_ōl,_ acc. sg. *_h_$_2$_ol-m̥,_ gen. sg. *_h_$_2$_el-os._

On balance, a stem *_h_$_2$_ol-ēn-_ seems more plausible for Celtic than either *_Hh_$_3$_-el-ēn-_ or *_HoH-l-ēn-_, with shortening by Dybo's rule. But the origin of these forms is far too complex to be used in evidence.

9. MIr. _ussin, usine, uisin_ (f. pl.) 'the temples of the head' < *_ustines_ or *_ostines_ may be derived from *_ost-_ 'bone' (O'Rahilly 1957: 171), probably from *_h_$_2$_ost-_ (see MW. _eis_ p. 54). But raising of *_-o-_ before voiceless consonants is unusual (McCone 1996: 110–111, GOI 47–49), which makes the etymology uncertain.

§ 26. *_h_$_3$_oC-_

Except in a few specific morphological categories, it is seldom possible to tell the difference between *_h_$_3$_eC-_ and *_HoC-_. Therefore, except perhaps for MIr. _orb_ (see above p. 20), which may come from *_h_$_3$_orb_^{h}_-o-_, there are no certain examples to be discussed here.

§ 27. _Conclusion_

§ 25.1 MIr. _ochair_ < *_h_$_2$_ok̂Vri-_ and § 25.4 OIr. _ol_ < *_h_$_2$_ol-_ are good evidence that *_h_$_2$_o-_ gave *_o-_, against which there is no convincing counter-evidence.

_#HĒ-_

Introduction

Examples of *_h_$_2$_ē-_ (there are no examples of *_h_$_3$_ē-_) are given in the section on Eichner's law (p. 249 ff.). *_Hō-_ gives *_ō-_ in Proto-Celtic.

§ 28. *_HōC-_

1. OW. _ui_, MW. _wy_ (m.), MB. _uy, vy_, B. _vi_ (m.), OC. _uy_ gl. _ouum_, MC. _oy_ (m.) 'egg' < *_āu̯i̯o-_ (Schrijver 1995: 299) are cognate with Lat. _ōuum_, Gk. ᾠόν 'egg'. Although Schindler (1969) reconstructs *_ō-h_$_2$_uio-_, the correct preform is probably *_h_$_2$_ōu̯i̯o-_, a _vr̥ddhi_ derivation from *_h_$_2$_eu̯-i-_ 'bird' (Zair 2011).

#HeHC-

§ 29. _Introduction_

*_HeHC-_ clusters give long vowels, with colouring of *_-e-_ if one of the laryngeals is *_-$h_{2/3}$-_.

§ 30. _Material_

1. OIr. _áith_ (f. _i_-stem) ‘drying kiln’ < *_āti-_, MW. _odyn_ (f.) ‘kiln’ < *_ātinV-_ < *_$h_2$eh$_{(1)}$-ti-_ are probably cognate with Av. _ātar-_ ‘fire’ < *_ātr̥_, Lat. _āter_ ‘black’ < *_ātro-_, Lat. _ātrium_ ‘hall’ < *_ātr-i̯o-_ and Alb. _vatër_ ‘hearth’ < *_ātrā_.[10] These are all derived from an agent noun *_h_2eH-ter-_ ‘burner’ (Adams 1995: 209) or _nomen actionis_ *_h_2eH-tr̥-_ (Irslinger 2002: 198 fn. 214). The root is also found in Palaic _ḫāri_ ‘be hot’ (Adams 1995: 209; LIV 257). On the basis of Palaic _ḫ-_, and the _a_-vocalism in Latin we can reconstruct *_h_2eH-_; the second laryngeal may be *_-h_1-_ (Harđarson 1994: 39 fn. 35; Irslinger 2002: 198 fn. 213; LIV 257).

2. OW. _diauc_ gl. _segnem_, MW. _diawc_, W. _diog_ (adj.) ‘lazy, indolent, slothful, sluggish, slow’, OB. _diochi_ gl. _segnitia_ (= MB. _dieguy_ ‘slowness’), MB. _dieuc_, _diec_, B. _diek_ (adj.) ‘lazy, slow’, OC. _dioc_ gl. _piger_ < *_dī-ōku-_ are cognate with Skt. _āśúḥ_, Gk. ὠκύς ‘fast’, Lat. _ōcior_ ‘faster’. There are several possible reconstructions; Matasović (2009: 97–98) mentions doubtfully a connection with *_$h_1$ek̂u̯o-_ ‘horse’, which would require *_h_1ōk̂-u-_ by _vr̥ddhi_ (presumably on the basis of something like an unattested *_$h_1$ok̂-u-_ ‘swiftness’). However, _vr̥ddhi_ derivations are invariably thematic, so this is unlikely. Since a lengthened grade in a _u_-adjective is unmotivated (as noted by Schrijver 1991a: 55), and since _u_-adjectives usually show _e_-grade rather than _o_-grade (Sihler 1995: 132–133), *_$h_{1/3}$e$h_{1/3}$k̂-u-_ is the most likely reconstruction.

#HIC-

§ 31. _Introduction_

It does not seem to have been doubted that the regular reflex of an initial laryngeal before syllabic *_-i-_ or *_-u-_ is loss of the laryngeal without leaving any traces, as before a low vowel. The majority of the evidence indeed suggests this, but there is one form which might suggest a different result.

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[10] Despite the doubts of LEIA (A-54).

§ 32. _*HiC-_ > _*iC-_

1. MW. _ennyn_ (3sg.) ‘kindles, sets on fire; stirs up’ < _*ande-ind-e/o-_ < _*h$_2$i-n-d^h-_ is cognate with Skt. _inddhé_ ‘kindles, ignites’, to the root _*h$_2$ei̯d^h-_ ‘ignite’ (cf. Gk. αἴθω ‘kindle’, Lat. _aedēs_ ‘room, temple’; LIV 259; Schumacher 2004: 374–375).

2. MIr. _escaid_ ‘cleansing (esp. of removing vermin)’ < _*iskāti-_ is derived from _*h$_2$is-sk̂e/o-_,[11] if related to Skt. _iccháti_ ‘seeks’, OHG. _eisca_ ‘question’, Arm. _hayc^{c}em_ ‘seek, request, demand’ < _*h$_2$ei̯s-_ (LIV 260; Matasović 2009: 172–173).

3. OIr. _ethae_ (pret. pass.) ‘has been gone’ < _*ito-_ is derived from _*h$_1$i-to-_ (McCone 2006a: 146–147), past participle of _*h$_1$ei̯-_ ‘go’ (cf. Gk. εἶμι ‘go’; LIV 232–233; Schumacher 2004: 375–376).

§ 33. _*HuC-_ > _*uC-_

1. MIr. _aus_, _us_, _ús_ ‘adventures, story, tidings’[12] is derived by Stokes (1893: 120), taking the form _us_ as primary, from _*ud-tu-_. LEIA compares Skt. _vádati_ ‘raises the voice, speaks’, Gk. ἀυδή ‘voice, speech’ < _*h$_2$u̯edH-_ (final laryngeal on the basis of Skt. _uditáḥ_ (p.p.), _úditiḥ_ ‘speech’; IEW 76–77; LIV 286).[13] Such a reconstruction would imply _*h$_2$ud-_ > _*ud-_ (_*au̯d-tV-_ would have given ^{x}_úas_). However, variation between _au-_ and _u-_ is more usually the result of _u_-affection of _*-a-_ (GOI 51–52, 57), so we should probably reconstruct original _*assu-_ for MIr. _aus_, _us_, which therefore does not belong here.

2. MIr. _fel_ ‘evil’ is very badly attested (DIL F-70). If it is real, it is cognate with Goth. _ubils_ ‘evil’ < _*upelo-_, Hitt. _ḫuwappa-_ ‘bad’ (Watkins 1969b: 30). Consequently, it is possible that _fel_ reflects _*h$_{2/3}$upelV-_. IEW’s (1107) derivation from the preposition _*(h$_1$)upo-_ (see OIr. _fo_ below) is not likely.

3. OIr. _fo_ (prep.) ‘under’, OW., OB. _guo-_, MW. _gwa-_ (prefix) < _*u̯o_ < _*uö_ is cognate with Gk. ὑπό ‘under’. On the basis of the full grade found in OIr. _ós_ ‘over, above’ < _*eu̯psV-_, Goth. _iupa_ ‘above’ < _*eu̯ppo_ the preform might be _*h$_1$upo_.[14]

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[11] MIr. _escaid_ is a verbal noun, apparently the end of a chain of derivation: the verb was presumably _*iskāi̯e/o-_, denominative to a noun _*iskā_, itself probably deverbative to the primary verb _*is-sk̂e/o-_.

[12] S.v. _ús_ in LEIA (U-30).

[13] LEIA also compares OCS. _vaditi_ ‘accuse’, which may also belong here or come from _*u̯ed^{h}h$_1$-_ ‘hit’ (LIV 660).

[14] But note that according to Peters (1980), _*h$_1$upo_ would give Gk. ^{x}εὐπό, so this reconstruction is not certain.

4. OIr. _fraig_ (f. _i_-stem) 'interior wall (of a house)', MW. _achure_, W. _achwre_ (m., f.) 'roof, palisade, fence, hedge' < *_u̯regV-_[15] < *_$h_2$ureg-_ is compared with Skt. _vrajáḥ_ 'fold, stall, enclosure', Gk. Hom. ἐέργω, Att. εἴργω, εἵργω 'shut in, out; enclose' by IEW (1168; Matasović 2009: 430). According to LIV (290–291), ἐέργω comes from *_h_2u̯erg-_ by assimilation from *ἀέργω (cf. Cretan ἄερσαν vs. Ion. ἐέρση 'dew'; LIV 291–292), on the basis of Hitt. _ḫurki-_ 'wheel'. Matasović prefers to reconstruct *_h_1u̯erg-_. But the Greek evidence is messy, since there also seems to be a version of this root without initial laryngeal (*_u̯erg-_) found in Gk. ἔργω 'shut in, out; enclose', to which LIV (686) attributes OIr. _fraig_, Skt. _vrajáḥ_ (with _schwebeablaut_). So OIr. _fraig_ may represent *_u̯reg-i-_ rather than *_$h_{1/2}$ureg-_.

5. OIr. _fros_, _fras_ (f. _ā_-stem) 'shower' is problematic; it is not clear which is the original form, since the word is only attested in later manuscripts, and *_-o-_ and *_-a-_ fluctuate in later Middle Irish (GOI 53). See Irslinger (2002: 382) for an overview of suggested explanations. The root in question is clearly *_h_2u̯ers-_ 'rain' (Skt. _ávarṣīt_ (aor.) 'rained', Gk. Cret. Hesych. ἄερσαν, Hellenistic ἀέρσην (acc. sg.) 'dew'; LIV 291–292).[16] The assumption (e.g. IEW 81) of a preform *_u̯ros-tā_ requires _schwebeablaut_ and an _o_-grade (otherwise only attested once in a Celtic _tā_-stem: Irslinger 2002: 382). The alternative *_u̯r̥s-tā_ ought to have given ^{x}_fart_ (cf. _tart_ 'thirst' < *_tr̥s-tu_), but according to Matasović (2009: 10, 429), there was a 'liquid metathesis' in Proto-Celtic of *_-ar-_ and *_-al-_ to *_-ra-_ and *_-la-_ between a labial and another consonant. If Matasović is correct, _fros/fras_ is an example of *_Hu̯V-_ rather than *_HuC-_. At any rate, the picture is not clear enough for the form to be good evidence.

6. OIr. _oss_ (m. and n. _o_-stem) 'ox, deer, stag' < *_ukso-_, MW. _ych_ (m.) 'ox', OB. _ohen_, MB. _ouhen_ (pl.), B. _oc'hen_ (pl.) 'oxen', MC. _oghen_ (pl.) 'oxen' < *_uksen-_ are cognate with Skt. _ukṣā́_ 'bull', Goth. _auhsa_, OE. _oxa_, OHG. _ohso_, Toch. B _okso_ 'ox'. According to EWAIA (1.210) these come from *_$h_2$uks-ēn_, to the root found in Skt. _úkṣant-_ 'growing', Gk. αὔξομαι 'increase, strengthen' (*_h_2u̯eks-_, LIV 288–289). Although this connection is perfectly plausible, it cannot be treated as certain without probative evidence for an initial *_h_2-_ in the word for 'ox'.

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[15] The Irish _i_-inflection is probably secondary, since _i_-affection would have resulted in Welsh ^{x}_achwry_.

[16] Or *_h_1u̯ers-_, according to Pronk (2009 [2010]: 177), who sees ἄερσαν as analogical on ἀήρ 'mist, clouds, atmosphere' compared to regular ἔερση.

7. OIr. *·ucai* (*do·ucai* 'understands') probably reflects **h_1u-n-k-e/o-*, a nasal-infix present to **$h_1$eu̯k-* 'accustom oneself to, learn' (cf. Arm. *owsanim* 'learn', Lith. *jùnkstu* 'accustom myself'; LIV 244–245; Schumacher 2004: 652). Initial **h_1-* is based on forms like Lith. *jaukùs* 'accustomed to humans, tame' < **eu̯k-* (IEW 347), with initial *j-* carried over into the zero-grade nasal present.

8. MIr. *Uisnech* (pl.n.) < **ostinākV-* or **ustinākV-* is derived by Hamp (1974: 255–260) from **us-tin-āko-* 'place of the hearth', with the first element being the zero-grade of the root **$h_1$eu̯s-* 'burn, singe' (cf. Gk. εὕω 'singe', Lat. *ūrō* 'burn'; LIV 245). Semantically this seems reasonable, but place-names are particularly difficult to etymologise;[17] O'Rahilly's (1957: 171) etymology of it as **ostināko-* 'the angular place', with the root **ost-* 'bone' (probably < **$h_2$ost-*; see MW. *eis* p. 54), is less good, because raising of **-o-* before voiceless consonants is unusual (McCone 1996: 110–111, GOI 47–49).

§ 34. **HuC- > *au̯C-*

1. MW. *awel* (f.) 'breeze, light wind', MB. *auel, avel*, B. *avel* (f.) 'wind', OC. *auhel* gl. *aura*, MC. *awel* (f.) 'weather, wind, breeze, gale', perhaps Gaul. *Suauelos* (p.n.; Delamarre 2003: 238), come from **au̯elV-*.[18] MIr. *a*(*h*)*el* 'breeze' is probably a loan word (LEIA A-20; IEW 82). GOI (1946: 125) suggests that OIr. *oal* 'bucca' (Sg. 22b8) is the regular cognate of W. *awel*, but **au̯elā* ought to have given OIr. ^{x}*auel* > ^{x}*uel* (Uhlich 1995: 17). The closest cognate form is Gk. ἄελλα 'stormy wind, whirlwind' < **au̯eli̯a*. The same root also appears in MW. *awen* (f.) 'poetic gift, inspiration' and MIr. *aí* (m. *t*-stem) 'poetic inspiration' < **au̯et-s* (LEIA A-19; Irslinger 2002: 57).[19]

There is a very obvious semantic connection to be made with **h_2u̯eh_1-* 'blow' (Hitt. *ḫuwant-* 'wind', Skt. *vā́ti* 'blows', Gk. ἄησι 'blows'; LIV 287). This suggests three possibilities: the first is a root **$h_2$eu̯h_1-* with *schwebeablaut*, which is unattractive (although accepted without comment by Joseph 1980: 44–48) because there is no other Indo-European evidence for *schwebeablaut* in this root.[20] Peters (1980: 195–196 fn. 152) has at least provided a morphological motivation for (_vr̥ddhi_) _schwebeablaut._ He assumes a derivation from an unattested *_h$_2$uh$_1$-el_ 'blow, a blowing' to *_h$_2$eu̯h$_1$-el-ih$_2$_, giving Gk. ἄελλα and, shifted into the _ā_-stems, Proto-Celtic *_au̯elā_.[21] But this is less likely also to be the explanation for MIr. _aí_ and W. _awen_ (if these last two belong here), which would then have to be separate _vr̥ddhi_ derivations.

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[17] Acceptance of Hamp's functional connection of *Uisnech* on the North border of the *Uí Tuirtri* with Welsh *Pumlumon* and Roman Vestal and Vedic fire rituals depends entirely on one's attitude to this sort of cultural reconstruction.

[18] MW. *awydd* 'heftiger Windstoß', OC. *awit* 'air', given by IEW (82) under this root are ghost words.

[19] Although Watkins (1995: 117) connects them instead to the root **au̯-* 'see' also found in Hitt. *autti* (2sg.) 'see', Lat. *audiō* 'hear', Gk. ἀΐω 'perceive, hear'. LIV (243, 288) separates these forms, deriving the Hittite form from an old perfect of a root **$h_1$eu̯-*, and the Greek and Latin forms from a root **h_2u̯eis-*.

The second possibility is to reconstruct a different root, *_h$_2$eu̯-_, as the basis for the Celtic (and Greek?) forms, which has nothing to do with *_h$_2$u̯eh$_1$-_ 'blow'. Given the semantics, this is implausible. The third possibility is that *_au̯el-_ comes directly from *_h$_2$uh$_1$-el-_; such a development would require more evidence to be really convincing, however.

§ 35. _Conclusion_

All three examples of *_HiC-_ (§ 32.1 MW. _ennyn_ < *_h$_2$i-n-d^h-_, § 32.2 MIr. _escaid_ < *_h$_2$is-sk̂e/o-_, § 32.3 OIr. _ethae_ < *_h$_1$i-to-_) suggest that it gave *_iC-_ (although there is no evidence for *_h$_3$iC-_). It seems probable that *_HuC-_ gave *_uC-_, although the only example which is absolutely certain is § 33.7 OIr. _·ucai_ < *_h$_1$u-n-k-_. This would also agree with the reflex of *_HiC-_.[22] Therefore, § 34.1 MW. _awel_ probably does not represent the regular result of *_h$_2$uh$_1$-el-i̯eh$_2$_.

_#HR̥C-_

§ 36. _Introduction_

Views on the development of laryngeals before syllabic sonorants (*_HR̥C-_) have become more nuanced over time, but the precise details of the development remain cloudy. The difficulty is in part due to the variation in reflexes of syllabic sonorants in Celtic when not in an environment involving a laryngeal. As is well known, syllabic *_-r̥-_ and *_-l̥-_ gave *_-ri-_ and *_-li-_ before plosives and *_-m-_, and *_-ar-_ and *_-al-_ before all other consonants (including *_-n-_), and in word-final position.[23] By contrast, *_-m̥-_ and *_-n̥-_ always gave

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[20] Gk. ἄελλα 'whirlwind' can reflect *_h$_2$uh$_1$-el-_.

[21] This is slightly surprising, since we would expect an original _devī́_ noun either to retain long *_-ī_ or to generalise the weak stem in *_-i̯ā-_ in Celtic (see GOI 187).

[22] Although it does not necessarily follow that *_HiC-_ and *_HuC-_ must have developed in the same way. Peters (1980: 5–125, especially 113–125) argues that *_HiC-_ gave Greek *_iC-_, while *_HuC-_ gave *_Eu̯C-_ (but see Pronk 2011a: 311).

[23] This picture is now challenged by Hill (forthcoming, esp. 232–239), who argues that *_-L̥-_

*_-am-_ and *_-an-_ regardless of the following consonant (McCone 1996: 49, 70–79; Schumacher 2004: 125–126).

This variation in the reflexes of the syllabic sonorants, combined with apparently inconsistent evidence, has allowed several different rules for the development of the sequence *_HR̥C-_ to be formulated. Joseph (1982: 51) mentions a rule *_HR̥C-_ > *_aRC-_. Ringe (1988: 429–433) concludes that since the regular reflex of syllabic nasals in Celtic was *_-aN-_, it is not possible to say whether the laryngeals were vocalised or simply lost in the cluster *_HN̥C-_ (as also noted by Schrijver 1991b: 14). He suggests that an alternative to a rule *_HL̥C-_ > *_aLC-_ is that *_aL-_ was the regular reflex of word-initial liquids (i.e. *_HL̥C-_ > *_L̥C-_ > *_aLC-_). This would then be parallel to the development of word-final *_-L̥_ > *_-aL_.

McCone (1996: 52) argues that *_h_$_1$_L̥C-_ became *_L̥C-_ (> *_Li-_ before a stop and *_-m-_, *_aL-_ before other consonants), while *_h_$_{2/3}$_L̥C-_ gave *_aLC-_. He is followed by Schumacher (2004: 126, 135), who only specifies *_h_$_2$_L̥C-_ > *_aLC-_, presumably due to lack of evidence for *_h_$_3$_L̥C-_.

Matasović (2009: 11) provides a completely different conception, arguing that *_HL̥C-_ always gave the same result as *_L̥C-_ (i.e. > *_LiC-_ before a stop and *_-m-_, otherwise *_aLC-_).

Since so many interpretations of the data are possible, and in order to avoid prejudging the outcome of the discussion, the evidence will be split into two categories: first to be collected will be cases of *_HR̥C-_ > *_RiC-_, followed by cases of *_HR̥C-_ > *_aRC-_.[24]

§ 37. *_HR̥C-_ > *_RiC-_

1. OIr. _díriug_ (_u_-stem adj.) 'straight, direct' may show *_h_$_3$_r̥ĝ-_, at least if we follow LIV's (304–305) reconstruction of *_h_$_3$_reĝ-_ meaning both 'stretch out' and 'direct' (see OIr. _rigid_ below). The addition of the preverb may be under the influence of Lat. _dīrectus_, but otherwise this represents a preform *_rig-u-_, which formally and semantically can be directly cognate with Skt. _r̥júḥ_, Av. _ərəzuš̌_ 'straight, right, correct' < *_h_$_3$_r̥ĝ-u-_. If the Irish form also came from

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also developed to *_-Li-_ before *_-n-_. The debate on this detail does not impinge on the present discussion.

[24] In principle another development *_h_$_{1/2/3}$_R̥C-_ > *_e/a/oRC-_ might be thinkable, as in Greek and perhaps Latin (Rix 1970; Schrijver 1991a: 56–72). However, the only evidence is OIr. _ortae_ (pret. pass.) 'was slain' which eventually reflects a past participle *_orgto-_, to a root *_h_$_3$_erg-_ (see OIr. _orcaid_ p. 19). Consequently, we could reconstruct *_orgto-_ < *_h_$_3$_r̥g-to-_. However, in this case the form is certainly due to remodelling after the present stem.

the zero grade it would show *_h$_3$r̥ĝ-u-_ > *_rigu-_. However, Celtic could have generalised the full grade *_h$_3$reĝ-u-_, which would also give Irish _-riug_ by vowel raising.

2. MIr. _lem_ (m. _o_-stem) ‘elm-tree’ < *_limo-_ or *_lemo-_ could be compared with Lat. _ulmus_ ‘elm-tree’ < *_h$_1$(e/o)lmo-_, OHG. _elm_(_-boum_) ‘elm-tree’ < *_h$_1$elmo-_ and ON. _almr_ ‘elm-tree’ < *_h$_1$olmo-_ (Schrijver 1991a: 66; EWA: 1055–1060). This would suggest Proto-Celtic *_h$_1$l̥mo-_ > *_limo-_. However, MW. _llwyf_ (pl., m.) ‘elm(-tree)’ < *_lei̯mV-_ suggests that _lem_ < *_limo-_ has the zero grade of that root (IEW 309; de Bernardo Stempel 1999: 246), and cannot be used as evidence for *_h$_1$L̥C-_.[25]

3. OIr. _ríched_ (m. and n. _o_-stem) ‘heaven’ has usually been reconstructed as *_rīgo-sedom_ ‘royal seat’ (or *_rīgi̯o-_, *_rīgi-_; LEIA R-28). However, as Stifter (2004) shows, such a reconstruction is formally impossible, and semantically and derivationally implausible. He prefers to reconstruct *_rik^w-eto-_, connecting it to the same root as Skt. _arkáḥ_ ‘ray, light, gleam; song, incantation’, MIr. _erc_ ‘heaven’ < *_h$_1$erk^w-_ (IEW 340; LEIA R-29; LIV 240–241). This requires a development *_h$_1$r̥k^w-eto-_ ‘the shining thing’ > *_rik^w-eto-_, with analogical lengthening of the first vowel by analogy with OIr. _rí_ ‘king’. Stifter’s etymology is certainly preferable to previous attempts, and it may well be correct. But since it requires the appeal to analogy to explain the long vowel, it cannot be used as decisive evidence here.

4. OIr. _richt_ (m. _u_-stem) ‘shape, form, guise; condition’, MW. _rith_, W. _rhith_ (m., f.) ‘shape, form, figure; look, appearance’, OB. _ar-rith_ gl. _penace .i. imago pulcherrima_ < *_rixtu-_ are usually reconstructed as *_pr̥p-tu-_, with the same root as Gk. πρέπω ‘shine forth, appear, be clearly seen’, Arm. _erewim_ ‘appear’, perhaps OHG. _furben_ ‘clean, cleanse, wipe’ (IEW 845; LEIA R-29; LIV 492). However, Ó Flaithearta (forthcoming) observes the rarity of Indo-European roots with two homorganic stops, and suggests that the Armenian and Greek words in fact go back to a root *_k^{w}rep-_ found in Skt. _kŕ̥pā_ (instrumental sg.) ‘beautiful appearance, beauty, splendour’, Av. _kərəp-_ ‘form, appearance, body’, MIr. _crí_ ‘body’ (EWAIA 1.393), and that the Germanic forms are semantically too different to be connected. He therefore concludes that an alternative etymology should be accepted, connecting _richt_ to Skt. _arkáḥ_

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[25] David Stifter (p.c.) suggests to me that MW. _llwyf_ could be a secondary _vr̥ddhi_ derivative from a Celtic ‘pseudo-root’ *_limo-_ < *_h$_1$l̥mo-_. Although this should not be ruled out, I think it is too speculative to allow MIr. _lem_ to be used as evidence for *_HR̥C-_ > *_RiC-_.

‘ray, light, gleam; song, incantation’, MIr. _erc_ ‘heaven’ < _*$h_1$erk^w-_ (see OIr. _ríched_ above). If this were correct, _richt_ would come from _*h_1r̥k^w-tu-_, but the etymology is not certain.

5. MIr. _rig_ (f. dental-stem) ‘fore-arm’ < _*riget-_ is ambiguous between the roots _*$h_3$reĝ-_ ‘direct in a straight manner, stretch out’ or _*rei̯ĝ-_ ‘stretch (oneself)’ (LIV 304–305, 503; LEIA R-29, and see OIr. _rigid_ below). De Bernardo Stempel (1999: 172 fn. 108) argues that it comes from the former. The semantics do not seem so easily distinguishable to the present writer. If de Bernardo Stempel is right, then this word is evidence for a change _*h_3r̥C-_ > _*r̥C-_, but this is only possible, rather than certain.

6. OIr. _·riga_, _·rega_ (fut.) ‘will go’ < _*rig-e/o-_[26] is derived by McCone (1991b: 174–176, 1996: 52) from _*h_1r̥ĝ^h-e/o-_ to the root _*$h_1$erĝ^h-_ found in MIr. _eirgg_ (impv.) ‘go’, OHitt. _arkatta_ ‘mounts’, and Gk. ἔρχομαι ‘come, go’ (LIV 238–239). In fact, Gk. ἔρχομαι could come from _*h_1r̥-sḱe/o-_ to a root _*$h_1$er-_ (cf. Skt. _r̥ccháti_ ‘reaches’; LIV 238), but _eirgg_ guarantees the initial laryngeal on root-structure grounds (see p. 9 f.).

7. OIr. _rigid_ ‘stretches (out), directs, rules’ < _*rig-e/o-_ has somewhat controversial origins. It must be distinguished, in the first place, from OIr. _a-t·raig_ ‘raises oneself, rises’ < _*eks-rege/o-_ < _*$h_3$reg-e/o-_ (Gk. ὀρέγω ‘reach, stretch’, Lat. _ērigo_ ‘set up, erect’; LIV 304–305; see p. 51) and from OIr. _·rig_ (in e.g. _con·rig_ ‘binds’) < _*rig-e/o-_ (Lat. _rigeō_ ‘am fast, stiff’; LIV 503). However, _rigid_ and _·rig_ are formally identical in all parts of the paradigm, with the exception that _rigid_ is never found with preverbs, whereas _·rig_ is only found with them.

McCone (1991a: 8–11) posits three roots: _*$h_3$reĝ-_ ‘stretch (out)’, which formed a full-grade thematic present and gave OIr. _a-t·raig_, Gk. ὀρέγω ‘reach, stretch’, Lat. _ērigo_; _*rei̯g-_ ‘bind’, which formed a zero-grade thematic present _*rig-e/o-_ > OIr. _·rig_, Lat. _rigeō_; and _*($h_{1,2}$)reĝ-_ ‘direct, rule’, which formed an athematic Narten present _*($h_{1,2}$)rē̆ĝ-_ > Skt. _rā́ṣṭi_ ‘reigns, rules, beams’, and, with thematisation of the weak stem, gave Lat. _regō_ ‘rule, govern, direct’. This paradigm gave Celtic strong _*rīg-_, weak _*reg-_ which was levelled to _*rīg-_, _*rĭg-_, and then thematised from the weak stem (for more on this secondary ablaut see McCone 1991b: 46). The resulting _*rĭge/o-_ ‘direct, rule’ was formally identical outside the present stem to _*rege/o-_ ‘reaches, stretches’ < _*h$_3$reĝ-e/o-_, which led to a confusion of semantics and loss of unprefixed _*rege/o-_. Proto-Celtic _*rige/o-_ now meant both ‘rules’ and ‘reaches, stretches’. However, the present stem was identical to _*rige/o-_ ‘binds’, and this led to the loss of the synchronically anomalous non-present stems, which were replaced by those of _*rige/o-_ ‘binds’ (i.e. as though from a root _*rei̯g-_ rather than _*reg-_, e.g. _reraig_ (pret.) < _*re-roi̯g-_).

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[26] OIr. _·riga_, _·rega_ is inflected as a future, and is suppletive to OIr. _téit_ ‘goes’, but it was originally a thematic present. That the addition of the _*-ā-_ (< _*-āse/o-_) suffix was late is shown by the variation in the root vowel, which is due to lowering of _*-i-_ by _*-o-_ in the following syllable: thus _*rig-e-_, but _*reg-o-_ (Schumacher 2004: 549–550).

Schumacher (2004: 543–546) objects to this explanation because it requires the assumption of a new root (_*(h$_{1,2}$)reĝ-_)[27] and because of the analogical explanation of the non-present forms. Indeed, the loss of _*rege/o-_ ‘stretches’ on the basis of the non-present forms, and then the loss of these by analogy with _*rige/o-_ ‘binds’, seems particularly far-fetched.

Schumacher (following LIV 304–305, 503) therefore sets up three roots: firstly _*h$_3$reĝ-_ ‘direct in a straight manner, stretch out’ (which forms a Narten present) > Skt. _rā́ṣṭi_, Gk. ὀρέγω, Lat. _ērigo_, OIr. _a-t·raig_ (with generalisation of weak stem in Greek, Latin and Celtic); secondly _*rei̯ĝ-_ ‘stretch (oneself)’ > OIr. _rigid_ ‘stretches (out), directs, rules’ < _*riĝ-e/o-_, Lith. _réižiu_ ‘stretch, tighten’ < _*rei̯ĝ-e/o-_, OE. _rǣcean_ ‘reach’ < _*roi̯ĝ-ei̯e-_; thirdly, _*rei̯g-_ ‘bind’ > OIr. _·rig_, Lat. _rigeō_, MHG. _ricken_ ‘tie on’.

Schumacher’s hypothesis seems more likely than McCone’s, since it requires less in the way of analogical remodelling. However, the distinction between the two roots reconstructed as _*rei̯ĝ-_ and _*rei̯g-_ is not very sharp. With the exception of OIr. _rigid_ ‘stretches (out), directs, rules’, they could all belong to a single root _*rei̯ĝ-_ ‘stretch, tighten, bind’. We could remove _rigid_ ‘stretches (out), directs, rules’ from this group if we hypothesise that it belongs instead to _*h$_3$reĝ-_ ‘direct in a straight manner, stretch out’, and that _*h$_3$r̥ĝ-_ gave _*riĝ-_ regularly in Proto-Celtic. Zero-grade _*h$_3$r̥ĝ-e/o-_ > _rigid_ would then continue the semantics of _*h$_3$reĝ-_ directly, while the semantics of _*eks-h$_3$reĝ-e/o-_ > _a-t·raig_ ‘raises oneself, rises’ are clearly determined by the preverb (cf. Lat. _ērigo_ ‘set up, erect’ vs. _regō_ ‘guide, direct’). There was then well-motivated analogical (but not semantic) remodelling of the non-present stem of _rigid_ ‘stretches (out), directs, rules’ on the basis of the paradigm of formally identical present stem _*rige/o-_ > OIr. _·rig_ ‘binds’.

The disadvantage of the hypothesis presented here is that it does not explain why Proto-Celtic had an ablauting full-/zero-grade root where Proto-Indo-European had a Narten present (and apparently an _s_-aorist, also with Narten ablaut, on the basis of Lat. _rēxī_ (perf.), Gk. ὤρεξα (aor.), Toch. B _reksa_ (pret.) 'spread out'). Although the picture presented here has the advantage of reducing the number of roots for this group of formally and semantically similar roots to only two, the situation is too complex for certainty.

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[27] But McCone (1998a), with some doubt, suggests that the root is also found in Gk. ἀρηγών ‘protector’ (which would imply _*h$_2$rēĝ-_).

§ 38. _*HR̥C-_ > _*aRC-_

1. OIr. _altae_ (pret. pass.) 'was reared' < _*alto-_ ought to reflect _*h_2l̥-to-_ (cf. OIr. _alaid_ 'nourishes, rears, fosters', Lat. _alō_ 'rear, nourish'; LIV 262; Schumacher 2004: 193–195), since the Old Irish preterite passive comes from the Indo-European past participle (Schumacher 2004: 79; for the development of absolute and conjunct forms see McCone 2006a: 146–147). However, it could well have generalised _*al-_ from the present stem and is therefore unreliable.

2. Gaul. _ambe_,[28] _ambes_ 'river-bank', MW. _Amir, Amyr_ (river name) < _*ambrā_ (IEW 316) may belong together. LEIA (A-4–5), followed by Delamarre (2003: 41) derives _ambe_ from _*$h_2$eb-_ (cf. OIr. _aub_ 'river' p. 215), with a nasal infix, comparing Skt. _ámbu_ 'water' and perhaps Lat. _imber_ 'shower', Gk. ὄμβρος 'rain storm'. But the idea of a nasal infix in a noun formation is probably misconceived (Lat. _unda_ 'wave' must come from something like _*ud-nā_; Meiser 1998: 121–122), and the etymologies of these words are very uncertain: Lat. _imber_ may be connected to Osc. **anafríss** (dat. pl.) 'gods (of rain?)' and either Gk. νέφος 'cloud' < _*neb^h-es-_, Skt. _abhrám_ 'cloud, rainy weather' < _*n̥b^h-ro-_ or Skt. _ámbhaḥ_ 'water' (Schrijver 1991a: 64), while _ámbu-_ and ὄμβρος point to _*$h_3$emb-_, but may be non-Indo-European (Szemerényi 1964: 249; Rix 1970: 108 n. 76). The origin of _ambe_ is too unclear.

3. OIr. _and_ 'in it' < _*andom_, and probably OIr. _ind-_[29] 'into', Gaul. _ande-_ (p.n. and pl.n. element; Delamarre 2003: 45) < _*andi_ are cognate with Gk. ἔνδον 'within', OLat. _endo-_ 'in', Hitt. _anda_ 'in(to)' < _*h_1(e)ndo-_ (Schrijver 1991b: 14, 15; McCone 1996: 50; Matasović 2009: 35), and come from _*h_1n̥d-_.

4. MIr. _arg_ (_o-_ and _ā_-stem adj.) 'noble, great, impressive', (m. _o_-stem) 'prominent person, champion, hero', Gaul. _-argus_ (p.n. element) < _*argo-_ are compared somewhat doubtfully by LEIA (A-87) to Gk. ἀρχός 'leader, chief,

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[28] If really Gaulish, which is doubted by Lambert (1994a: 203); the forms are from the unreliable and late Endlicher's Glossary.

[29] OIr. _ind-_ could also come from _*endi-_, but it is probably identical to Gaul. _ande-_. See Schrijver (1991b) for the development of syllabic nasals before voiced stops.

commander’, which seems semantically and formally unproblematic. Gk. ἄρχω ‘begin; lead, rule, govern’, MHG. _regen_ ‘set up, raise, stir up’ show that the root was _*reg_^{h}_-_ or _*h_$_2$_reg_^{h}_-_ (LIV 498). Consequently, _arg_ must come either from _*h_$_2$_r̥g_^{h}_-o-_ or _*r̥g_^{h}_-o-_.

5. OIr. _argat_ (n. _o_-stem), OW. _argant_, MW. _aryant_, W. _arian_ (m.), OB. _argant_ (in _solt argant_ gl. _soldum_), MB. _argant_, B. _arc’hant_ (m.) ‘silver’, OC. _argans_ (in _gueidwur argans_ gl. _argentarius_), MC. _arghans_, _arhans_ (m.) ‘silver, money’, Celtib. _arkato-beđom_ ‘silver mine (?)’ (MLH V.1: 41–42), Gaul. _Arganto-_ (pl.n. element), _argantodannos_ ‘magistrate in charge of money’, OBrit. Αργεντό- (p.n. element) < _*arganto-_ are cognate with Av. _ərəzata-_, OPers. _ardata-_, Lat. _argentum_ ‘silver’ < _*h_$_2$_r̥ĝ-n̥t-o-_, Sanskrit _rajatáḥ_ ‘silver; shining’ < _*h_$_2$_reĝ-n̥t-o-_ (for the root cf. Gk. ἀργι- ‘shining, quick’, Hitt. _ḫarki-_ ‘white’). Matasović (2009: 41) posits _*h_$_2$_erĝ-n̥t-o-_ for Celtic on the grounds of full grade I in other forms of this root such as Skt. _árjunaḥ_ ‘white, shining, made of silver’. But since full grade II (which could not give Proto-Celtic _*argento-_) is attested specifically in this word by Skt. _rajatáḥ_ and zero grade by Av. _ərəzata-_, it is more plausible that Proto-Celtic _*argento-_ comes from the zero grade. Other forms of the root, such as Gaul. _Argio-_ (pl.n. element) and MW. _eiry, eira_ (m.), MB. _erch_, B. _erc’h_ (m.) ‘snow’, OC. _irch_ gl. _nix_ < _*argōn-_ (Balles 1999: 17–18),[30] may have full or zero grade.

6. MIr. _art_ (m. _o_-stem), MW. _arth_ (m., f.) ‘bear’, OB. _Arth-_, _-ard_ (p.n. element), Gaul. _Artus_, _Artula_ (p.n.; the latter apparently a calque of Lat. _Ursula_, Delamarre 2003: 55–56) < _*artko-_ are cognate with Hitt. _ḫartakka-_ ‘bear’,[31] Gk. ἄρκτος, Skt. _ŕ̥̥kśaḥ_, YAv. _arəša-_, Arm. _arǰ_ ‘bear’ < _*h_$_2$_r̥tk̂o-_. The explanation for Lat. _ursus_ is uncertain (Schrijver 1991a: 68–69). Skt. _ŕ̥kśaḥ_ attests to the zero grade; since we do not usually find ablaut in thematic formations, the other languages probably also reflect zero grade (YAv. _arəša-_ does not imply a full grade _*h_$_2$_er-_ because _*ərəš-_ became _arəš-_ in the history of Avestan; Hoffmann & Forssman 2004: 91).[32]

According to Matasović (2009: 42–43), the Proto-Celtic development of _h_$_2$_r̥C-_ > _*arC-_ here is due to the development of the cluster _*-tk̂-_ into a fricative _*-þ-_, whence _*h_$_2$_r̥tk̂o-_ > _*r̥þo-_, with the usual development of _*L̥C-_ > _*aLC-_ before consonants other than stops and _*-m-_. The question of the development of ‘thorn’ has proved very difficult, but the supposition of a fricative stage, either in Proto-Indo-European or Proto-Celtic, seems unnecessary (Melchert 2003, and now Lipp 2009: 2.1–343, summarised at 2.477–483). A development _*h_2r̥tk̂o-_ > _*artk̂o-_ is the most likely explanation of the Celtic forms, but they could also be explained by _*aLC-_ being the regular result of Proto-Celtic word-initial _*L̥C-_ < _*HL̥C-_. Matasović's theory (_*h_2r̥tk̂o-_ > _*r̥þo-_ > _*arto-_), although it cannot be altogether ruled out, has little in its favour.

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[30] Hamp’s (1974: 280) acceptance of a crossed etymology with _*(s)perg-/(s)preg-_ is incorrect, since syllabic _*-r̥-_ gives _*-ri-_ before a stop.

[31] That this is the meaning in Hittite there is little doubt (HED 3.201; Kloekhorst 2008: 316).

[32] This reference is owed to Elizabeth Tucker.

7. OIr. _·icc_ (_do·icc_ 'comes'), MW. _reinc_ (3sg.) 'reaches', MB. _rancaff_ 'must' probably come from _*-an-n-k-e/o-_ < _*h_2n̥-n-k-e/o-_ (see p. 251).

8. OIr. _im(b)-_, _im_, MW. _am_, B. _am-_ 'around, about', Gaul. _ambi-_ < _*ambi-_ are cognate with Lat. _amb-_, Gk. ἀμφί, OHG. _umbi_ 'around, about', Skt. _abhí_ 'to, towards' < _*h_2m̥b^hi_. The Sanskrit and Old High German forms must be zero-grade, and there is no reason for the other forms to have full grade. Jasanoff's (1976) reconstruction as _*h_2n̥t-b^hi_, originally the instrumental of a root noun, provides a morphological reason for zero grade (as noted by Ringe 1988: 429–430; Schrijver 1991a: 60).

9. OIr. _imb_ (n. _n_-stem) 'butter', OW. _emeninn_, MW. _emenyn_, W. _ymenyn_ (m.) 'butter', MB. _amanenn_ (singul.), B. _amann_ (coll.) 'butter', OC. _amanen_ (singul.) gl. _butirum_ < _*ang^wen-_ are cognate with Lat. _unguen_ 'grease, oil', OHG. _ancho_ 'butter', OPruss. _anctan_ 'butter' from _*h_3(e)ng^w-_ (Schrijver 1991b: 14) or possibly _*h_2(o)ng^w-_, if the root is found in Gk. διθύραμβος 'dithyramb' (Janda 2000: 282–287). Since the Celtic forms cannot be derived from _*$h_{(2,3)}$ong^w-_ > _*ong^w-_, they must be from _*$h_{(2/3)}$n̥g^w-_.

10. MIr. _imbliu_ 'navel' < _*ambe/il(i)i̯ō_ is cognate with Gk. ὀμφαλός, Lat. _umbilīcus_ and OHG. _nabulo_ 'navel'. These all seem to be derivatives of a stem ending in _*-l-_, and since the full grade of the root is _*$h_3$nob^h-_ (in Germanic), the other forms must be derived from _*h_3n̥b^h-_ (Schrijver 1991a: 61–62). Furthermore, _*$h_3$enb^h-_ > _*ombe/il(i)i̯ō_ > ˣ_ombliu_ would not give the attested Irish form. The most probable reconstruction is _*h_3n̥b^h-el-ii̯ō_.

11. OIr. _ingen_ (f. _ā_-stem) 'nail; hoof, claw, talon', OW. _eguin_, MW. _ewin_ (m., f.) 'nail, claw', MB. _iuin_, B. _ivin_ (m., f.) 'nail, claw', OC. _euuin_ gl. _unguis_ < _*angu̯īnā_ are cognate with OCS. _nogъ-tь_, Lith. _nagù-tis_ 'finger-nail', Toch. A _maku_, B _mekwa_, Lat. _unguis_ < _*$h_3$nog^h-u-_, Gk. ὄνυξ 'nail, claw' < _*$h_3$nog^h-_ (Schrijver 1991a: 62). Since the root has a full grade _*$h_3$nog^h-_, and since _*$h_3$eng^h-u̯-īnā_ > _*ongu̯īnā-_ could not give the Irish form, the Celtic forms reflect _*h_3n̥g^h-u-_.

§ 39. _Conclusion_

The reliable evidence for a development *_HR̥C-_ > *_RiC-_ consists only of § 37.6. OIr. _·riga_ < *_h$_1$r̥g^h-e/o-_; a possible, but not definite, second case is § 37.3 OIr. _ríched_, if from *_h$_1$r̥k^w-eto-_. Both of these cases have initial *_h$_1$-_. None of the possible cases of *_h$_3$R̥C-_ > *_RiC-_ are reliable (§ 37.1 OIr. _díriug_ < *_h$_3$r̥ĝ-u-_, § 37.5 MIr. _rig_ < *_h$_3$r̥ĝ-et-_, § 37.7 OIr. _rigid_ < *_h$_3$r̥ĝ-e/o-_). The reliable evidence for *_HR̥C-_ > *_aRC-_ is § 38.3 OIr. _and_ < *_h$_1$n̥d-om_, § 38.5 OIr. _argat_ < *_h$_2$r̥ĝ-n̥t-o-_, § 38.6 MIr. _art_ < *_h$_2$r̥tk̂o-_, § 38.7 OIr. _·icc_ < *_h$_2$n̥-n-k-e/o-_, § 38.8 OIr. _im(b)-_ < *_h$_2$n̥t-b^{h}i_, § 38.9 OIr. _imb_ < *_h$_{(2,3)}$n̥g^w-_, § 38.10 MIr. _imbliu_ < *_h$_3$n̥b^h-el-ii̯ō_, § 38.11 OIr. _ingen_ < *_h$_3$n̥g^h-u-_. However, most of these forms involve *_HN̥C-_, and syllabic *_-N̥-_ is expected to give *_-aN-_ regardless of environment, so this does not provide any evidence regarding the details of the development of *_HN̥C-_ to _aNC-_. Consequently, only § 38.5 OIr. _argat_ < *_h$_2$r̥ĝ-n̥t-o-_, § 38.6 MIr. _art_ < *_h$_2$r̥tk̂o-_ provide useful evidence.

With regard to Matasović's theory that *_HL̥C-_ gave *_L̥C-_, with the subsequent usual developments of *_-L̥-_ depending on the following consonants, even if we were to accept the unlikely theory that MIr. _art_ reflected *_r̥þo-_ <*_h$_2$r̥tk̂o-_, § 38.5 OIr. _argat_ < *_h$_2$r̥ĝ-n̥t-o-_ is counterevidence. So is § 38.4 _arg_ < *_(h$_2$)r̥g^h-o-_, because it would be expected to give ^{x}_rig-o-_ according to Matasović, regardless of whether or not the root began with a laryngeal. It will be recalled that there are three further theories: that *_HL̥C-_ gave *_aLC-_ in all cases (Joseph); that *_HL̥C-_ gave *_L̥C-_, which gave *_aLC-_ in all cases (Ringe); and that *_h$_1$L̥C-_ gave *_L̥C-_ by early loss, with the expected developments of *_-L̥-_ according to following consonant, while *_h$_2$L̥C-_ gave *_aLC-_ (McCone). Since there is no certain evidence for the sequence *_L̥C-_ without an initial laryngeal in Celtic, it is not possible to distinguish between Joseph and Ringe's theories. Both are disproved by the single form § 37.6 _·riga_, which is the only positive piece of evidence in favour of McCone's theory over Joseph's or Ringe's. McCone's theory is therefore the only one which fits all the evidence, but this evidence is very slight (and for a minor problem see p. 44 ff.).

It would be possible to eliminate _·riga_ as evidence either if the root structure rules followed here (see p. 9 f.) are incorrect, or if one supposed that _·riga_ is the result of a secondary zero grade: thus *_h$_1$r̥g^h-e/o-_ > _arge/o-_ was remodelled to *_r̥ge/o-_ (or *_rige/o-_) on the basis of the full grade *_h$_1$erg^h-e/o-_ seen in MIr. _eirgg_ 'go'. The model would be full/zero grade alternations of the type seen in OIr. _beirid_ 'bears' < *_b^{h}er-e/o-_, _brethae_ (pret. pass.) 'was borne' < *_b^{h}r̥-to-_ (Schumacher 2004: 218–223). The fact that _eirgg_ and _·riga_ are suppletive parts of the paradigm of OIr. _téit_ 'goes' suggests that their paradigmatic unity was not well established, at least by Proto-Irish, but secondary zero grade is not impossible.

_#HR̥HC-_

§ 40. _Introduction_

It is difficult to formulate a hypothesis for the treatment of the sequence *_HR̥HC-_. The nearest analogy might appear to be the sequence *_CR̥HC-_, when the initial consonant is not a laryngeal. If this is the case, we might expect the developments *_HR̥HP-_ > *_RăP-_ and *_HR̥HR-_ > *_RāR-_ (see p. 69 ff.). However, if the relative chronology of the appropriate changes were different, we might compare the treatment of the sequence *_HR̥C-_ (see p. 29 ff.), which might lead us to expect at least *h_2_R̥HC-_ > *_aRHC-_, which might undergo the same development as other *_-C.HP-_ and *_-C.HR-_ sequences to give *_arP-_ and *_araR-_ (see p. 180 ff.).

As it happens, only the first of these analogies has been suggested, with McCone (1996: 52) clearly assuming that *_HR̥HC-_ gives the same result as *_CR̥HC-_ (which for him is always *_CRāC-_). There have also been other suggestions. Joseph (1982: 50–51, 55) argues for a change *_HR̥HC-_ > *_HR̥C-_ by dissimilation, with subsequent development to *_aRC-_. This rule is doubted by Ringe (1988: 421–422) on the basis of a lack of firm evidence. Schrijver (1991a: 315–316) argues for *_HL̥HC-_ > *_LăC-_, but *_HN̥HC-_ > *_aNC-_ (perhaps by a sporadic dissimilation, since the evidence considered consists only of a single form). The evidence can be collected under four possible developments: § 41 *_HR̥HC-_ > *_aRC-_, § 42 *_HR̥HC-_ > *_RāC-_, § 43 *_HR̥HC-_ > *_RăC-_, and § 44 *_HR̥HC-_ > *_aRaC-_.

§ 41. *_HR̥HC-_ > *_aRC-_

1. OIr. _ainm_ (n. _n_-stem), OW. _anu_, MW. _enw_ (m.), MB. _hanu_, B. _anv_ (m.), MC. _anow_, _hanow_ (m.), Gaul. _anuana_ (pl.) ‘name’ < *_anman_ are cognate with (_inter alia_) Lat. _nōmen_, Gk. ὄνομα, Hitt. _lāman_, Phryg. _onoman_, Toch. A _ñom_, B _ñem_, Skt. _nā́ma_, Goth. _namo_, Arm. _anun_ ‘name’, MHG. _benuomen_ (inf.) ‘name’. The initial laryngeal demonstrated by ὄνομα, _onoman_ and _anun_ is either *h_3- (Kortlandt 1987: 63–64; Kloekhorst 2006: 90, 95), or *h_1- on the basis of Hitt. _lāman_ and Gk. Dor. ’Ενυμακρατίδας (p.n.), with vowel assimilation in Greek and Phrygian.

Whether the word had a medial laryngeal is more problematic. For an exhaustive discussion of, and previous literature on, the word for ‘name’ see

Neri (2005), who convincingly reconstructs for Indo-European a neuter with an acrostatic singular _*h$_1$nḗh$_3$-mn̥_/_*h$_1$néh$_3$-mn-_ and amphidynamic collective _*h$_1$néh$_3$-mon-_/_*h$_1$n̥h$_3$-mn´_ from which all forms are derivable. If this reconstruction is correct, the only form from which OIr. _ainm_ could be derived would be _*h$_1$n̥h$_3$-mn-_. On the face of it, therefore, _ainm_ is a good example of _*HR̥HC-_ > _*aRC-_, but Neri (2005: 221) explains the result differently. He suggests that in the gen. sg. _*h$_1$n̥h$_3$-m̥n-es_ the laryngeal was lost between vowels, giving _*n̥m̥n-es_, whence with resyllabification _*n̥mn-es_ > _*anmnes_, the stem of which was then generalised to the rest of the paradigm to give _ainm_. However, such a development is actually rather implausible. Neri compares the resyllabification of the sequence _*-R̥R̥-_ > _*-R̥R-_ with that of _*u̯eh$_1$-n̥to-_ > _*u̯en̥to-_ > _*u̯ento-_ > MW. _gwint_ 'wind'. But it is not absolutely certain that _*u̯eh$_1$-n̥to-_ developed in this way in Celtic rather than to _*u̯en̥to-_ > _*u̯eanto-_ > _*u̯ēnto-_ > _*u̯ento-_ (see p. 174 and p. 172 ff.).[33] Even if this was the correct development in Celtic, the resyllabification of _*u̯en̥to-_ to _*u̯ento-_ can best be seen as a continuation of the Indo-European syllabification rules (see p. 4 ff.), whereas according to those rules _*n̥m̥n-es_ ought to have given _*nm̥n-es_. That these rules were still alive after the loss of intervocalic laryngeals is suggested by OIr. _trá_ < _*trants_ < _*trn̥ts_ < _*tr̥n̥ts_ < _*tr̥h$_2$-n̥t-s_ (see p. 179).

Another way to get the Celtic form would be to follow Stüber (1998: 53–56), who favours an acrostatic paradigm _*h$_1$nom-n̥_, _*h$_1$nem-n̥-_, with subsequent remodelling of the weak forms to proterodynamic _*h$_1$n̥m-en-_. But Neri's reconstruction addresses the non-Celtic forms much better.

2. OIr. _arbor_, gen. sg. _arbe_ 'grain, corn' < _*aru̯ar_, _aru̯en-s_ had a weak stem _*h$_2$r̥h$_3$-u̯en-_ (Stüber 1998: 84). It is possible that the medial laryngeal may have been lost by dissimilation, but it is not clear whether the regular result of the sequence _*-VRHu̯-_ was _*-VRu̯-_ or _*-VRau̯-_ in Celtic (see p. 201 ff.). If it was the former, it is possible that the laryngeal was instead lost in the strong stem _*h$_2$erh$_3$-u̯r̥_, and this could have been generalised throughout the paradigm (see p. 205).

3. OIr. _ard_ (_o-_, _ā_-stem adj.) 'high', MW. _ard_, _art_ (f.?) 'hill, highland', OB. _ar_[gl. _arduam_, Gaul. _Arduenna_ (pl.n.) < _*ardu̯o-_ and their Indo-European cognates have been much discussed (Joseph 1982: 50–51; Schrijver 1991a: 312–313). The relevant forms are Skt. _ūrdhváḥ_ 'high', Av. _ərəδβa-_ 'high', Gk. ὀρθός 'straight, upright, in line', Lat. _arduus_ 'high; difficult to attain', ON. _ǫrđugr_ 'steep'. If they all belong together, it is assumed here that they reflect

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[33] In fact, Neri reconstructs _*u̯ēh$_1$n̥to-_, but this makes no difference to the point at hand.

an original acrostatic _u_-stem noun _*h$_{(2)}$orHd^{h}-u-_/_*h$_{(2)}$erHd^{h}-u-_ (→ proterodynamic _*h$_{(2)}$r̥Hd^{h}-eu̯-_ in at least Indo-Iranian), which was thematised in the individual Indo-European languages.[34] That this was not an original _*-u̯o-_ formation is suggested by the profusion of ablaut grades; by ON. _ǫrđugr_ < Proto-Germanic _*arðuga-_; because _ūrdhváḥ_ has not undergone Sievers' law, which ought to have produced ^{x}_ūrdhuváḥ_; and because inherited _*ar(a)d^{h}u̯o-_ would not have given Lat. _arduus_.[35] An original proterodynamic _u_-stem adjective with strong stem _*h$_{3}$erHd^{h}-u-_ and weak _*h$_{3}$r̥Hd^{h}-eu̯-_ might be thinkable, but would not explain the loss of the second laryngeal in Greek, and _u_-stem adjectives usually become _i_-stems in Latin (cf. _grauis_ 'heavy', Skt. _gurúḥ_ 'heavy'; Sihler 1995: 352–353).

The regular developments are then as follows. Strong stem _*h$_{(2)}$orHd^{h}-u-_ gave _*h$_{(2)}$ord^{h}-u-_ by the Saussure effect (p. 243 ff.) → _*ord^{h}-u̯o-_ > Gk. ὀρθός and → _*ord^{h}u-go-_ > ON. _ǫrđugr_. The weak stem _*h$_{(2)}$erHd^{h}-u-_ → _*h$_{(2)}$r̥Hd^{h}-u-_ → _*(h$_{(2)}$)r̥Hd^{h}-u̯o-_ gave Skt. _ūrdhváḥ_; _*(h$_{(2)}$)r̥Hd^{h}-u̯o-_ ought to give Av. ^{x}_arəδβa-_, but Avestan sometimes fails to show the reflex of a laryngeal in _*CR̥HC-_ clusters; cf. Av. _pərənā_ 'handful' beside Skt. _pūrṇáḥ_ 'full' < _*pl̥h$_{1}$-no-_ (Joseph 1982: 50–51; de Vaan 2003: 506 fn. 648). The most likely preform for Lat. _arduus_ is _*aradVu̯o-_, which is best derived from the secondarily proterodynamic weak stem _*h$_{(2)}$r̥Hd^{h}-eu̯-_ > _*arad^{h}-eu̯-_ → _*arad-eu̯-o-_ > _arduus_.[36]

Proto-Celtic _*ardu̯o-_ can then come from _*h$_{2}$erHd^{h}-u-_ or _*h$_{(2)}$r̥Hd^{h}-u-_. If the former is correct, loss of the laryngeal is regular in the environment _*-C.HP-_ (p. 180 ff.). Therefore it cannot be used as evidence for _*HR̥HC-_.

It should be noted that Sankrit (but not Avestan) and perhaps Greek Argive ϝορθαγόρας, Laconian ϝορθασια, ϝορθεια, Elean Hesych. βορσόν (Chantraine 1968–1980: 819) point to a form _*u̯(o)rHd^{h}u̯o-_ (but note that Homer does not have initial ϝ-; Nikolaev 2007: 173 fn. 53). According to EWAIA

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[34] The following owes much to discussions with Peter Barber.

[35] The precise environments which resulted in _*-d^{h}-_ > _*-b-_ in Latin remain slightly obscure due to lack of evidence. Compare Stuart-Smith (2004: 41–42, 53): "after _*u_, before _*l_, and before and after _*r_, and after _*n_" with Weiss (2009: 75–76): "PIE _*d^{h}_ becomes Lat. _b_ when following _r_ or _u_ or preceding _r_, _u/u̯_ or _l_". We can at least say that _*ard^{h}u̯-_ would give ^{x}_arbus_, while _*arad^{h}u̯o-_, if it did not also give ^{x}_ar(a)bus_ according to Weiss's formulation of the rule, would have given ^{x}_ar(a)uus_ (cf. Lat. _suāuis_ 'sweet' < _*su̯ādu̯i-_). Consequently, we have to reconstruct _*arad^{h}Vu̯o-_ for Latin.

[36] Schrijver (1991a: 304–319) concludes that _*HR̥HC-_ in Latin gives _*RăC-_. However, he assumes that Indo-European roots could not begin with _*r-_. If one removes all cases of _*HR̥HC-_ where there is no direct evidence for initial _*H-_ no clear conclusion can be reached, and _*HR̥HC-_ > _*araC-_ remains possible. Lat. _arduus_ is not, however, completely certain evidence for such a development, since it is possible to imagine that it could reflect full grade in both the root and the suffix, to give _*h$_{2}$erHd^{h}-eu̯-o-_.

(1.244–245), forms without initial _*u̯-_ can be explained by dissimilatory loss, an explanation also provided by Lejeune (1972: 81 fn. 1–2) for Myc. _o-tu-wo-we_ = *ορθϝο̄ϝε̄ς 'with erect ears' (in this case in a sequence of three _*-u̯-_). However, _*r̥Hdʰu̯o-_ < _*u̯r̥Hdʰ-u̯o-_ is hardly likely to have produced Lat. _arduus_ (_*R̥HC-_ gave _*RăC-_ or _*RāC-_; Schrijver 1991a: 161–172) or Celtic _*ardu̯o-_ (see p. 58 ff.), and this formulation does not solve the other problems discussed above which are involved with positing an originally thematic form. Consequently, it is assumed here, although with some doubt, that Greek ϝορθ- in fact shows a metathesis _*u̯ordʰo-_ < _*ordʰu̯o-_, and that labiality was able to spread from following _*-dʰu̯o-_ to produce Sanskrit _ū́r-_. A last resort would be to separate Sanskrit and Greek _*u̯(o)rHdʰu̯o-_ from *$h_{(2)}$(e)rHdʰu̯o- in the other languages, but the semantics are against such a split, and would involve divorcing Avestan *$h_{(2)}$r̥(H)dʰ-u̯o- from Sanskrit _*u̯r̥Hdʰ-u̯o-_.

§ 42. _*HR̥HC-_ > _*RāC-_

1. OIr. _anaid_ 'stays, remains, abides' < _*anā-_, MW. _kynnhan_ (3sg.) 'speaks' (< _*kanta-anā-_) and MB. _ehanaff_, B. _ehanañ_ (inf.) 'abide, rest' (<_*eks-anā-_) are cognate with Skt. _ániti_ 'breathes', Gk. ἄνεμος 'wind' < *h_2enh_1- (LIV 267). According to McCone (1991b: 110) 1–3sg. *h_2enh_1- > _*ană-_ was contaminated by 1–2pl. *h_2n̥h_1-C- > _*nāC-_ to give _*anā-_. However, this is not definite evidence for _*HR̥HC-_ > _*RāC-_. This verb, MIr. _antair_ (see below), and _*skara-_ (> OIr. _scaraid_, see p. 198) formed a small group of athematic root-presents formed to roots ending in a laryngeal. The paradigm of OIr. _scaraid_ will have had 1–3sg. _*skară-_ < _*skerH-C-_, 1-2pl. pl. _*skrā-_ < _*skr̥H-C-_ (LIV 558; Schumacher 2004: 576–578); _anaid_ had at least strong _*ană-_; _antair_ perhaps had strong _*nā-_ and weak _*an(ă)-_. The only group of verbs with _*-ă-_ in the stem was the nasal stems of the type OIr. _crenaid_, _·cren_ 'buys' < _*kʷrină-_ < *kʷri-n-h_2- (LIV 395–396; Schumacher 2004: 438–441), which were quite unproductive as a category. Therefore, it is possible that _anaid_ would have been absorbed by the productive _ā_-stems on the basis of strong _*ană-_ < *h_2enh_1- along with _scaraid_ and _antair_, even though it did not have any forms in the paradigm with stem _*anā-_.[37]

2. MIr. _antair_ (pass.) 'is blemished' (DIL A-321 s.v. _anaid_$_2$) < _*anā-_ has the same root as OIr. _on_ 'blemish', Gk. ὄνομαι 'blame' (Watkins 1962: 116–117). According to Joseph (1980: 38–39) the root is *h_1enh_3- > _*ena-_ > _ana-_ in

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[37] And for the (partial) assimilation of a relic form _*-ă-_ in the _*-ā-_ stems compare Lat. inf. _dăre_ 'to give' but 2sg. pres. _dās_.

Proto-Celtic. However, the initial laryngeal must be *h_2- or *h_3- on the basis of Hitt. _ḫannari_ ‘litigates, sues’. Gk. ὄνομαι ‘blame’ might imply *h_3-, but according to LIV (282) it is due to vowel assimilation from *_ano_- < *h_2n̥h_3-. Since the reflexes of initial *h_3- in Hittite remain disputed, and since the root may have had either full grade I or II[38] (Kloekhorst 2006: 91–92) it is not possible to be certain about either the shape of the root or its initial laryngeal. MIr. _antair_ could have generalised the resulting stem *_ană_- and been brought into the _ā_-stems along with _anaid_ (above), if the root were *$h_2enh_{(2,3)}$- (note that OIr. _on_[39] suggests full grade I at least for Celtic). If the root had full grade II, or began with *h_3-, it must somehow reflect *$h_{2/3}$n̥$h_{2/3}$-.

According to LIV, which reconstructs a full grade II root *h_2neh_3-, _antair_ reflects “durchgeführter R(z) [i.e. zero-grade root] und Kontamination der Allomorphe *_nā_- und *_an_- zu *_anā_-”. LIV is apparently assuming an active paradigm with *_nā_- from 1sg.-2pl. *$h_{2/3}$n̥$h_{2/3}$-_mi_-, -_si_, -_ti_-, -_mosi_, -_te_, and 3pl. *_ana/onti_ from *$h_{2/3}$n̥$h_{2/3}$-_enti_. If this is correct, it suggests that *_HR̥HC_- gave *_RāC_-. However, one might in this case expect that a stem *_nā_- would simply have been generalised, especially since this would avoid homophony with OIr. _anaid_ ‘stays’. A direct change *_HR̥HC_- > *_aRaC_-, and even *_HR̥HC_- > *_HR̥C_- are also compatible: 1–3sg. *$h_{2/3}neh_{2/3}$-_mi_,-_si_,-_ti_ > *_nā-mi_, -_si_, -_ti_, 1–2pl. *$h_{2/3}$n̥$h_{2/3}$-_mosi_, -_te_ > *_an_(_a_)-_mosi_, -_te_, 3pl. *$h_{2/3}$n̥$h_{2/3}$-_enti_ > *_ana/onti_ could have been levelled out to give *_anā_-.

3. OIr. _ráïd_ ‘rows, sails, voyages’ < *_rāi̯e/o_- is identical to OE. _rōwan_, ON. _róa_ ‘row’, but the reconstruction is problematic. The root is found as *h_1reh_1- and *h_1erh_1- (LIV 251) in Gk. ἐρέτης ‘rower’, Skt. _aritā́_ ‘rower’, Lat. _rēmus_ ‘oar’, Lith. _ìrti_ ‘row’. The most morphologically acceptable reconstruction would be *h_1r̥h_1-_i̯e/o_-, but this would have given ˣ_ari̯e/o_- (_pace_ Rasmussen _apud_ Olsen 1988: 11; see p. 201 ff.). *h_1roh_1-_i̯e/o_- would give the Celtic and Germanic forms, and LIV (loc. cit.) suggests that the _o_-grade is taken from the perfect. However, a morphologically plausible possibility is that _ráïd_ comes from an iterative *h_1roh_1-_ei̯e_- ‘row (repeatedly)’, with loss of the laryngeals to give *_ro-ei̯e_-, whence, by contraction, *_rōi̯e/o_- (or from *h_1r$\bar{o}h_1$-_i̯e/o_-, if it was an iterative of the *_su̯ōp-i̯e/o_- type; see LIV 23, 612–613).[40] OIr. _rámae_ (m. and

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[38] The only reasons to prefer *$h_{(2/3)}neh_{(2/3)}$- are Kloekhorst’s connection of the root with *h_3neh_3-_men_- ‘name’ (which is extremely problematic in itself; see OIr. _ainm_ p. 38), and the supposition that the Toch. B subjunctive stem _nāk_- ‘blame’ is due to analogical remodelling of *h_2n̥h_3- after full-grade *h_2neh_3- (LIV loc. cit.; Hackstein 1995: 65–67).

[39] Which must belong here, despite the strange doubts of LEIA (O-22–23).

[40] I am grateful to Andreas Willi for the suggestion that _ráïd_ might reflect an old iterative.

f.) ‘oar’, W. _rhaw_ (f.) ‘shovel’ < _*rām(i)i̯o-_ may reflect _*h_1r̥h_1-mo-_, but could equally well reflect _*$h_1$roh$_1$-mo-_.

4. OIr. _ráith, ráth_ (m. and f.) ‘earthen rampart, fort’ < _*rāti-_, Gaul. _Rate, ratin_, _-ρατον_, _-ratum_, _-rata_ (pl.n.; Delamarre 2003: 253; Irslinger 2002: 190–191) are derived by McCone (1996: 52) from _*h_2r̥h_3-ti-_ ‘(ploughing), throwing up earth’ (to the root _*$h_2$erh$_3$-_; see MIr. _airid_ p. 202). This is certainly possible, although the necessary assumption that _*HR̥HP-_ would give _*RāP-_ is slightly surprising, since _*MR̥HP-_ gives _*MRăP-_ (see p. 69 ff.). It must be admitted, however, that the alternative connection with Lat. _prātum_ ‘meadow’ (IEW 843–844) is not entirely satisfactory, as observed by Delamarre, Irslinger and Schrijver (1991a: 182).

§ 43. _*HR̥HC- > *RăC-_

1. W. _rhathaf_ ‘rub, scrape (off), smooth, file’, MB. _razaff_, B. _razhañ_ (inf.) ‘shave, scrape’ < _*rasd-_ are connected by Schrijver (1991a: 309–310) to Lat. _rādere_ ‘scrape, shave, smooth’. Lat. _rādere_, along with _rōdere_ ‘gnaw’, has been compared with Hitt. _ard(u)-_ ‘saw’, Skt. _rádati_ ‘digs, scrapes’ (HED 1.175); a root _*$h_{1(/3)}$reh$_{1/3}$d-_ could in principle give all these forms, but not the Celtic words, which require an internal _*-sd-_ sequence. Kloekhorst (2008: 211) is unenthusiastic about connecting Hitt. _ard(u)-_ with _rŏdere_ for semantic reasons. Hitt. _arrirra-_ ‘scrape’ is probably onomatopoeic (HED 1.139–140). If W. _rhathaf_ and Lat. _rādere_ do belong together, if they reflect a root of Proto-Indo-European date (there being no other cognates, since Skt. _rádati_ etc. must belong to a different root), and if it was impossible for PIE roots to begin with _*r-_ (see p. 9 f.), then the root is reconstructable as _*Hr̥Hsd-_; but these forms are not at all strong evidence.

§ 44. _*HR̥HC- > *aRaC-_

1. OW. _anamou_ gl. _mendae_, MW. _anaf_ (m.) ‘injury, wound, hurt’, MB. _anaff_, B. _anaf_ ‘trouble, pain, blemish’ < _*anamo-_,[41] surely come from the same root as MIr. _antair_ ‘is blemished’ (p. 41), despite the doubts of LEIA (A-78). If they directly reflect _*$h_{2/3}$n̥h$_{2/3}$-mo-_ rather than _*$h_2$enh$_{2/3}$-mo-_, they suggest _*HR̥HC- > *aRaC-_, but they may be later derivations from the Proto-Celtic verbal root _*ană-_ instead. Matasović’s (2009: 34) derivation as _*an-amo-_

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[41] OIr. _anim_ (f. _ā_-stem, but perhaps originally an _ī_-stem) ‘blemish, defect’ presumably belongs here too; it seems to go back to _*animī_, although the middle _*-i-_ is mysterious.

‘unwashed, unwashable’ (cf. OIr. _ind·aim_ ‘washes, bathes’ < *_h$_2$emH-_; LIV 265; Schumacher 2004: 195) is quite unlikely.

2. MW. _araf_ (adj.) ‘slow, gradual; mild, meek, gentle, tender, calm’ < *_aramo-_ is cognate with Skt. _īrmā́_ ‘quietly’ < *_h$_1$r̥h$_3$-mo-_, Gk. ἐρωή ‘rest’, OHG. _ruowa_ ‘rest’ < *_h$_1$reh$_3$-u̯eh$_2$_. YAv. _airime_ ‘quietly, calmly’, _armaeštā_ ‘sitting quietly’ can come from *_h$_1$r̥h$_3$-mo-_ or *_h$_1$erh$_3$-mo-_. Since the directly cognate forms show only zero grade certainly and since the root was state II, the most likely explanation for _araf_ is *_h$_1$r̥h$_3$-mo-_. It is possible that _araf_ comes from _h$_1$erh$_3$-mo-_ (via *_eramo-_ > *_aramo-_ by Joseph’s rule; Joseph 1980: 87–88), but there is no semantic or morphological reason to posit _schwebeablaut_. Delamarre (2003: 51) also attributes the truncated Gaulish word _aram …_, the river name _Aramis_, the theonym _Aramoni_ (dat. sg.) and the p.n. _Aramo_ to this root.

§ 45. _Conclusion_

The evidence for *_HR̥HC-_ is very meagre. However, Schrijver’s argument for *_HL̥HC-_ > *_L̥HC-_ cannot be substantiated. Joseph’s proposed development *_HR̥HC-_ > *_HR̥C-_ rests only on § 41.1 OIr. _ainm_ < *_h$_1$n̥h$_3$-mn-_, and there is also one piece of evidence each for *_HR̥HC-_ > *_RāC-_ (§ 42.4 OIr. _ráith_ < *_h$_2$r̥h$_3$-ti-_) and *_HR̥HC-_ > *_aRaC-_ (§ 44.2 MW. _araf_ < *_h$_1$r̥h$_3$-mo-_). Various possible interpretations of this data might be possible, and all of them would be speculative, given how exiguous the evidence is. This is naturally true also of the proposal put forward here, but it is at least congruent with other developments of laryngeals in Celtic, as will be seen.

Of the three plausible pieces of evidence for *_HR̥HC-_, in my view the least convincing is OIr. _ráith_ < *_h$_2$r̥h$_3$-ti-_. It is essentially a root etymology, and the semantics are not altogether certain: an earthen rampart is not the result of ploughing but of digging. The following possible explanation therefore applies only to OIr. _ainm_ < *_h$_1$n̥h$_3$-mn-_ and MW. _araf_ < *_h$_1$r̥h$_3$-mo-_. If we take _ainm_ first, we can see it in the light of the development of *_CR̥HCC-_ sequences to *_CRăCC-_ when the first consonant was not a plosive (see p. 69 ff.). It is argued there that the development to a short vowel is due to dissimilatory loss of the laryngeal (perhaps by this stage phonetically [h]) when at the end of a syllable containing a syllabic sonorant and another continuant or nasal. If all of the laryngeals are non-plosives at this point, exactly the same rule can have applied to _ainm_ < *_h$_1$n̥h$_3$.mn-_.[42] On this basis, one might expect *_h_1n̥h_3.mn-_ to develop to ^{x}_náim_, but the actual development is perhaps not surprising in light of the usual development of *_HR̥C-_ sequences (for which see p. 29 ff.). In most sequences of the type *_CR̥H.CC-_, this was realised, it is suggested, as [CRəHCC-]; when the laryngeal was lost the epenthetic vowel was phonologised, giving [CRaCC-]. In the case of *_HR̥C-_ sequences, however, it is at least possible to interpret the data as showing that the epenthetic vowel was realised between the laryngeal and the sonorant, thus: [HəRC-]. This development occurred regardless of the following consonant, as shown by OIr. _argat_ < *_h_2r̥ĝ-n̥t-o-_ (p. 35), even though this is normally the governing factor for the development of epenthetic vowels in _-CR̥C-_ sequences (*_-L̥-_ > *_-Li-_ before plosives and *_-m-_, otherwise > *_-aL-_). In the sequence *_HR̥H.CC-_, therefore, the phonetic realisation [HəRHCC-] is the most likely. This was followed by dissimilation of the medial laryngeal to give *_HR̥CC-_ [HəRCC-] > *_aRCC-_, whence *_h_1n̥h_3-mn-_ > *_h_1n̥-mn-_ > *_anmn-_ > _ainm_.

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[42] The *_-mn-_ sequence here must have been restored here by analogy with the rest of the

At first sight, we might expect exactly the same development in *_h_1r̥h_3-mo-_, giving MW. ^{x}_arf_. However, in the section on *_CR̥HC-_ sequences it is discovered that *_CR̥HP-_ clusters act like *_CR̥HCC-_ in giving *_CRăP-_ when the first consonant is not a plosive, while *_CR̥HR-_ sequences give *_CRāR-_ regardless of the syllable initial consonant. From this it may be possible to extrapolate that Proto-Celtic treated intervocalic *_-CR-_ sequences as tautosyllabic, while other types of *_-CC-_ sequences were heterosyllabic. The same treatment of intervocalic *_-CR-_ may perhaps also be seen in Celtic cases of the 'Wetter Regel', although this is very uncertain (p. 150 ff.). If this is correct, then an *_HR̥HR-_ sequence such a *_h_1r̥h_3-mo-_ would be syllabified as *_HR̥.HR-_ (*_h_1r̥.$h_3$mo-_), in which the medial laryngeal would not undergo dissimilation, not being in the same syllable as the preceding syllabic sonorant. To get attested MW. _araf_ we can assume a development *_h_1r̥.$h_3$mo-_ [h_1ərh$_3$əmo-] > *_aramo-_ > _araf_.

An interesting question arises about the treatment of § 41.2 OIr. _arbor_ < *_$h_2$erh$_3$-u̯r̥_, gen. sg. _arbe_ 'grain, corn' < *_h_2r̥h$_3$-u̯en-_, in which the absence of reflex from the medial laryngeal must be due to either the rule currently under discussion, or due to laryngeal loss before tautosyllabic *_-u̯-_ in the sequence *_$h_2$er.h$_3$u̯r̥_ (for which see p. 201 ff.), or both. The possible case of OIr. _Sadb_ < *_sādu̯ā_ < *_su̯eh$_2$d-u̯eh$_2$_ (p. 155), if shortening is due to the 'Wetter Regel', suggests that only intervocalic sequences of *_-CR-_, not *_-CI̯-_, were

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paradigm, since syllable initial *_-mn-_ was reduced to *_-n-_ already in Proto-Indo-European (Mayrhofer 1986: 159).

treated as tautosyllabic. If this is correct, then *_h_2r̥h_3-u̯en-_ may have been syllabified as *_h_2r̥h_3.u̯en-_, with *_aru̯en-_ then being the regular result as in OIr. _ainm_ < *_h_1n̥h_3.mn-_; the loss of the laryngeal could then have been generalised throughout the paradigm.

Although admittedly tentative, the development outlined here neatly explains the different results of *_h_1n̥h_3-mn-_ > OIr. _ainm_ and *_h_1r̥h_3-mo-_ > MW. _araf_, while fitting in with other evidence provided by the treatment of *_HR̥C-_, *_CR̥HC_(_C_)- and 'Wetter Regel' sequences. However, there is one piece of evidence for *_HR̥C-_ with which it is not compatible, which is OIr. _·riga_ 'will go' < *_rige/o-_. It has been suggested that this comes directly from *_h_1r̥ĝ^h-e/o-_, with an early loss of initial *_h_1-_ leading to the regular treatment of *_r̥-_ before a plosive to *_ri-_. This rule is not compatible with the necessity that the sequence *_h_1R̥-_ be realised as [h$_1$əR-] in _ainm_ and _araf_. Perhaps this is evidence for an explanation of _·riga_ < *_rige/o-_ as an analogical remodelling of regular *_arge/o-_, as suggested above (p. 37 f.). It must once again be stressed, however, that the lack of data prevents us from even getting close to certainty on these matters.

#_HIHC-_

§ 46. _Introduction_

There are several possible reflexes for *_HIHC-_; it might be expected to give the same result as other *_CIHC-_ clusters (> *_CĪC-_; see p. 111 ff.), as *_HR̥HC-_ clusters (perhaps > *_aR_(_a_)_C-_; see p. 38 ff.), or as *_IHC-_ (perhaps > *_ĪC-_; see p. 66 ff.).

§ 47. *_HIHC-_ > *_I̯aC-_

1. MIr. _fann_ (_o-_, _ā_-stem adj.) 'weak, helpless, powerless, soft', MW. _gwan_ (adj.) 'weak, feeble, lacking physical strength', OB. _guenion_ gl. _mitiores_, B. _gwan_ (adj.) 'feeble', OC. _guan_ gl. _debilis_, MC. _gwan_, _guan_ (adj.) 'weak, feeble, infirm, poor' < *_u̯asno-_ are derived by Matasović (2009: 402–403) from the same root as OIr. _fás_, Lat. _uāstus_, OHG. _wuosti_ 'empty' < *_u̯ās-_. The same connection is made by Hamp (1976c: 347–348) for MW. _gweilyd_, W. _gweilydd_ (adj.) 'empty, void' < *_u̯asili̯o-_/*_u̯aseli̯o-_.

The reconstruction of the Indo-European root is problematic. The contrast with _fás_ etc. suggests *_u̯eh_2s-_ ~ *_u̯h_2s-_. However, Skt. _ūnáḥ_ 'deficient, defective', Goth. _wans_ 'deficient, lacking (in)' point to a root *_u̯eH-_; Lat. _uānus_ 'empty, void' could come from *_u̯eh_2-no-_ (but *_u̯ăsno-_ would also be possible). Gk. εὖνις 'bereft (of), without' seems to imply _*h_1u̯-ni-_. Nussbaum (1998: 81) argues that the root-final _*-s-_ was carried over from an original _s_-aorist, which seems possible.

If all of these forms are related, as is plausible on the grounds of their semantic and formal similarities, then the only available reconstruction for the root is _*h_1u̯eh_2-(s-)_, and it must be assumed, without any parallel, that the regular result of _*h_1uh_2-ni-_ in Greek is εὖνις (Peters 1980: 51–52). Nussbaum (1998: 73–84; followed by LIV 254) bolsters this etymology by positing the same root for Gk. ἐάω 'let, suffer, allow, permit'. If this is correct, then MIr. _fann_ < _*u̯asno-_ must reflect _*h_1uh_2-s-no-_ (and probably be exactly cognate with Lat. _uānus_).

Although Nussbaum has convincingly explained the semantic development of the derivatives of this root, one might want to separate the words meaning 'empty' (OIr. _fás_ etc., Lat. _uānus_), from those meaning 'deficient, lacking' (MIr. _fann_, Skt. _ūnáḥ_, Goth. _wans_, Gk. εὖνις), which would give two roots: _*u̯eh_2-_ and _*u̯eh_1-_ respectively. This would have the advantage of giving εὖνις from _*u̯$h_1$ni-_, a development for which there is some other evidence (Peters 1980: 31, 52–54; Balles 2007), while _*h_1u$h_2$ni-_ > εὖνις is counterintuitive, since _*-eIHC-_ gives _*-eIEC-_ and _*HR̥HC-_ gives _*EREC-_ in Greek (Beekes 1988a: 38; Beekes 1988b: 75–76; Peters 1980: 80 fn. 38). If this were the case, MIr. _fann_ would reflect _*u̯h_1-sno-_ and MW. _gweilyd_ would reflect _*u̯h_1-s-ili̯o-_. However, despite the difficulties _*h_1uh_2s-no-_ is probably more likely.

There is one remaining possibility: _fann_ < _*u̯ăsno-_ could come from _*u̯āsno-_ with shortening by Dybo's rule in a pretonic syllable; but there is no proof of the accentual position in this word, and Dybo's rule may have only affected high vowels (p. 132 ff.). Whether MW. _gweilyd_ really belongs here is uncertain, because of the unclear morphology involved in reconstructing _*u̯asi-lii̯o-_ or _*u̯ase-lii̯o-_.

§ 48. _*HIHC-_ > _*ĪC-_

1. OIr. _ísaid_ (fut.) 'will eat' is derived by McCone (1991a: 3) from a reduplicated desiderative _*h_1i-h_1d-se/o-_. However, the present _ithid_ probably indirectly reflects a stem _*īd-_ < _*ēd-_ from the strong forms of an acrostatic present _*h_1ēd-_ (cf. Gk. ἔδω, Lat. _edō_, Hitt. _ēdmi_ (1sg.) 'eat'; McCone 1991a; LIV 230–231; Schumacher 2004: 376–380). If _*h_1i-h_1d-se/o-_ led to a form which was apparently divergent from the rest of the paradigm, it is therefore possible that it was replaced with _*īd-_ < _*ēd-_ from the present stem.

§ 49. *_HIHC-_ > *_IC-_

1. OIr. _eó_ (_o_-stem) 'yew' may reflect *_h_1iH-u̯o-_ (see p. 106). However, it is also possible that it comes from *_h_1Hi-u̯o-_, or that *_h_1iHu̯o-_ > gave *_ĭu̯o-_ by Dybo's rule (see p. 132 ff.).

§ 50. _Conclusion_

The only reliable evidence is § 47.1 MIr. _fann_ < *_$h_1$uh$_2$-s-no-_, which suggests *_HIHC-_ > *_I̯aC-_. However, no firm conclusion can be drawn on the basis of a single form.

_#HC-_

§ 51. _Introduction_

It has been generally agreed that initial laryngeals directly before a consonant were lost without any reflex being preserved (Joseph 1980: 15–16; McCone 1996: 51; Schumacher 2004: 135). This is certainly the case before a sonorant, so only representative examples of *_HRV-_ and *_HI̯V-_ clusters will be given. The evidence for the sequence *_HI̯V-_ is complicated by the uncertainty of the reflex of *_Hi̯-_ in Greek. Laryngeals before *_-u̯-_ leave behind vocalic reflexes as usual, but initial *_(H)i̯-_ gives either Gk. ζ- or ʽ [h]. It is usually maintained that the conditioning factor is the presence or absence of a laryngeal directly before *_-i̯-_, or perhaps the type of laryngeal. Which reflex is the result of *_i̯-_ and which of *_Hi̯-_ remains disputed. Summaries of the competing views, with literature, can be found in Meier-Brügger (2003: 85–86) and Southern (2002 [2006]): 192–203). Consequently, it is impossible to state with certainty that a root began with a laryngeal solely on the basis of the Greek evidence. Therefore Celtic forms beginning with *_i̯-_ which have a Greek cognate are included here, regardless of which reflex of *_i̯-_ is shown by Greek. Since *_HI̯-_ always gives *_I̯-_, only representative examples are provided here.

Hamp (1965: 224, 1981: 53, 1994: 37) has suggested on several occasions the possibility that laryngeals before obstruents could result in Proto-Celtic *_a-_. All of the evidence found for laryngeals before obstruents is therefore collected below.

§ 52. _*HRV- > *RV- and *HI̯V- > *I̯V-_

1. OIr. _fess_ (f. _ā_-stem?) ‘spending the night, sleeping’, MW. _gwest_ (m. and f.) ‘night’s stay, lodging’, OB. _guest_ ‘feast, ceremony’ (in _guest hemisiou_ gl. _laticlauia_) < _*u̯estā_ come from _*h$_2$u̯es-_ ‘stay, spend the night’: Hitt. _ḫuišzi_ ‘lives’, Gk. Hom. ἄεσα (aor.) ‘spent the night’ (Irslinger 2002: 344–345; LIV 293). The same root occurs in OIr. _foaid_ ‘spends the night’ < _*u̯os-e/o-_, MW. _arhoaf_ ‘delay’ _*u̯or-ati-u̯os-e/o-_, MB. _gortos_, B. _gortoz_ (inf.) ‘wait’, MC. _gortos_ (v.n.) ‘stop, delay, wait’ < _*u̯or-ati-u̯os-to-_.

2. OIr. _fíu_ (adj.) ‘worthy, meet, fitting’, MW. _gwiw_ (adj.) ‘apt, fit, proper, worthy’, B. _gwiv_ (adj.) ‘gay’, MC. _gvyw, guyv_ (adj.) ‘fit, worthy, proper, meet’, Gaul. _Uesu-, -uesus_ (p.n. element) < _*u̯esu-_ (see Schrijver 1995: 386–387) < _*h$_1$u̯esu-_ are cognate with Skt. _vásuḥ_ ‘excellent, good’, Toch. B _yṣuwar_ ‘kindly’, Luv. _wāsu-_ ‘good’, and perhaps Gk. Hom. ἐάων (gen. pl.) ‘good things’ (G.-J. Pinault 1995; but on the Greek see Nussbaum 1998: 130–145). For the initial laryngeal cf. Skt. _purūvásuḥ_ ‘with many goods’, _viśvā́vasuḥ_, Av. _vīspā.vohu-_ ‘having all goods’ (EWAIA 2.533–534). It might be _*h$_1$-_ if ἐάων does belong here, or if Goth. _iusiza_ ‘better’ < _*eu̯s-is-_ comes from the same root with _schwebeablaut_ (Nussbaum 1998: 134–135 fn. 26).

3. MW. _gwint_, W. _gwynt_ (m.) ‘wind’, MB. _guent_ ‘odour’, B. _gwent_ (m.) ‘wind’, OC. _guins_ gl. _uentus_, MC. _gwyns, guyns_ (m.) ‘wind’ come from _*h$_2$u̯eh$_1$-n̥t-o-_ (see p. 174).

4. MW. _iawl_ (f.) ‘prayer, supplication; worship, praise’ < _*i̯ālV-_ < _*(H)i̯eh$_2$-leh$_2$_ and its denominative verbs OIr. _áilid_ ‘requests, entreats’, OB. _iolent_ gl. _precentur_ are cognate with Gk. ζῆλος, Gk. Dor. ζᾶλος ‘eager rivalry, zealous imitation, emulation, zeal’ (LEIA A-30; LIV 310–311).

5. MW. _ieu_ (m., f.), MB. _yeu_, B. _yev_ (f.), OC. _ieu_ gl. _iugum_ ‘yoke’ < _*i̯ugo-_ < _*(H)i̯ugo-_ may be cognate with Gk. ζυγόν, Lat. _iugum_ ‘yoke’, Skt. _yugám_ ‘yoke, team’. For evidence of initial laryngeal cf. Skt. _āyunak_ (3sg. impf.) ‘harnessed’. But they may also be borrowed from Latin (Schrijver 1995: 340).

6. OIr. _lenaid_ ‘follows’, MIr. _ad·len_ ‘adheres, follows’, OW. _linisant_ (3pl. pret.) gl. _lauare_, MW. _llynwys_ (3pl. pret.), W. _llynaf_ ‘infect, defile, corrupt, be infectious; ?smear’ < _*lina-_ < _*h$_2$li-n-H-_ are cognate with Gk. Hesych. ἀλίνειν· ἀλείφειν ‘smear’, Lat. _linō_ ‘smear’, Hitt. _ḫalina-_ ‘clay’ < _*h$_2$lei̯H-_ (LIV 277–278; McCone 1991b: 11). Schrijver’s (1991a: 19–20) splitting of the forms between two roots is unnecessary.

7. OIr. _luid_ (pret.) ‘went’ < _*lude/o-_ (suppletive to _téit_ ‘goes’) is cognate with Toch. B _lac_ (pret.) ‘went out’ and Gk. Hom. ἤλυθον (aor.) ‘came’ < _*h$_1$leu̯d^h-_ (LIV 248–249). OIr. _lus_ (m. _u_-stem) ‘plant, herb, vegetable; leek’, MW. _llysyeu_, W. _llysiau_ (pl.) ‘vegetables, herbs’, MB. _lousaou_, B. _louzoù_ (coll.) ‘plants, herbs’, OC. _les_ gl. _herba_, MC. _losow_ (coll.) ‘plants, herbs’ < _*lussu-_ may also belong to this root, via the semantics seen in Skt. _ródhati_ ‘grows’, Goth. _liudan_ ‘grow’, Lat. _līberi_ ‘children’ (IEW 684–685). Skt. _vī-rúdh-_ ‘plant’ provides further evidence for the initial laryngeal (EWAIA 2.467–468).

8. OIr. _mé_, MB. _me_, MC. _my, me_ ‘I’ < _*mĕ_, OW., MW. _mi_ ‘I’ < _*mī_ are cognate with Gk. ἐμέ, Hitt. _ammuk_, Alb. _mue_, _mua_ ‘me’, Arm. _im-_ ‘my’. We can reconstruct _*h$_1$me_, if the prothetic vowels in Greek, Hittite and Armenian are due to initial _*h$_1$-_ (as argued, for instance, by Beekes 1987: 7–12, Kortlandt 1987; but see Kloekhorst 2006: 77–81 for _*h$_1$-_ in Hittite). Gaul. _imon_ probably means ‘this’ rather than ‘my’ (Stifter 2011b: 176 fn. 19).

9. OIr. _melg_ (n. _s_-stem) ‘milk’ < _*melg-es-_, _mligid_ ‘milks’ < _*ml̥g-e/o-_, _mlicht_ (_i_-stem) ‘milk’, MW. _blyth_, _blith_, W. _blith_ (adj.) ‘milch, full of milk’ < _*ml̥g-ti-_ are cognate with OE. _melcan_, Lith. _mélžu_, Lat. _mulgeō_, Gk. ἀμέλγω ‘milk’ < _*h$_2$melĝ-_ (LIV 279).

10. OIr. _nert_ (m., _n. o_-stem) ‘strength, might, power’, MW. _nerth_ (m., f.) ‘force, strength’, MB. _nerz_, B. _nerzh_ (m.) ‘strength’, MC. _nerth_ (m.) ‘strength, energy, might, power, force’, Gaul. _Nertus_, _Nerto-_ (p.n.) < _*nerto-_, OIr. _ner_ (m. _o_-stem) ‘boar’, MW. _ner_ (m.) ‘chief, lord’ < _*nero-_, perhaps OIr. _nár_ (_o_-, _ā_-stem adj.) ‘noble, magnanimous’ < _*nōro-_ (de Bernardo Stempel 1999: 42 fn. 32; but see p. 152) are cognate with Skt. _nár-_, Alb. _njer_, Osc. **niir**, Gk. ἀνήρ, Arm. _ayr_ ‘man’, Phryg. αναρ ‘husband’ < _*h$_2$ner-_ (for the initial laryngeal, cf. also Skt. _sūnáraḥ_ ‘posessing vital strength, mighty, prosperous, beautiful’ < _*su-h$_2$ner-o-_).

11. OIr. _noí_, OW. _nauou_, MW. _naw_, OB. _nau_, MB. _nau_, B. _nav_ ‘nine’ < _*neu̯an_ (Schrijver 1995: 98) are cognate with Skt. _náva_, Lat. _nouem_, Goth. _niun_, Gk. ἐννέα, Arm. _inn_ ‘nine’ (IEW 318–319). The initial vowel of Greek and perhaps Armenian suggests _*h$_1$neu̯n̥_.

12. MIr. _olann_ (f. _ā_-stem) ‘wool’ < _*ulanā_, OW. _gulan_, MW. _gwlan_ (m.), MB. _gloan_ (m.) ‘wool’, OC. _gluan_ gl. _lana_ < _*u̯lanV-_ are cognate with Hitt. _ḫulana-_, Luv. _ḫulaniš_, Skt. _ū́rṇā_, Av. _varənā_, Lith. _vìlna_, OCS _vlъna_, Goth. _wulla_, Lat. _lāna_, Gk. λῆνος (n.) ‘wool’ (IEW 1139) < _*h$_2$u̯l̥h$_{1/2}$-n-_.[43] Whether we

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[43] Initial _*h$_3$-_ may also be possible (see p. 14). For discussion of the medial laryngeal, see Peters (1987a), attacked by Lindeman & Berg (1995). The loss of the initial laryngeal without

should assume that the Irish or Brittonic words represent the original Celtic situation is unclear.

If the syllabification in Celtic was the same as for the other languages, _olann_ is an example of *_Hu̯V-_; McCone (1985: 173–175) explains the divergent Celtic reflexes by a Proto-Celtic change *_u̯l̥-_ > *_u̯ul-_ > Irish *_ul-_, British *_u̯l-_ (cf. OIr. _olc_ 'evil', Lep. ULKOS, Gaul. _-uulkos_ (p.n.) if from *_u̯l̥k^{w}o-_ 'wolf').[44] This is more plausible than Schrijver's (1995: 177) suggestion that the Celtic forms reflect an archaic syllabification, *_h$_2$ulh̥$_{1/2}$n-eh$_2$_, but the exact developments of this word in Celtic are not clear. See also p. 76 and p. 197.

13. OIr. _·raig_ (_a-t·raig_ 'raises oneself, rises', with infixed reflexive object pronoun), MW. _re_ (3sg.) 'lifts oneself', Gaul. _regu_ (1sg. indicative or subj.) 'stretch out(?)' < *_rege/o-_, MB. _gourreas_ (3sg. pret.) 'lifted, collected', MC. _gor_ (3sg.) 'places' < *_u̯or-reg-e/o-_ are cognate with Lat. _regō_ 'guide, direct', Goth. _rikan_ 'amass', Gk. ὀρέγω 'reach, stretch' < *_h$_3$reĝ-_ (LIV 304). OIr. _recht_ (m. _u_-stem) 'law', MW. _reith_, W. _rhaith_ (m.) 'law, rule, decree; rightness, justice', MB. _rez_, B. _reizh_ (f.) 'justice, equity, right, law', Gaul. _Rectu-_, _Rextu-_ (p.n. element) < *_rek-tu-_, and perhaps MIr. _rén_ 'span' and _réise_ 'finger, span', come from the same root.

14. MIr. _recht_ (m. _u_-stem) 'paroxysm, outburst (of anger, passion etc.)', MW. _anreith_, W. _anrhaith_ (f.) 'spoil, booty, plunder, foray' < *_rep-tu-_, and perhaps OIr. _rect_ 'impetigo', are connected doubtfully by LEIA (R-12) either with Skt. _rápaḥ_ 'injury, wound', Gk. ἐρέπτομαι 'feed on', and Lat. _rapiō_ 'seize and carry off, snatch', or with Lat. _rabiō_ 'am enraged'.

A root *_(h$_1$)rep-_ (LIV 507) can explain Gk. ἐρέπτομαι, Skt. _rápaḥ_, Alb. _rjep_ 'robs' and Lith. _ap-rẽpti_ 'take by force', but Lat. _rapiō_ is problematic. LIV explains it as a morphological zero grade replacing *_(h$_1$)r̥p-_, probably based on a root aorist *_(h$_1$)rep-/_(h$_1$)r̥p-. I assume that morphological zero grades should be accepted only as a last resort.

Alternatively, if Gk. ἐρέπτομαι does not belong here, the root may be *_h$_2$rep-_ on the basis of Gk. ἀρέπυια, ἅρπυια 'harpy' ← *'snatcher' (Beekes 1969: 35; Rix 1970: 86). Neither root explains _rapiō_ easily. Therefore, Schrijver

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reflex in Greek might be due to a rule *_HCL̥-_ > *_CL-_; thus *_h$_2$u̯l̥h$_{1/2}$-n-_ > *_u̯l̥h$_{1/2}$-n-_ (cf. Gk. ῥαίνω 'sprinkle' < *_h$_2$u̯r̥-n-h-i̯e/o-_; Peters 1980: 23–24 fn. 18).

[44] But McCone notes that the same change did not affect e.g. *_u̯l̥H-ti-_ > OIr. _flaith_ 'lordship', W. _gwlad_ 'territory'. If he is correct, it might be possible to argue that this is due to accentual position: on the basis of Sanskrit and Greek the first syllable of *_h$_2$u̯l̥h$_{1/2}$-n-_ was stressed, as was that of *_u̯l̥k^{w}o-_ (Gk. λύκος, Skt. _vŕ̥kaḥ_ 'wolf'), whereas *_u̯l̥H-ti-_ might have generalised final stress. Another example might be OIr. _fled_ 'feast' if from *_h$_1$u̯l̥d-éh$_2$_ (LIV 254).

(1991a: 17) explains _rapiō_ and Gk. ἐρέπτομαι as regular from _*h_1r̥h_1p-_, with Lith. _ap-rẽpti_ from the full grade _*$h_1$reh_1p-_. He assumes that acute tone on long vowels only results from _*-VH-_ clusters, but this may not be the case (p. 12 ff.), and anyway _ap-rẽpti_ is also found with a circumflex, as noted by LIV (507). Schrijver reconstructs yet another root of identical semantics for Gk. ἀρέπυια, ἅρπυια 'harpy', Alb. _rjep_ 'robs' and Lith. _rẽplės_, OPruss. _raples_ 'pliers' < _*$h_2$rep-_.

It seems arbitrary to separate Lith _ap-rẽpti_ and _rẽplės_, and all forms except Lat. _rapiō_ can go back without problems to _*(h_1)rep-_ or _*$h_2$rep-_; although the etymology of Lat. _rapiō_ remains difficult it is not good enough evidence on its own to reconstruct a root _*(H)r̥Hp-_. The etymology of Lat. _rabiō_ remains uncertain (Schrijver 1991a: 305–306). The best reconstruction for MIr. _recht_, MW. _anreith_ is therefore _*(h_1)rep-tu-_ or _*$h_2$rep-tu-_; for the semantics in Irish cf. English 'seizure'.

15. OIr. _uin-se_ (2sg. conj. pres. subj) 'look, behold' may be cognate with Lat. _iubeō_ 'order', Skt. _yúdhyati_ 'fights', Gk. ὑσμίνη 'fight' < _*(H)i̯eu̯d^h-_ (LIV 225–226; Willi 2002; Schumacher 2004: 381). As evidence of initial laryngeal cf. Skt. _amitrāyúdh-_ 'fighting enemies'. OW., OB., OC. _Iud-_ (p.n. element), MW. _ud_ (m.) 'lord' may also belong here, but are argued by Lambert (1994b: 225–228) to be borrowed from Lat. _iudex_ 'judge'.

§ 53. _*HS-_ > _*S-_

1. OIr. _dét_ (n. _nt_-stem), MW. _dant_ (m.), OB. _dant_ gl. _odonta_, MB. _dant_ (m.), OC. _dans_ gl. _dens_, MC. _dyns_ (pl.), LC. _dans_ (m.) 'tooth' < _*dant-_ < _*$h_{1/3}$dn̥t-_ are cognate with Lat. _dēns_, Goth. _tunþus_, Skt. _dan_, Arm. _atamn_, Gk. Att.-Ion. ὀδών, Aeol. ἔδοντες (nom. pl.) 'tooth'. The Armenian and Greek forms point to an initial laryngeal, whether this be _*h_1-_ or _*h_3-_ (Beekes 1969: 54–55, 110; Kortlandt 1987: 63–64; Sihler 1995: 85; LIV 230–231).

2. OIr. _forbrú_ (pl.) 'eyebrows', MIr. _broí_, _braí_, _bráe_ (nom. pl.) 'eyebrows' < _*b^{h}rū-_ are cognate with Skt. _bhrū́ḥ_, Gk. ὀφρύς 'brow, eyebrow', OE. _brú_ 'brow' < _*h_3b^{h}ruH-_ (LEIA B-75 s.v. _brá_; Ringe 2006: 71).

3. MIr. _graig_ (n. _i_-stem) 'horses', MW. _gre_ (f.) 'stud of horses; herd', MB. _gre_ (f.) 'herd', OC. _gre_ (in _grelin_ gl. _lacus_) are cognate with Lat. _grex_ 'herd, flock' (if not borrowed). Schrijver (1991a: 19) is rightly sceptical of a connection with Gk. ἀγείρω 'gather' (IEW 382), which would imply _*$h_2$gre-g-_. For another etymology see de Vaan (2008: 273).

4. OIr. _it_, OW. _hint_, MW. _ynt_, OB. _int_, MB. _int_ (3pl.) 'are' < _*senti_ < _*h_1s-enti_ are cognate with Skt. _sánti_, Gk. εἰσί (3pl.) 'are' (LIV 241–242; Schumacher 2004: 295–317).

5. OIr. _so-_ (prefix), MW. _hy-_, _hu-_, B. _he-_, MC. _he-_, _hy-_, Gaul. _su-_ 'good' are cognate with Skt. _su-_, Av. _hu-_, Gk. εὐ- < _*$h_1$su-_ (Hamp 1974: 272; Nussbaum 1998: 134).[45]

§ 54. _*HS-_ > _*aS-_

1. MIr. _abra_ (m. _nt_-stem) 'eyelash, eyelid' < _*abrant-_, MW. _amrant_ (m., f.) 'eyelid' < _*ambrant-_ (?), MB. _abrant_ (f.), OC. _abrans_ gl. _supercilium_ 'eyelid' < _*abbrant-_ are sometimes connected with OIr. _forbrú_ 'eyebrows' < _*h_3b^hruH-_ (LEIA A-8, B-75; see p. 52) in the light of forms in other languages which seem to show similar 'prothetic' vowels: OCS. _brъvь_ and _obrъvь_ 'eyebrow', Macedonian ἀβρουτες and ἀβροτες and Persian _abrū_. Given OIr. _forbrú_, MIr. _broí_ 'eyebrows', the initial vowel can hardly be due to vocalisation of the laryngeal, and the different stem formations of _forbrú_ and _abra_ are also difficult to reconcile, as noted by Joseph (1980: 81–82), who suggests a connection with Lat. _frons_ 'forehead', Av. _bruuat-_ 'brow'. This, of course, does not explain the origin of the Celtic _*a-_; Hamp (1981: 49–53) posits an original _*h_1p-b^hrn̥t-_ > _*ap-brant-_ (with considerable remodelling in Irish and Welsh), the first member being the zero-grade of a root noun _*$h_1$op-s_ 'forehead' from which Hamp derives the preposition _*$h_1$epi_ (Gk. ἐπί 'on'). If correct, this would imply vocalisation of the laryngeal, but the etymology and subsequent remodelling are so complex, that Hamp's explanation itself cannot provide evidence for vocalisation.

2. OIr. _·acht_ (pret. pass.) 'was driven' < _*akto-_, MW. _amaeth_, W. _amhaeth_ (m.) 'ploughman, tiller, farmer', Gallo-Lat. _ambactus_ 'vassal' < _*ambi-akto-_ (Delamarre 2003: 40–41) are based on the past participle of the root _*h_2eĝ-_ (LIV 255–256; see OIr. _agaid_ p. 19). They ought to reflect the past participle _*h_2ĝ-to-_, but this could have been remodelled after the present stem.

3. OIr. _anai_ (m. pl. _i̯o_-stem) 'wealth', MW. _anaw_ (m.) 'wealth, bounty, gift', Gaul. _Anauus_ (p.n.) cannot come from _*$h_3$pn-au̯o-_ as implied by LEIA (A-73 s.v. _anair_), which compares Lat. _opēs_ 'wealth', Skt. _apnaḥ_ 'possession, work'.

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[45] LEIA's (S-155–156) assumption that only ὑ- in Gk. ὑγιής 'health' is related to OIr. _so-_, and that Gk. εὐ- belongs with Gaul. _Esu-_ (p.n. element), is incorrect (Mayrhofer 1986: 125; Lambert 1994a: 107; Weiss 1994 [1995]).

This would give OIr. ^{x}_úanai_ (Joseph 1980: 35). For the correct etymology see p. 208.

4. MW. _eis_ (pl.) ‘ribs’, MC. _asow_ (pl.) ‘ribs’ < _*ast-_, MW. _asen_ (f.) ‘rib’, OC. _asen_ gl. _costa_, MC. _asen, asan_ < _*astinā_, MIr. _asna_[46] (m.) ‘rib’ < _*astanii̯o-_ or _*astnii̯o-_, OIr. _aisil_ (f.) ‘part, division, joint’, MB. _esel_, B. _ezel_ (m.), OC. _esel_ gl. _membrum_ ‘limb’ < _*astili-_, and MW. _asgwrn_ (m.), MB. _ascourn, ascorn_, B. _askorn_ (m.), OC. _ascorn_ gl. _oss_, MC. _ascorn_ ‘bone’ < _*asto-kornV-_ (LEIA A-94–95; Schrijver 1995: 53–55), all derived from an _*ast-_, are probably cognate with Skt. _ásthi_, Av. _ast-_, Lat. _os_, Luv. _ḫassa-_, Hitt. _ḫaštāi_, Arm. _oskr_, Gk. ὀστέον ‘bone’.

Hamp (1965: 224; more definitely 1994: 37) derives Proto-Celtic _*ast-_ from _*h_3st-_. The prevalent _o_-vocalism might imply a root _*$h_3$est-_, but none of the forms above rule out _*$h_2$ost-_. According to Kortlandt (1983: 12–15; 1987), Arm. _oskr_ can come from _*h_3st-_ or _*Host-_, but not _*$h_3$est-_, which he would expect to give ^{x}_hoskr_ (but the reflexes of initial laryngeals in Armenian are much debated; see p. 14 f.). Joseph (1980: 16–17) argues for _*$h_2$ost-_ on the basis of Gk. ἀστράγαλος ‘vertebra’. This might reflect _*h_2(e)st-_, but is hardly reliable, given its derivational opacity. Hamp (1994: 37) very concisely explains away another Greek form, ἀστακός ‘the smooth lobster, crayfish’, as “< _*ʕstn̥-ko-_, dissimilated < _*ʕʷost-_”,[47] which presumably means that _*h_3-_ was dissimilated to _*h_2-_ before _*-o-_, with _*h_2-_ carried over into zero-grade forms of the root. Assuming original _*h_2-_ would seem simpler, but ἀστακός is not very trustworthy anyway; a variant ὀστακός suggests the Greeks thought that ἀστακός was connected with ὀστέον, but it may be completely unrelated.

While there is no good evidence, outside the Celtic words, for an initial _*h_2-_, there is nothing to prevent it (Ringe 2006: 45 reconstructs an acrostatic root noun _*h_2o/est-_). Therefore, it cannot be concluded that Proto-Celtic _*ast-_ must reflect _*h_3st-_ rather than _*$h_2$est-_.

§ 55. _Conclusion_

Laryngeals were lost without a vocalic reflex before consonants (this is shown by all the examples in § 52 and by § 53.1 OIr. _dét_ < _*$h_{1/3}$dn̥t-_, § 53.2 OIr. _forbrú_ < _*h_3b^hruH-_, § 53.4 OIr. _it_ < _*h_1s-enti_, § 53.5 OIr. _so-_ < _*$h_1$su-_). Neither of the possible examples of _*HS-_ (§ 54.1 MIr. _abra_, § 54.4 MW. _eis_) are plausible.

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[46] Joseph (1980: 16–17) considers that _asna_ does not belong here, since there is also a variant _esna_ and “where such variation between _e_ and _a_ occurs, _a_ is rarely the original sound” (GOI 53–54); but MW. _asen_, OC. _asen_ seem to show that _-a-_ is the original vowel.

[47] Where ʕ and ʕʷ stand for _h_2_ and _h_3_ respectively.

#HHC-

§ 56. _Introduction_

Two outcomes of *_HHC-_ in Celtic are conceivable; either the result is the same as *_HC-_ > *_C-_, or it is the same as *_CHC-_ > *_CaC-_ (see p. 57 ff.). According to Schrijver (1991a: 77), *_HHC-_ gave *_aC-_ in Latin.

§ 57. *_HHC-_ > *_aC-_

1. MW. _aren_ (f.) 'kidney' < *_ărenV-_ might come from *$h_{2/3}h_{2/3}r$-_en-_, if it is cognate with Hitt. _ḫaḫ(ḫa)ri-_ 'lung(s), midriff' (whose etymology is however, obscure, according to HED 3.7), Toch. A _āriñc_ 'heart' (GPC 438; Matasović 2009: 42). However, OIr. _áru_ (f. _n_-stem; perhaps secondary; Stüber 1998: 177–179) 'kidney' < *_ārō_ has a long vowel. The two Celtic words could reflect zero and full grades of a form *$h_{2/3}(e)h_{2/3}r$-_on-_. Lat. _rēnēs_ 'kidney' could not be connected, if *_HHC-_ gave Lat. _aC-_ (Schrijver 1991a: 77; see de Vaan 2008: 519 for alternative etymologies for _rēnēs_). Matasović (2009: 42) suggests the Celtic forms reflect a reduplicated formation *_He-Hr-ōn_, *_H-Hr-en-_, with _rēnēs_ from an unreduplicated form *_Hr-ēn-_; but the morphological variation (reduplicated syllable with ablaut) is unmotivated. Given the uncertainty, Stüber's etymology begins to seem appealing. She derives both Celtic forms from *_agrinā_ (cf. OIr. _áirne_ 'sloe' < *_agrin(i)i̯ā_; IEW 773; LEIA A-48), with secondary transfer to the _n_-stems in Irish, and back-formation in Welsh from the plural _eirin_. These forms are too uncertain to be used as evidence.

2. OIr. _óa_ (f.), MIr. _ae_, MW. _ahu_, W. _au_ (m.), MB. _auu_, _affu_, B. _avu_ (m.) 'liver', OC. _aui_ gl. _iecur_ are of somewhat unclear origin, but imply a preform *_au̯V-_. Matasović's (2009: 49) connection with the root *h_2eh_1- 'be hot' (see OIr. _áith_ p. 25) implies a reconstruction *h_2h_1-_u̯V-_ > *_au̯-_. But this etymology is too tentative to be used as evidence.

§ 58. *_HHC-_ > *_C-_

1. OIr. _ser_ 'star' (hapax), OW. _sserenn_ (singul.), MW. _ser_, _syr_, W. _ser_ (pl.), MB. _ster_ (coll.), MC. _steyr_, _steare_ (coll.) 'stars', Gaul. _Đirona_ (theonym), perhaps also OIr. _sell_ 'iris (of the eye)' < *_ster-lā_ (Schrijver 1995: 421–422), are cognate with Lat. _stella_, Gk. ἀστήρ, Skt. _stár-_, Hitt. _ḫašterza_, Arm. _astł_ 'star' (LEIA S-90; NIL 348–354). According to Adams (1995), these come from an agent noun *h_2h_1s-_ter-_, from the root *h_2eh_1s- 'be hot' (LIV 257–258; see OIr. _áith_ p. 25), which underwent cluster simplification to produce the attested forms. This preform, although with a different derivational explanation, is accepted by

G.-J. Pinault (2007). However, it seems unlikely that reduction of *h_2h_1s-*ter*- would have given *h_2ster- > Gk. ἀστήρ rather than *h_1ster- > ^{x}ἐστήρ. Although an origin for the putative root *h_2es- of *h_2s-*ter*- is lacking, it may be that the Proto-Indo-European word was not related to *h_2eh_1s-, in which case we should reconstruct *h_2ster- (thus, doubtfully, NIL); OIr. *ser* cannot be used as evidence.

§ 59. *Conclusion*

No conclusion can be reached on the result of **HHC*- clusters, because there is no reliable evidence.

CHAPTER THREE

LARYNGEALS IN THE FIRST SYLLABLE

#CHC-

§ 60. _Introduction_

There is no doubt that the regular result of a laryngeal between two consonants in the first syllable was *-_a_- in Proto-Celtic. Therefore, only some representative examples are given here. For Proto-Indo-European *-_a_- not from *-_H_- see p. 10 f. It has also been suggested that laryngeals were lost specifically after _s_-mobile before a consonant (Beekes 1969: 83–85).

§ 61. *_CHC-_ > *_CaC-_

1. OIr. _athir_ (m. _r_-stem) 'father', Gaul. _atrebo_ (dat. pl.), _ater_ (voc. sg.) 'father' < *_patēr_, MW. _edryd_, W. _edrydd_ (m.) 'residence, home, abode' < *_patri̯i̯o-_ (LEIA A-100–101) are cognate with Skt. _pitā́_, Arm. _hayr_, Lat. _pater_, Gk. πατήρ 'father' < *_ph_$_2$_tēr_.

2. MW. _had_ (coll.) 'seeds, that which is sown; offspring', MB. _hat_, _had_, B. _had_ (m.) 'seed', MC. _has_ (coll.) 'seed, progeny, semen' < *_satV-_ come from *_sh_$_1$_-tV-_ (cf. Goth. _saian_ 'sow', Lith. _sė́ju_ 'sow' < *_seh_$_1$_-_; LIV 517–518).

§ 62. *_sHC-_ > *_sC-_

1. OB. _stloit_ 'traction, sliding, pulling' (in _stloitprenou_ gl. _lapsus_) < *_slei̯ddV-_, MB. _stleiget_ (p.p.), B. _stlejañ_ (inf.) 'drag' < *_slei̯dd-i̯e/o-_ (Schrijver 1995: 432), MIr. _slaet_ 'swathe, layer, pile' < *_sloi̯dd-_[1] are compared to Skt. _srédhati_ 'fails, errs', OE. _slīdan_ 'slide', Lith. _slýstu_ 'slide', Gk. Hom. ὄλισθε (3sg. aor.) 'slipped' (LEIA S-125). According to IEW (960) the Greek form goes back to a verbal derivative in *-_d_^{h}- or *-_t_-: thus *_h_$_3$_lid_^{h}_-d_^{h}-, and the root is *(_s_)_h_$_3$_lei̯d_^{h}-. LIV (307) prefers to see a metathesis of *_h_$_3$_sleid_^{h}- to *_h_$_3$_leisd_^{h}- in Greek. Either way, the Celtic forms require *_h_$_3$_slei̯d_^{h}_-d_^{h}-.

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[1] With unclear gemination of the final stop. Perhaps this is a loan-word from Britonnic.

2. MW. _llym_ (adj.) ‘sharp, pointed, keen’, MB. _lemm_ (adj.) ‘sharp’ are connected by IEW (663) with Gk. Hesych. ὀλιβρός ‘slippery’, OHG. _slīfan_ ‘slip, slide; whet to a polish’. Beekes (1969: 84) assumes that these reflect a root _*(s)h_$_3$_lib-_ (since _*h_$_3$_slib-_ ought to have given Gk. ^{x}ὀλλιβρός). However, since the only evidence for the laryngeal is the Hesychian form, we should be wary (especially given PIE _*-b-_); could it be connected instead with ὀλισθηρός ‘slippery’? If ὀλιβρός is reliable, it must reflect _*h_$_3$_lib-_, and we must assume that the Germanic form comes from _*sh_$_3$_libro-_ > _*slibro-_, but the Celtic forms could come from _*sh_$_3$_lib-smo-_ > _*slib-smo-_ or _*h_$_3$_lib-smo-_.

§ 63. _Conclusion_

*CHC- normally gives _*CaC-_. There is some slight evidence for loss of laryngeal in _*sHC-_ when _*s-_ is _s_-mobile (§ 62.1 OB. _stloit_ < _*sH_$_3$_lei̯d_^{h}_-V-_), but it is not very reliable.

_#R̥HC-_

§ 64. _Introduction_

Beekes (1988a) argues that _*R̥HC-_ clusters regularly gave _*Re/a/oC-_ in Greek, _*RaC-_ in Germanic and Italo-Celtic. His argument is generally quite compelling (accepted for Celtic by e.g. Irslinger 2002: 26; Schumacher 2004: 136), but as he notes (1988a: 40), relatively little Celtic evidence is included, and the rule’s extension to Celtic is largely due to Beekes’ assumption of an Italo-Celtic subgroup. It is worthwhile assessing the Celtic evidence in detail. In principle, it is possible that different laryngeals could have given different results in this constellation (as supposed for Germanic by Müller 2007: 98–106); since this does not seem to be the case for Celtic, the material will not be separated according to laryngeal in the root.

§ 65. _*R̥HC-_ > _*RăC-_

1. OIr. _·lá_ (_ro·lá_, suppletive to _fo·ceird_ ‘throws, places, puts’) < _*lā̆i̯e/o-_, perhaps Cisapline Gaulish _-lai_ in TOMEZECLAI (Schumacher 2004: 444), are difficult to reconstruct. McCone (1991b: 33) posits _*h_$_1$_leh_$_2$_-i̯e/o-_, with the same root as Gk. ἐλάω, ἐλαύνω ‘drive’ (LIV 235), but this would require _schwebeablaut_, since the Proto-Indo-European root is _*h_$_1$_elh_$_2$_-_ (cf. Gk. ἤλασα (aor.) ‘drove’, Arm. _eli_ ‘go up, go out’). A zero-grade _*h_$_1$_l̥h_$_2$_-i̯e/o-_ would have given ^{x}_l̥i̯e/o-_ > ^{x}_ali̯e/o-_ (see p. 89 ff.). Schumacher (2004: 442–446) argues for a connection to the root _*leh_$_1$_-_ ‘slacken, allow’ (Lat. _lētum_ ‘death’, Lith. _liáutis_ ‘stop’ < _*leh_$_1$_-u̯-_,

Hitt. _laizzi_ ‘loosens’ < *_loh$_1$-ei̯e-_; LIV 399). This would imply *_l̥h$_1$-i̯e/o-_ > *_lăi̯e/o-_. In fact, since there is no other evidence for a _i̯e/o_-present to this root in Indo-European, Schumacher considers the present root generalised from the weak forms of a root aorist; this would also suggest *_l̥h$_1$-C-_ > *_laC-_. This is a possible etymology, but the semantics are not as good. The etymology is uncertain.

2. MIr. _lac_ (_o_-, _ā_-stem adj.) ‘weak, feeble’ < *_laggo-_ is difficult in light of its Indo-European cognates. Schrijver (1991a: 165) reconstructs a root *(_s_)_leh$_2$g-_ on the basis of Lat. _laxus_ ‘loose’ < *_l̥h$_2$g-so-_, _langueō_ ‘languish, waste away’ < *_l̥h$_2$-n-g-u-_ (derived from a _u_-stem adjective itself based on the original nasal present), Gk. λαγάσσαι (aor.) ‘slackened’ < *_l̥h$_2$g-_, λάγνος ‘lascivious’ < *_l̥h$_2$g-no-_, λάγγων ‘weakling’ < *(_s_)_l̥h$_2$-n-g-_ (from *_lăng-_ or *_slāng-_ > *_slăng-_ by Osthoff’s law), λωγάνιον ‘dewlap’ < *(_s_)_loh$_2$g-_.

ON. _slakr_, OS. _slac_, OE. _slæc_ ‘weak, soft’, which ought to go back to *_slog-_ or *_slag-_, are problematic for this view. Schrijver observes that there is a full grade in ON. _slōkr_ ‘degenerate man’, and concludes that _slakr_ etc. therefore probably represent *_sl̥h$_2$g-_ (presumably by morphological zero grade, since the regular result of *_sl̥h$_2$g-_ would be *_sulg-_). He explains Skt. _ślakṣṇáḥ_ ‘slippery, smooth, soft’ as being due to Lubotsky’s (1981) rule, whereby *-_VHDC_- gives *-_VDC_- in Sanskrit. Toch. A _slākkär_ ‘sad’, B _slakkare_ ‘darting, tremulous’ are difficult, because they ought to come from *_slag-_ or *_slōg-_ (Ringe 1996: 20–22; _contra_ Schrijver, and de Vaan 2008: 325, who allow *_sl̥h$_2$g-_), but *_slōg-_ could of course be from *_sloh$_2$g-_.

LIV (565), followed by de Vaan (2008: 325, 331–332), on the other hand, reconstructs *_sleg-_. This explains the Germanic forms (*_slog-_), and Gk. λάγγων, because the *-_n_- in a nasal present never seems to vocalise: thus *_sl̥-n-g-_ > *_slang-_. De Vaan derives Lat. _laxus_ from *_sl̥g-so-_ via Schrijver’s (1991a: 477–485) rule *-_R̥DC_- > *-_RăDC_- in Latin, with analogical introduction into the verb (or via another rule *_CCCC_ > *_CaCCC_ in *_lngu̯e/o-_; Schrijver 1991a: 488–498).[2] He suggests that the Tocharian forms do not belong here, on semantic grounds.

A root *(_s_)_leg-_ has difficulties in explaining MIr. _lac_, because *_l̥ggo-_ should have given ^{x}_liggo-_, unless we operated with a _schwa secundum_ to give *_laggo-_. It is easier to assume a root *(_s_)_lā̆g-_, which explains all forms, but still leaves the problem of the geminate (‘expressive gemination’?).

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[2] Note that Schrijver includes sonorants as consonants, even when they are in a position in which they would be syllabified according to the rules adopted here (see p. 4 ff.).

3. MIr. _ladan_ (_o_-, _ā_-stem adj.) 'dumb', Gaul. _Ladanus_ (p.n.) are connected by Delamarre (2003: 194) with Gk. Hesych. ληδεῖν 'become tired', Lat. _lassus_ 'tired'. The root is *_leh$_1$d-_, cf. Alb. _lodh_ 'makes tired', Goth. _letan_ 'leave alone', _lats_ 'slow' (LIV 400). The semantic connection is possible but not certain; _ladan_ may come from *_l̥h$_1$d-ano-_.

4. OIr. _lainn_ (_i_-stem adj.) 'eager, keen' < *_las-ni-_ is apparently directly cognate with Gk. ληνίς 'Bacchante', and further λιλαίομαι 'long for' < *_li-las-i̯e/o-_, Lat. _lascīuus_ 'playful, sportive; wanton' (IEW 654; LIV 397). Insofar as it attests to ablaut variation, OCS. _laska_ 'flattery' < *_lās-_ might imply original *-_h$_2$_- in the root. Skt. _láṣati_ 'desires, longs for' would imply *-_a_- but *_las-_ ought to have given Skt. ^{x}_lásati_; it is not clear that this should belong here (KEWA 3.95).[3] However, the evidence is not certain enough to prefer *_l̥h$_2$s-_ over *_las-_ for OIr. _lainn_ (_pace_ Beekes 1988a: 28, 35 and Schrijver 1991a: 165–166).

5. OIr. _laith_ 'ale, liquor', MW. _llad_ (m., f.) 'liquor, ale', OB. _lat_ gl. _crapulam_, OC. _lad_ gl. _liquor_ < *_lăti-_ are connected by IEW (654–655) with W. _llaid_ (m) 'mud, mire' < *_lăti̯o-_,[4] OIr. _lathach_ (f. _ā_-stem) 'mire, puddle' < *_lătāka_, ON. _leþja_ 'mud, dirt' < *_lăti̯ōn_ and Gk. λάταξ 'drops of wine in the bottom of a cup'. If correct, this etymology would imply *_l̥h$_2$t-_. However, Irslinger (2002: 206–207) argues that the words for 'mud' etc. should be divorced from those for 'ale'.[5] She derives the 'ale' words from either *_pleh$_1$-_ 'be full' (Lat. _plēnus_ 'full', Gk. πλήθω 'am full'; LIV 482–483) or *_leh$_2$-_ 'pour' (Hitt. _lāḫ̯ui_ 'pours'; LIV 401). The latter is more likely, on the assumption that λάταξ does belong here (which it may not; after all, the drops of wine at the bottom of a cup are likely to contain the lees, in which case a semantic connection with the 'mud' words would also be possible). Consequently, _laith_ may come from *_l̥h$_2$-ti-_, but this is very uncertain.

6. OIr. _laithe_ (n. _i̯o_-stem) 'day, daylight' < *_lati̯o-_, Gaul. _lat_ (abbreviated) 'day' are cognate with OCS., Russ. _lěto_ 'year, summer', Swed. dial. _låding_ 'spring' < *_lēt-_ (IEW 680), which suggests Proto-Celtic *_l̥h$_1$t-_.

7. OIr. _lassaid_ 'takes fire, blazes, lights up', OIr. _lassar_ 'flame, fire', MW. _llachar_ (adj.) 'bright, brilliant, gleaming, flashing' < *_laps-_ are apparently

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[3] OHG., OE. _lust_ 'lust' does not seem likely to be the regular result of either *_l̥s-tu-_ or *_l̥h$_2$s-tu-_ (Müller 2007: 98–106, 288).

[4] Irslinger (2002: 207) connects also MC. _lys_ (m.) 'mud, mire, slime'. But MC. _lys_ is more usually spelled _lyys_, which suggests the word was originally disyllabic.

[5] And that _lathach_ is a later derivative of OIr. _loth_ (f. _ā_-stem) 'mud, mire', which is perfectly likely: see GOI (53). Since the British Celtic and Germanic words can also come from *_loti̯V-_, and if λάταξ is not connected, these probably all go back to a root *_lot-_.

cognate with Gk. λάμπω 'give light, shine', Hitt. *lāpta* (pret.) 'glowed', OPruss. *lopis* 'flame', Latv. *lāpa* 'torch' (IEW 652–653; LIV 402); consequently, *lassaid* probably reflects *_l̥h_2p-_, although it is not clear where the suffix *_-s-_ comes from.

8. MW. *llain* (m., f.) 'blade, sword, spear' < *_lăginV-_, is compared by IEW (652) with MIr. *láige* (m.) 'mattock, spade; spear', Gk. λαχαίνω 'dig', which would imply *_l̥$h_2$$g^h$-_ for *llain*. However, if *llain* and *láige* are related, 'blade' seems to have been the primary meaning, and O'Rahilly (1940–1942: 152) instead compares *láige* with Lat. *plangō* 'beat', Gk. πληγή 'blow' < *_pleh₂g-_ (LIV 484); he leaves the origin of *llain* uncertain (but it could come from *_pl̥h_2g-ineh$_2$_).

9. OIr. *loch* (n. *u*-stem) 'lake, inlet of the sea, pool', MB. *laguenn*, B. *lagenn* (f.) 'lake, mire, cesspit', OC. *lagen*[6] gl. *stagnum*, Gaul. *-locos*, Λοκό- (pl.n. element) are cognate with Lat. *lacus* 'lake', Gk. λάκκος[7] 'pond, reservoir', OE. *lagu* 'sea', OCS. *loky* 'sea, cistern'. One might reconstruct *_l̥$h_2$ku-_, on the basis of the Latin and Greek forms. However, this does not explain the *-o-* of Irish and Gaulish. According to Schrijver (1991a: 475–476), the Latin *-a-* is due to change from *_-o-_ after velar *_-l-_, and the Greek form comes from *_l̥ku-_. Matasović (2009: 243) suggests that the Cornish and Breton words are borrowed from Latin. Whatever the explanation, the Irish and Gaulish *-o-* suggest that a laryngeal was not involved.

10. MIr. *macha*, *machad* (m.) 'enclosure for milking cows, milking yard (or field?)' < *_măk-_ may be cognate with Lat. *mācĕria* 'a wall of brick or stone, esp. enclosing a garden', and Latv. *màkt* 'push, squeeze', in which case the different vowel lengths might suggest *_m(e)h_2k-_ (IEW 698). MIr. *machaire* (m. *i̯o*-stem) 'large field or plain' might be a loan-word from *mācĕria*, except for the change from *i̯ā-* to *i̯o*-stem.[8] MW. *magwyr* (f.) 'wall', B. *magoar* 'wall' probably are loans, with late Latin shortening of the initial, unstressed syllable, and lengthening of stressed *_-ĕ-_ in the suffix.

Since the evidence is limited to Celtic, Italic and Balto-Slavic, *_măk-_ may be a post-Indo-European creation; it is also possible that *macha* is related to OIr. *mag* 'plain; field' (LEIA M-3–4), and does not belong here. It is not certain that *macha* comes from *_m̥h_2k-_.

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[6] If correctly emended from <*sagen*> (Campanile 1961: 320), but this is doubted by Graves (1962: 316).

[7] From *_laku̯o-_ with irregular -κκ- instead of -ππ-; Chantraine (1968–1980: 615).

[8] With regard to the semantics, an anonymous reviewer points out to me that fields in Ireland are typically surrounded by stone walls.

11. MIr. _maide_ (m. _i̯o_-stem) ‘stick, staff, beam, log’ is probably cognate with ON. _mastr_, OHG. _mast_ ‘mast’, and hence from *_masdi̯o-_.[9] A further connection with Lat. _mālus_ ‘mast, pole’ < *_mā̆sdo-_ (IEW 701; followed by Schrijver 1991a: 167) may or may not be correct.[10] If this is a shared Celtic-Italic-Germanic word and is not a post-Proto-Indo-European creation then it may reflect *_m̥h_$_2$_-s-d-_ (if MIr. _mátan_ (m. _o_-stem) ‘club, staff?’ < *_māsd-_ belongs here, then the implied ablaut makes a Proto-Indo-European origin more likely).

12. OIr. _maidid_ ‘breaks, bursts; rushes; bursts forth, gushes’, MW. _maedu_ (v.n.) ‘beat, strike, smite’, MB. _mezaff_ (inf.) ‘knead dough; muddle, confuse’, B. _mezañ_ (inf.) < *_mad-i̯e/o-_ (Schumacher 2004: 464–465) are cognate with Lat. _madeō_ ‘am wet, moist; stream’ and Gk. μαδαρός ‘wet; flaccid’ < *_mad-_ or *_m̥h_$_2$_d-_, according to LIV (421). If Sanskrit _mádati_ ‘is glad, drunk’ belongs here, it does not necessarily provide evidence for *_-a-_: according to Lubotsky (1981) it comes from *_meh_$_2$_d-_, with regular loss of laryngeal before voiced stop in Sanskrit. On the other hand LIV (423–424) attributes it to a different root *_med-_ ‘be full’.

Although Schrijver (1991a: 167) disconnects the Celtic etyma on semantic grounds, a connection between _maidid_ and the words in other languages seems possible (the Brittonic languages showing subsequent shift of meaning). If *_R̥HC-_ gave *_RĔC-_ in Greek and Latin, as argued by Beekes (1988a) and Schrijver (1991a: 171–172), it is more likely that _maidid_ comes from *_m̥h_$_2$_d-_, since proven *_-a-_ vocalism is rare in Proto-Indo-European roots. However, *_mad-_ remains a possibility.

13. OIr. _maith_ (_i_-stem adj. and n. _i_-stem) ‘good’, MW. _mad_ (adj.) ‘fortunate, lucky, auspicious, happy; good, beneficial’, MB. _mat_, MC. _mas_ (adj.) ‘good’, Gaul. _matu_ (abbreviated _mat, m._),[11] and perhaps Celtib. _matus_ (MLH V.1: 247–249) < *_matV-_ are generally assumed to be cognate with OLat. _mānus_ ‘good’, Lat. _mātūrus_ ‘ripe, mature, perfect’, perhaps also Gk. Hesych. ματις· μέγας (LEIA M-2, 12–13; Irslinger 2002: 208, with literature). These etyma would imply a root *_meh_$_2$_-_. Irslinger suggests a connection with the root *_meh_$_2$_-_ ‘give a sign’ (Gk. μηνύω ‘declare, indicate’, OCS _po-manǫti_ ‘wave, make signs to’; LIV 425), via ‘give a positive sign’ to ‘what is marked as good’, which

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[9] With <_d_> for *_-dd-_ < *_-sd-_ (GOI 133), since <_d_> is written even in late texts which write <_dh_> for *_-đ-_ (DIL M-27–28).

[10] With so-called ‘Sabine’ _-l-_ < *_-d-_. The environment for this change remains unclear (Meiser 1998: 100).

[11] And perhaps the name elements _-matus_, _Mati-_ etc. (Delamarre 2003: 221).

is a possibility. More likely, however, is that *maith* etc. originally meant 'timely', cf. Hitt. *meḫur* 'time' < **mēh$_2$-u̯r̥* (Eichner 1973).[12] On the basis of the vowel length alternations, and the attestation of the root in at least three languages, OIr. *maith* etc. probably reflect **m̥h$_2$-tV-*.

14. MIr. *mén* (*i*-stem) 'mouth, opening' < **makn-* or **mePn-* (where **-P-* is **-g-*, **-d-*, **-k-* or **-t-*; GOI 78–79) and W. *min* (m.), B. *min* (m.) 'expression, face', MC. *myn*, *meen* (m.) 'edge, point, brink, lip, mouth, muzzle, face' < **mē(P)n-* (where **-P-* is **-g-*, **-d-* or **-k-*; Schrijver 1995: 353–361) could reflect an ablauting form **m̥h$_1$kni-*/**meh$_1$kni-* or **mePni-*/**mēPni-*.

LEIA (M-36) suggests two possible connections. The first is with OHG. *mago* 'stomach', Lith. *mãkas*, *mẽkeris* (dialectal *-ẽ-*?) 'money bag', Latv. *maks* 'bag, pouch', OCS. *mošьna* 'bag' (IEW 698); if **m̥HC-* gives **măC-* in Germanic and Balto-Slavic, and if Lith. *mẽkeris* is secondary, then these could reflect a root **meh$_1$k-*, but all forms could also come from **mek-* or **mok-*. The second is with Gk. μήκων, Dor. μᾱ́κων 'poppy', OHG., OS. *māho*, OHG. *mago* 'poppy' (IEW 698). If this were correct, it might reflect an *n*-stem in which **mēh$_2$k-on-* > OHG *māho*, → W. *min*; **m̥h$_2$k-on-* > OHG. *mago*, → MIr. *mén*; and **meh$_2$k-on-* > Gk. μήκων were all found. Reconstructing such a formation would have the advantage of explaining the variation in vowel length, and the presence of the suffix **-n-* in Celtic.

Given the semantic difference between Celtic 'mouth' and Greek and Germanic 'poppy', it is very unlikely that *mén* etc. belong here. Nor is the connection with words for 'stomach' and 'bag' much more appealing. Consequently, we cannot be certain about the origin of *mén* etc.

15. MW. *mac* (3sg.) 'rears, breeds; causes something to grow', MB. *mag* (3sg.) 'nourishes, brings up', MC. *maga* (v.n.) 'feed, nourish, rear, raise up' < **make/o-*, OIr. *do·formaig* 'increases, amplifies, adds' < **tu-u̯or-make/o-* are cognate with Gk. μῆκος, Dor. μᾶκος 'length', Gk. μακρός 'long, tall, large', Lat. *macer* 'lean', OHG. *magar*, ON. *magr* 'lean' (Schumacher 2004: 466–470); OIr. *mér* (m. *o*-stem) 'digit, finger' is probably directly cognate with Gk. μακρός.[13] They might reflect a root **meh$_2$k̂-*, but Av. *mas-* 'long', and its derivatives *masyah-* 'bigger', *masisòta-* 'highest', *masah-* 'length, size', are problematic

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[12] Kloekhorst (2008: 567–568) reconstructs **mei̯H-u̯r̥*, which would require this word to be disconnected from *maith* etc. But Kloekhorst's connection with **mei̯H-* 'diminish' (LIV 427) is uncertain semantically.

[13] Pedersen's (1909–1913: 1.296) comparison of Gk. μέτρον 'measure' < **m̥h$_1$-tro-*, Skt. *mā́tra* 'measurement' < **meh$_1$-treh$_2$* or **meh$_1$-tleh$_2$* (**meh$_1$-* 'measure', LIV 424–425), with regard to the use of the finger in measuring will not work; **matro-* < **m̥h$_1$-tro-* would have given OIr. ^{x}*mathar* (cf. MIr. *arathar* 'plough' < **h$_2$erh$_3$-tro-*).

for a reconstruction involving a laryngeal. Beekes' (1988a: 25) suggestion that these do not belong here is unlikely, since they are semantically a good fit. More likely is IEW's suggestion that the _-a-_ was created by analogy with Av. _maz-_ 'big', _mazyah-_, _mazišta-_ (*_meĝh$_2$-_, IEW 708), but the simplest possibility is that this root had original Proto-Indo-European *_-ā̆-_.

16. MIr. _métal_ (f. _ā_-stem) 'paunch, belly' comes from *_mentlā_ or *_mantlā_. LEIA (M-40–41) comes to the conclusion that all etymologies are doubtful; it observes that a connection with Lat. _mandō_ 'chew, masticate', Gk. μασταζῶ 'chew, eat', Hesych. μάθυιαι· γνάθοι is unlikely on semantic grounds. It is also impossible formally, since the root is either *_meh$_2$d^h-_ (Beekes 1988a: 29) or _meth$_2$-_ (LIV 420), neither of which could give _métal_. The best etymology is *_mn̥-tleh$_2$_, from the root *_men-_ 'stand out, project' (IEW 732; LIV 437).

17. OIr. _mug_ (m. _u_-stem) 'slave, servant', MB. _mau_, B. _mav_ (adj.) 'agile, active; happy', MC. _maw_ (m.) 'boy, youth, servant', Gaul. _Magus_ (p.n.) < *_magu-_, MW. _meudwy_ (m.) 'anchorite' (< *_magu-dei̯u̯ī_ 'servant of god') are cognate with Goth. _magus_ 'boy, servant', ON. _mǫgr_ 'son, young man'. One might therefore reconstruct *_m̥Hg^{h}u-_, but Av. _maγava-_ 'unmarried' suggests an original Indo-European *_mag^h-_ (IEW 696).

18. MIr. _naiscid_ 'binds, makes fast', MB. _nascaff_, _naskañ_ (inf.) 'bind, fasten', MC. _nask_ (3sg.) 'tethers, yokes' < *_nadske/o-_ have an uncertain history. On the one hand we have ON. _nót_ 'fishing net' < *_nōd-_ or *_nād-_ and Goth. _nati_, OHG. _nezzi_ from Proto-Germanic *_nati̯a-_ < *_nod-_ or *_nad-_. On the other we find Skt. _náhyati_ 'binds', past participle _naddháḥ_, compound _upānáh-_ 'shoe', which suggest *_Hned^h-_ (LIV 227). ON. _nist_ 'brooch, pin', OHG. _nestilo_ 'string' < *_ned$^{(h)}$-st-_ could belong to either of these roots.

According to Schumacher (2004: 489–490), ON. _nót_, Lat. _nōdus_ 'knot' and MIr. _naiscid_ belong to a root *_neHd-_, on the grounds that _nōdus_ and _nót_ are unlikely to be a _vr̥ddhi_ formation, and hence that the long vowel must be original (Darms 1978: 308–310), with Skt. _náhyati_ coming from a separate root. Lat. _nassa_ 'wicker basket for catching fish' < *_nad$^{(h)}$-tā_ is also most easily explained as coming from *_n̥Hd-_ (although see below).

Celtic *_năd-_, therefore, might come regularly from *_n̥Hd-_. Alternatively, LIV derives it from an analogical reduced grade *_n$_e$d-_, replacing regular ^{x}_and-_ < *_Hn̥d-_. Against this hypothesis is the fact that there is no sign of a full-grade *_ned-_ in the Proto-Celtic paradigm of this verb, which would act as the trigger for this reanalysis (Schumacher 2004: 488). A similar explanation for Lat. _nassa_ is also unlikely, since this is an isolated form (influence from _nōdus_ is improbable).

Schrijver (1991a: 125, 481, 485) argues for a rule *_-R̥DC-_ > *_-RaDC-_ in Latin and Celtic, and derives both Lat. _nassa_ and MIr. _naiscid_ from *_n̥d-_, to a root *_ned-_ found in these words and the Germanic forms. However, there is no other good evidence for this rule in Celtic (see p. 71 fn.20).

In terms of explanatory efficiency there are two possibilities: either 1) two roots of similar meaning, *_Hned_^{h}- and *_ned-_. The former gives Skt. _náhyati_, the latter ON. _nót_, Lat. _nōdus_ (_vr̥ddhi_) and ON. _nist_, OHG. _nestilo_. MIr. _naiscid_, Lat. _nassa_ can come from either, via the *_-R̥DC-_ > *_-RaDC-_ rule or reduced grade. Or 2) two roots of similar meaning, *_Hned_^{h}- and *_neHd-_. The former gives Skt. _náhyati_ and ON. _nist_, OHG. _nestilo_, the latter ON. _nót_, Lat. _nōdus_ and MIr. _naiscid_, Lat. _nassa_. It is not possible to come to a final judgement: _nascaid_ < *_n̥Hd-_ remains a possibility, but cannot be proven.

19. OIr. _nath_ (m., f.) 'poetical composition', MW. _nad_ (m., f.) 'song, poem, poetry', Gaul. _-nato-_, -νατα- (in p.n.s) are described by LEIA (N-4) as "sans étymologie". However, given the Indo-European association of poetry and weaving (West 2007: 36–38) a connection with the root *(_s_)_neh_$_1$- 'spin' (cf. Gk. νῇ 'spins', OHG. _nāen_ 'sew'; LIV 571–572) is plausible (Matasović 2009: 284–285). This suggests *_n̥h_$_1$_-tV-_ > *_nătV-_.

20. OIr. _nathir_ (f. _k_-stem) 'snake, serpent' < *_nătrik-_, MW. _neidyr_ (f.) 'snake, serpent', OB. _natrolion_ gl. _regulosis_, _pithis_, MB. _azr_, B. _aer_, _naer_ (f.) 'grass snake, viper', OC. _nader_ gl. _uipera l. serpens l. anguis_, MC. _nader_ 'viper, adder' < *_nătrī_[14] are cognate with Lat. _natrix_ 'snake', ON. _naðr_, _naðra_ < *_nătr-_, OS. _nādea_, OHG. _nātra_ 'snake' < *_nētr-_ (IEW 767). The variation in vowel quality implies *_neh_$_1$-, whence Celtic *_n̥h_$_1$_-tr-ih_$_2$. However, _nathir_ and _nath_ (above) may not provide independent evidence: Schrijver (1991a: 169), following Walde & Hofmann (1938–1956: 2.147) derives _nathir_ from a _nomen agentis_ formed to the root *(_s_)_neh_$_1$- 'spin, weave': LIV 571–572).[15] Pedersen's (1909–1913: 2.45) connection with the root *_sneh_$_2$- 'swim' (LIV 572–573) does not fit with Germanic *_-ē-_.

§ 66. _Conclusion_

There is not enough evidence to be categorical about the reflexes of *_R̥HC-_ clusters for all sonorants and all laryngeals. However, there are several pieces of good evidence which point to a reflex *_RăC-_: § 65.6 OIr. _laithe_ < *_l̥h_$_1$_ti̯o-_, § 65.7 OIr. _lassaid_ < *_l̥h_$_2$_p-s-_, § 65.13 OIr. _maith_ < *_m̥h_$_2$_-ti-_, § 65.20 OIr. _nathir_ < *_n̥h_$_1$_-trik-_. It is possible that apparent cases of *_R̥h_$_2$_C-_ > *_RăC-_ may be due to Dybo's rule (see p. 132 ff.), which shortened long vowels in pre-tonic syllables, operating on forms which really reflect full grade *_Reh_$_2$_C-_ (although Dybo's rule may have only applied to high vowels). Nonetheless, the evidence strongly suggests that the regular result of *_R̥HC-_ is *_RăC-_. Such a reflex seems to imply a development *_R̥HC-_ [RHəC-] > *_RaC-_, rather than the *_R̥HC-_ [RəHC-] > *_RāC-_ which might be expected. This development may be due to analogical desyllabification of the initial sonorant of *_R̥HC-_ due to the desire to preserve paradigmatic unity with full grades in *_ReHC-_.

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[14] With _i_-affection undone in the singular on the basis of the plural in Cornish and Breton, and with irregular loss of _n-_ in Middle and Modern Breton.

[15] The evidence for the _s_-mobile being Germanic forms such as OHG. _nāen_ 'sew', Goth. _nēþla_ 'needle' (IEW 973).

#IHC-

§ 67. _Introduction_

In principle, it is possible that *_IHC-_ clusters could develop in Proto-Celtic in the same way as *_R̥HC-_ clusters, i.e. to give *_I̯aC-_ (as argued by Beekes 1988a, and for Germanic by Müller 2007: 98–106), or the same way as *_CIHC-_ clusters, resulting in long *_-ī-_ and *_-ū-_. Hamp (1976a: 17) suggests that there was a divergence between Irish *_iHC-_ > *_īC-_ and Gaulish and British *_i̯aC-_. Although such a late preservation of the laryngeals seems implausible (as noted by Schrijver 1995: 103–104), the evidence is collected below.

It is also possible that the clusters might develop differently depending on the laryngeal; since this does not seem to have happened in *_R̥HC-_ clusters this is _a priori_ unlikely, however, and there is no evidence for such a development.

§ 68. *_IHC-_ > *_I̯aC-_

1. OW. _iar_ gl. _ales_, MW. _yar_ (f.) 'hen, chicken', MB. _yar_ (f.) 'chicken', OC. _yar_ gl. _gallina_, MC. _yar_ (f.) 'hen', perhaps Gaul. _Iarus_, _Iiaros_ (p.n.) < *_i̯arV-_ are connected by IEW (297), followed by Beekes (1988a: 36), with Goth. _jēr_, OHG. _jār_ 'year' < *_i̯ēr-_, Russ. _jara_ 'Spring', Gk. ὥρα 'time, period' < *_i̯ōr-_ (hence presumably originally 'one-year-old chicken'), which would imply *_ih_$_1$_rV-_ > *_i̯arV-_ for Celtic. O'Rahilly (1940–1942: 148–149) points out that this does not explain (Middle) Irish _eirín_ 'chick, pullet', which looks as though it comes from *_i̯er-_. Since *_i̯e-_ becomes *_i̯a-_ in British and Gaulish (Schrijver 1995: 104–105, 107–108), the Irish form could then show the original vocalism, which would suggest that the Celtic forms do not come from the root

*_i̯eh$_1$r-_.[16] However, as David Stifter (p.c.) points out to me, _eirín_ could come from *_i̯ar-_, with Middle Irish raising of _-a-_ to _-e-_ before a palatal consonant (McCone 2005: 141). The oldest form of this word, which is not widely attested, seems to be _eréne_ (gen. sg.) in _Orgain Denna Ríg_ (Greene 1955: 18, line 311). This tale is attested in manuscripts dating from the Middle Irish period, although it is likely to have been written early in the 10th century; the spelling is largely classical, but it cannot be completely ruled out that _eréne_ reflects a Middle Irish spelling. However, it is not certain that OW. _iar_ reflects the original vocalism, so this word is not reliable evidence.

2. MW. _gwas_ (f.) 'abode, mansion, residence; rest, repose' < *_u̯astV-_ is derived by Matasović (2009: 404) from *_uh$_2$stu-_, cf. Skt. _vā́stu_ 'homestead, house', Gk. ἄστυ 'city, town', Toch. B _ost_ 'house'. However, _gwas_ should instead be connected with OIr. _foss_ (m. _o_-stem) 'rest, remaining quiet or stationary' < *_h$_2$u̯os-to-_ (see OIr. _fess_ p. 49),[17] since Proto-Celtic *_u̯o-_ could give British *_u̯a-_ (Schrijver 1995: 116–128).

3. MW. _gwaeth_ (adj.), MB. _goaz_, B. _gwazh_, early Van. _goueh_, Van. _goah_ (adj.), MC. _gweth_, _gueth_ 'worse' are derived by IEW (1135) from *_u̯akt-_, and connected with Lat. _uacillō_ 'totter, reel, stagger'. However, Schrijver (1995: 132–133) points out that this reconstruction cannot be correct; *_u̯akt-_ ought to have given something like MB. ^{x}_goaez_, B. ^{x}_gwaezh_, Van. ^{x}_goeh_, ^{x}_goeah_ (Jackson 1967: 163–164).

4. MIr. _féice_ 'ridge-pole, roof-tree' is cognate with (post-Vedic) Skt. _vám̐śyaḥ_ 'crossbeam', but contrary to IEW (1112), these can both go back to *_u̯enk̂-i̯o-_ rather than *_u̯ank̂-i̯o-_.

5. Gaul. _-ialum_ (in pl.n.s; only attested late), _Iallus_ (p.n.), OBrit. _Ialonus_ (theonym), W. _Iâl_ (pl.n.; _iâl_ 'clearing' probably does not exist) < *_i̯alo-_ are compared by IEW (505) with Latv. _jêls_ 'unripe, raw' < *_i̯ēlo-_, which implies a Celtic preform *_ih$_1$lo-_. Sims-Williams (2005) shows that the basic meaning may have been 'unripe' → 'late in coming to fruition' → 'infertile', which makes the semantic connection with the Latvian word plausible. However, the evidence for such a word remains slight, and not much weight can be put on it.

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[16] The alternative suggestion of a preform *_pīpero-_ (cf. Lat. _pīpō_, _pīpiō_ 'chirp, cheep'; O'Rahilly 1940–1942: 148–141; Hamp 1989: 181; Delamarre 2003: 186) seems implausible, however.

[17] Which Matasović confuses with OIr. _foss_ (m.) 'man-servant' < *_upo-sth$_2$-o-_.

§ 69. _*IHC- > *ĪC- in Irish, *I̯aC- in British and Gaulish_

1. OIr. _ícc_ (f. _ā_-stem) ‘payment, compensation, atonement, salvation’ < *_īkkā_ appears to be cognate with MW. _iach_ (adj.) ‘healthy, well, whole’, MB. _yach_, B. _yac’h_ (adj.), OC. _iach_ gl. _sanus_, MC. _yagh_ (adj.) ‘healthy’, Gaul. _Iaccus_ (p.n.) < *_i̯akko_-. The only extra-Celtic connection is with Gk. ἄκος (n.) ‘cure, relief, remedy’ (IEW 504), which lacks the expected rough breathing from *_i̯_-. However, there are dialectal forms which point to a rough breathing, e.g. ἐφακεῖσθαι, which suggest that ἄκος < *_i̯akos_ < *_ih$_2$kos_ may originally have been Ionic (Chantraine 1968–1980: 50).

If the connection with ἄκος is correct, it requires *_ih$_2$kko_- > Irish *_īkko_-, British *_i̯akko_-, but this is far from certain. Given the difference in semantics, it might be that the Irish word should be separated from the British and Gaulish forms, which might then be regular from *_ih$_2$ko_-; the geminate *-_kk_- remains a problem. The etymology is too uncertain to be used as evidence.

2. OIr. _ítu_ (f. _d_-stem) ‘thirst, desire’ < *_ītVtūt_- may be cognate with Gaul. _Adiatu_- (p.n. element), and perhaps W. _addiad_ (m.), _addiant_ ‘longing’, which are very badly attested (Schrijver 1995: 101). According to Hamp (1976a: 1–3, 16–17) the Gaulish and Irish forms show different reflexes of *_ih$_2$t_-, to the root found in Gk. ζητέω ‘seek’. Given the uncertainty of etymologising proper names, the Gaulish forms cannot be used as evidence. However, the semantic and formal connection between _ítu_ < *_ī-tV-tūt_- and the root *_i̯eh$_2$_-[18] is quite plausible, so it is possible that OIr. _ítu_ does come from *_ih$_2$-tV-tūt_-. See also Schrijver (1995: 104) and Delamarre (2003: 32).

§ 70. _*IHC- > *ĪC-_

1. W. _il_ (f.) ‘fermentation’. There is no real reason to associate this with Lat. _īlia_ ‘groin, flank; entrails’, Gk. Hesych. ἴλια· μόρια γυναικεῖα, which would imply *_iHl_- (IEW 499). Joseph (1980: 105) more plausibly derives it from *_i̯ūlā_ from the root *_i̯uH_- seen in e.g. Gk. ζῡ́μη ‘leaven, beer-yeast’. See OW. _iot_ (p. 139), MIr. _úsc_ (p. 156).

§ 71. _Conclusion_

There is no good evidence for a change *_IHC_- > *_I̯aC_-, either in Proto-Celtic, or within British or Gaulish; on the basis of § 69.2 OIr. _ítu_ < *_ih$_2$-tV-tūt_-, it is possible that *_IHC_- gave *_īC_-, but there is not enough evidence to be certain.

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[18] Not *_i̯eh$_2$t_-; cf. Skt. _yā́ti_ ‘requests’, Gk. δίζημαι ‘seek out’ (LIV 310–311).

#CHEC-

§ 72. *Introduction*

A laryngeal in the sequence **CHEC-* is lost without any reflex other than colouring an adjacent *-*e*-; only a representative example is given. Hoenigswald (1952) argued for the loss of laryngeals after initial **s*- in Indo-European, before (phonemic) colouring of a following *-*e*-, on the basis of alternations like Lat. *anus* 'old woman', Hitt. *ḫanna*- 'grandmother' ~ Skt. *sánaḥ* 'old', OIr. *sen* 'old', Lat. *senex* 'old man'. But **sH*- is attested in forms like Hitt. *išḫiya*- 'bind', and none of the etymologies are convincing (Polomé 1965: 32; Beekes 1969: 82–83). The idea will not be discussed further here.

For the sequence **CHIC*-, which has a different development from that of **CHEC*-, see p. 111 ff.

§ 73. **CHEC-*

1. MIr. *tó* (f. *ā*-stem) 'silence' < **tău̯ā*-, OIr. *túae* 'silence' < **tău̯i̯o*- and OIr. *túae* 'silence' < **tău̯i̯ā* (Uhlich 1995: 35–36), MW. *taw* (m.), B. *tav* (m.) 'silence' < **tău̯o*- or **tău̯i̯ā*, MC. *tauwaf* 'am silent', Gaul. *Tausius* (p.n.) (Jackson 1953: 369; Schrijver 1995: 302) are cognate with Hitt. *tuḫuššiyezzi* 'tolerates', Skt. *tūṣṇī́m* 'silently, quietly' < **th*$_2$*eu̯s*- (Schumacher 2000: 179, 2004: 621–623; LIV 642–643).

#CR̥HC(C)-

§ 74. *Introduction*

There has been considerable debate in the last thirty years over the regular output of the Celtic reflexes of the Proto-Indo-European sequence **CR̥HC*(*C*)-. McCone (1991b: 106–107) believes that the regular reflex of **CR̥HC*(*C*)- is **CRāC*(*C*)-, and assumes that short-vowel forms are analogical shortenings, following the same line as Watkins (1958: 99–101), who had earlier suggested morphological zero grade as the origin of the short vowel past participles.

Joseph (1982: 54) examines the concept of morphological zero grade more fully, defining it as follows:

> Ra- [sic] is an appropriate shape for the morphological zero grade corresponding to the phonologically regular zero grade Rā- because it is Rā- minus one mora. In most of the formations in which Ră- occurs, we can motivate the zero grade; where the full grade of the root in question has the structure

> *(C)Reh$_2$-, the reason for recharacterization of the zero grade is clear, since *(C)R̥h$_2$- would also give (C)Rā- before a consonant.

He also assumes the regular reflex of _*CR̥HC(C)_- to be _*CRāC(C)_- in all environments. By comparison, de Bernardo Stempel (1987: 40–43) and Schrijver (1995: 168–191) have suggested that variation between _*-ā-_ and _*-ă-_ may have had phonetic origins. For de Bernardo Stempel the difference is due to environment, the cluster _*CR̥HCV-_ giving _*CRāCV-_, while _*CR̥HCC-_ gives _*CRăCC-_. This would not explain the short vowels in forms such as OIr. _mrath_ 'has been betrayed' < _*mr̥h$_2$-to-_, and for these instances she accepts the operation of morphological zero grade. Schrijver concludes, after a long examination of all the available evidence, that the distribution is entirely explicable according to rule: _*CR̥HP-_ > _*CRăP-_ (perhaps also _*CR̥Hs-_ > _*CRăs-_), but _*CR̥HR-_ > _*CRāR-_.

Isaac (2007a: 21–59) also assumes a phonetic explanation for _*CR̥HC(C)_- clusters, shared with _*CIHC-_ clusters. His theory is discussed in the section on Dybo's rule (p. 132 ff.), where it is concluded that it is not correct; it will not be discussed again here. According to Matasović (2009: 6) the regular result of _*CR̥HC(C)_- is _*CRāC(C)_-, and examples of _*CRăC(C)_- are due to Dybo's rule.

Since the reflexes of the laryngeals in the sequence _*CR̥HC(C)_- have been discusssed repeatedly some evidence will not be gone over in detail again. The forms given here follow the reconstructions of Schrijver; only those which are not examined by Schrijver, or require further comment, are treated at length. One form, which Schrijver has shown not to contain a laryngeal, is not discussed (OIr. _mraich_ 'malt'). Forms discussed by Schrijver but which do not belong in this section are OIr. _maith_ 'good' (p. 62), _méit_ 'size' (p. 177) and _rámae_ 'oar' (p. 42).

Although the sequence _*CR̥HI̯-_ would be expected to be discussed here, it seems to have been treated differently from other _*CR̥HC(C)_- sequences and is therefore treated in its own section (see p. 89 ff.).

There are a few pieces of evidence, none convincing, for a development _*CR̥HC-_ > _*CaRC-_. They are included here for the sake of completeness. The evidence will be discussed in the following order: § 75 _*CR̥HC(C)_- > _*CRăC(C)_-; § 76 _*CR̥HC(C)_- > _*CRāC(C)_-; § 77 _*CR̥HC(C)_- > _*CaRC(C)_-.

§ 75. _*CR̥HC(C)_- > _*CRăC(C)_-

1. OIr. _braigim_ (1sg.) 'fart' < _*brag(i̯)e/o-_ (Schumacher 2004: 232–233) is connected by IEW (165), followed by LIV (91–92), with Lat. _frangō_ 'break', Goth. _brikan_ 'break' < _*b^{h}reg-_ (semantically via 'break wind'). As noted

by Matasović (2009: 73), the regular result of zero-grade **bʰr̥g-* would not be Proto-Celtic ˣ*brag-* but ˣ*brig-*; *braigim* could come from **bʰregʰ-e/o-* by way of the Irish interchange of *-a-* for **-e-* before palatal **-g-*, as noted by McCone (1985: 169–171; his implausible connection with Skt. *bráhma* 'prayer' is rescinded *apud* Stüber 1998: 62 fn. 99). The **-a-* is apparently inherited, on the basis of MW., MC., MB. *bram* (m.) 'fart' < *bʰragsmn̥*, but it is possible that **-e-* > **-æ-* (> British **-a-*, Irish **-a-* except before a high vowel) before **-ge-/-gi-* was an Insular Celtic change (Schrijver 1995: 134–141). The **bræg-* variant of the resulting stem **bʰræg-e-/bʰreg-o-*[19] could then have been used for derivatives such as *bram*. Alternatively, **bʰr̥gi̯e/o-* might give **bʰragi̯e/o-* if Schrijver's (1991a: 477–485) Italo-Celtic rule **CR̥DC-* > **CRaDC-* is correct.[20]

Schrijver (1995: 170–171) suggests an alternative etymology, connecting *braigim* with MHG. *brǣhen* 'smell' < **brēhi̯an*, Lat. *fragrāre* 'emit a (sweet) smell' < **bʰreh₁g-*, which suggest a development **brag(i̯)e/o-* < **bʰr̥h₁g-(i̯)e/o-* as well as **bʰr̥h₁g-smn̥* > *bram*. The closer semantics perhaps make this etymology more likely than the connection with **bʰreg-* 'break', but it is not at all certain.

2. MIr. *brén*, MW. *braen*, MB. *brein* (adj.) 'putrid' is derived by Schrijver (1995: 170–171) from the same root as OIr. *braigim* 'fart' (above), and hence from **brag-no-* < **bʰr̥h₁g-no-*. However, a preform **brag-no-* is not possible, since **-agn-* gives **-ān-* in Irish, cf. OIr. *áin* 'driving' < **ag-ni-* (McCone 1996: 122). If *braigim* comes from **bræg-e/o-* < **bʰregʰ-e/o-*, it might be possible to derive *brén* from a Celtic **bræg-no-* based on the present stem: **-æ-* is also raised to **-e-* with compensatory lengthening in forms like OIr. *géis* 'goose, swan' < **gænsi-* < **ĝʰans-i-* (McCone 1996: 106). This would be a minor piece of evidence in favour of reconstructing **bʰregʰ-e/o-* for *braigim* rather than **bʰr̥h₁g-(i̯)e/o-*. Otherwise MIr. *brén* must be taken back to an isolated **m/brak-no-*.

3. OIr. *claidid* 'digs, excavates', MW. *cladu* (v.n.), W. *claddaf* 'bury; dig, burrow; stab, pierce', B. *klazañ* (inf.) 'make a trench with a shovel' < **klăd-e/o-* belong, according to Schrijver (1995: 171) with Gk. *κλαδαρός* 'quivering' and therefore reflect an *aniṭ* root, with a development **kl̥d-i̯e/o-* > **kladi̯e/o-* according to an Italo-Celtic rule **CR̥DC-* > **CRăDC-* (a rule which is doubtful; see p. 71

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[19] This change did not occur before **-gi̯-*.

[20] But the evidence for this rule in Celtic is not good: apart from MIr. *mál* < **m̥glo-* (p. 189) it consists only of OIr. *claidid* (below), which does not in fact reflect **CR̥DC-*, and MIr. *naiscid* (p. 64), which is very uncertain (Schrijver 1991a: 477–485; Schrijver 1995: 171).

fn. 20). However, as Schumacher (2004: 412) points out, OIr. 3pl. _cladait_ (not ^{x}_claidit_) and W. _cladd-_ (not ^{x}_claedd-_) cannot go back to *_klad-i̯e/o-_, but must reflect *_klad-e/o-_. OIr. _claidid_ etc. thus cannot reflect an _aniṭ_ root after all. Gk. κλαδαρός may not belong here at all, or may have been influenced by κλᾰ́ω 'break' < *_kl̥-i̯e/o-_ < *_kl̥h_2-i̯e/o-_ (Peters 1980: 80 fn. 38). Therefore, it is most likely that _claidid_ is cognate with Lat. _clādēs_ 'devastation' and SCr. _klȁda_, Russ. _kolóda_ 'block of wood' < *_kl̥h_2-d-_, to the root *_kelh_2-_ (Lith. _kálti_ 'strike', Gk. ἀποκλᾱ́ς (pres. part.) 'breaking off'; LIV 350), as supposed by Schumacher (2004: 410–413). Since there is no evidence for a full grade II version of the root, MW. _claud_ 'soil thrown up when digging a pit; ditch' (p. 78) must show the regular result of *_kl̥h_2d-V-_, and _claidid_ must be analogical: in all Celtic verbs formed from roots ending in a stop and with _a_-vocalism, the present (and past participle etc.) has a short *_-ă-_ while the subjunctive has a long *_-ā-_, e.g. *_sag-(i̯)e/o-_ > OIr. _saigid_ 'seeks', *_sāg-se/o-_ > _·sáis_ (2sg. subj.). Proto-Celtic *_klāde/o-_ could have been altered to fit the prevailing pattern.

4. MW. _crafu_ (v.n.), W. _crafaf_ 'scrape, scratch' < *_krab-_ presumably belongs to the same root as MIr. _cerb_ 'keen, sharp' (p. 183); the evidence for a laryngeal is ambiguous, but *_kr̥b$^{(h)}$-_ would not have given *_krab$^{(h)}$-_, unless *_kr̥b$^{(h)}$-i̯e/o-_ gave *_karbi̯e/o-_ by Schrijver's (1991a: 477–485) Italo-Celtic rule *_CR̥DC-_ > *_CRăDC-_ (but see p. 71 fn. 20). If _crafu_ reflects *_kr̥Hb^h-_, the formation could have been *_kr̥Hb^h-i̯e/o-_ >*_krăbi̯e/o-_, but this is very uncertain.

5. OIr. _draigen_ (m. _o_-stem) 'sloe, blackthorn', MW. _draen_ (m., f.) 'thorn(s), prickle(s)', MB. _dren_, B. _draen_ (m.), OC. _drain_ gl. _spina_ 'thorn' < *_dregeno-_ does not reflect a form with a laryngeal (Lith. _drìgnės_ 'black henbane', Gk. τρέχνος 'twig'), but probably rather *_-eg-_ > *_-æg-_ in Insular Celtic before *_-e-_ and *_-i-_ (Schrijver 1995: 135).

6. MW. _ffraeth_ (adj.) 'fluent, eloquent, loquacious; ready, swift', MB. _fraez_, B. _fraezh_ (adj.) 'distinct, intelligible', MC. _freth_ (adj.) 'eager, fluent, eloquent' < *_sprăgto-_ (Schrijver 1995: 172–173, with literature) might come from *_sp$^{(h)}$r̥h_2ĝ-to-_ (Skt. _sphūrjáyant-_ (pres. part.) 'sizzling', Lith. _spìrgti_ 'sizzle, boil'; LIV 586), or from *_spr̥g-to-_ (OHG. _sprehhan_ 'speak' < *_spreg-_; LIV 582). The latter relies on Schrijver's Italo-Celtic rule *_CR̥DC-_ > *_CRaDC-_. Since there is no positive Celtic evidence (see p. 71 fn. 20) for this rule, *_sp$^{(h)}$r̥h_2ĝ-to-_ is far more plausible. However, Lambert (2002: 103–105), argues that in Middle Welsh _ffraeth_ is usually used of horses, and suggests that it is in fact a loan-word from Lat. _fractus_ in the sense 'broken in, well trained', whence, by extension, it could be used of an eloquent speaker. Since all the Brittonic languages share a meaning having to do with speech, this seems unlikely

to me; note that the objection to the semantics with regard to horses only applies to the etymological connection with OHG. *sprehhan*. A connection with Skt. *sphūrjáyant-* suggests that the original meaning might have had to do with swift movement and eagerness, whence the application both to a ready speaker and a horse. Nonetheless, this form cannot be taken as completely reliable evidence.

7. OIr. *flaith* (f. *i*-stem) 'lordship, rule', OW. *gúlát*, MW. *gwlat*, *gwlad*, W. *gwlad* (f.) 'country, domain', MB. *gloat*, *glat*, B. *glad* (m.) 'territory, country; riches', OC. *gulat* gl. *patria*, MC. *gulas* (f.) 'country, land' < *_u̯l̥H-ti-_, Gaul. *Ulatos* (p.n.) < *_u̯l̥H-to-_ are cognate with Lith. *véldu* 'possess, rule', Lat. *ualeō* 'am strong' < *_u̯elH-_ (Schrijver 1995: 171–172; LIV 676).

8. MIr. *flann* (*o*-, *ā*-stem adj) 'blood red', (m. *o*-stem) 'blood' < *_u̯lăsno-_ probably comes from *_u̯l̥h$_2$-sno-_, cognate with Hitt. *walaḫzi* 'strikes', Gk. ἑάλων (aor. part.) 'having taken, conquered' (*_u̯elh$_2$-_ after Balles 2007: 19. LIV 679 reconstructs *_u̯elh$_3$-_). According to Schrijver (1995: 172; 1991a: 180–181), *flann* could reflect an *aniṭ* root which he reconstructs for Lat. *uellō* 'tear' < *_u̯el-s-_ or *_u̯el-d-_. He argues that *uellō* must come from such a form rather than from a nasal present on the grounds that nasal presents do not carry the present stem over into the perfect; thus *pellō* 'strike', *pepulī*, but *uellō*, *uellī*. However, LIV explains *uellī* from an original *s*-aorist *_u̯elas-_, which removes this problem, and a single root *_u̯elh$_2$-_ is more plausible than two roots of the same semantics differing only in the presence or absence of the final laryngeal.

9. OIr. *fraig* 'a pointed instrument, a needle or stiletto (?)' < *_u̯ragi-_ is compared by IEW (1180)[21] with Gk. Att. ῥᾱχός 'thorn-bush, briar' and Lith. *rãzas* 'dry twig, stubble, broom-stump, tine of a fork'. Purely on the basis of the Greek evidence, *fraig* could come from *_u̯r̥h$_2$g^h-_. However, Gk. ῥᾰ́χις 'lower part of the back; backbone, spine', if it also belongs here, points to *_u̯răg^h-_, as does Lith. *rãzas*; one could argue for a secondary (morphological) ablaut in both Greek and Lithuanian, but the situation is too unclear to use as evidence for the presence of a laryngeal.

10. OIr. *glan* (*o*-, *ā*-stem adj.) 'clean, pure, clear, bright', MW., MB., MC. *glan* (adj.) 'clean, pure, bright', Gaul. *Glanum* (river name) < *_glăno-_ are identical to ON. *glan* (m.) 'brightness', MHG. (m.) *glan* 'brightness, glow' < *_glăno-_, and belong to a series of formally and semantically similar, but not identical, 'colour' words collected by IEW (429–431). The forms allow a minimum

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[21] Under the form *fracc*; but there is no reason to suppose gemination (DIL F-401).

(and tentative) reconstruction of the following roots: *_ĝ^{h}leh$_{1}$-_ (ON. _glāmr_ 'moon', Lith. _žlėjà_ 'twilight, half-dark'), *_ĝ^{h}elh$_{3}$-_ (Lith. _žélti_, Latv. _zel̂t_ 'becomes green', Gk. χλωρός 'greenish yellow'), _ĝ^{h}el-_ (Lith. _žel̃vas_ 'greenish', Latv. _zèlts_ 'gold') and *_gel-_ (Lith. _gel̃tas_ 'yellow'). Consequently, it is not possible to tell whether the Celtic forms are built to a _seṭ_ or an _aniṭ_ root on the basis of comparative evidence. However, since *_g$^{(h)}$l̥-no-_ ought to have given *_galno-_, it may be assumed that we are dealing with a _seṭ_-root.

Semantically *_ĝ^{h}leh$_{1}$-_ seems most likely, although Schrijver (1995: 173) argues that the root in question is *_g^{h}leh$_{2}$-_ (Lith. _glodùs_ 'smooth, shining', _glósti_ 'to polish', OHG. _glat_ 'smooth', Lat. _glaber_ 'smooth'). This is semantically plausible, but formally problematic, in that all the cognate forms, apart from the Celtic and Germanic forms given above, actually attest to *_g^{h}leh$_{2}$d^{h}-_, from which further derivations are formed. If Schrijver is correct, final *_-d^{h}-_ would have to have been originally a suffix rather than part of the root.

The best reconstruction for _glan_ thus seems to be *_ĝ^{h}l̥h$_{1}$-no-_, although *_g^{h}leh$_{2}$-no-_ is an alternative reconstruction. Since Schrijver expects *_g^{h}leh$_{2}$-no-_ to give ^{x}_glán_, he explains the short vowel as being due to Dybo's rule. This may be a possibility, although it is suggested here (p. 132 ff.) that only long high vowels may have been shortened by Dybo's rule. Another explanation for the short vowel in _glan_, if it is not the regular result of *_ĝ^{h}l̥h$_{1}$-no-_, is analogy with OIr. _glas_ 'blue, green' (below), which might be regular from either *_g^{h}l̥-sto-_ or *_g^{h}l̥h$_{3}$-sto-_ (the latter if all *_CR̥HCC-_ clusters gave *_CRăCC-_, which is however unlikely; see p. 84 ff.).

It should be noted that the Germanic cognates of _glan_ are problematic; *_g^{h}l̥(H)-no-_ ought to have given Proto-Germanic ^{x}_gulna-_, and *_g^{h}leh$_{2/3}$-no-_ would give ^{x}_glōna-_. Müller (2007: 147–155) argues that the Germanic words are the result of morphological zero grade in Germanic. If this is correct, Celtic *_glăno-_ could also be a loan word from Germanic, although it would also be possible to explain the Germanic forms as borrowed from Celtic, if a regular Celtic explanation for _glan_ exists.

11. OIr. _glas_ (_o-_, _ā_-stem adj.) 'green, blue, greenish blue', MW. _glas_ (adj.) 'blue, green, bluish green', MB. _glas_ (adj.) 'green, blue, grey, pale', Gallo-Lat. _glastum_ 'woad' < *_glasto-_ can go back to an _aniṭ_ root *_g$^{(h)}$l̥-sto-_ (if the regular result of *_-R̥sC-_ is *_-RasC-_, as perhaps in OIr. _fras_ 'rain', p. 27; but cf. OIr. _tart_ 'thirst' < *_tr̥s-tu-_) or to _seṭ_ roots *_ĝ^{h}l̥h$_{3}$-sto-_ or *_g^{h}l̥h$_{2}$d^{h}-to-_ (Schrijver 1995: 173; and see OIr. _glan_ above). On the basis of the meaning *_g^{h}l̥h$_{2}$d^{h}-_ is less likely, since this root usually means 'smooth' or 'shining': Lat. _glaber_ 'smooth', OHG. _glat_ 'smooth, shining' (for the developments here see Schrijver 1991a: 188). It is

striking that a cognate with equally unexpected _*-ă-_ is found in Germanic (MHG. _glast_ ‘brightness’) for this word and for OIr. _glan_ ‘clean, pure, bright’ (see above). As discussed with regard to _glan_, it is possible that the Celtic words are loan-words from Germanic.

12. MW. _gwreid_, W. _gwraidd_ (m.) ‘roots’, MB. _gruizyenn_, B. _gwrizienn_ (f.), OC. _grueiten_ gl. _radix_ ‘root’ probably reflect _*u̯rădī_ < _*u̯r̥h_$_2$_d-ih_$_2$ with the same _devī_-suffix attested by Gk. ῥάδιξ ‘branch’, Lat. _rādīx_ ‘root’ (Balles 1999: 19); the old _o_-stem plural _*u̯r̥h_$_2$_d-i̯oi̯_ reconstructed by Schrijver (1995: 173–175) is less likely on this comparative evidence.[22]

13. OIr. _lén_ (m. _o_-stem) ‘defeat, hurt, injury’ can be directly related to OCS. _plačǫ sę_ ‘beat ones breast’, Lith. _plõkis_ ‘stroke, lash’, both of which point to _*plāk-_. According to IEW (832), this root is further related to OE. _flōcan_, Lat. _plangō_ ‘beat, strike’ < _*pleh_$_2$_g-_. In this it is followed by LIV (484–485), which explains the variation in voicing of the final velars as due to generalisation of _*-k-_ from forms with voiceless suffixes. If this is correct, then _lén_ comes from _*pl̥h_$_2$_k-no-_ (it cannot come from _*pl̥h_$_2$_g-no-_, since this would have given ^{x}_lán_ (McCone 1996: 122). However, Lith. _plakù_ ‘strike, whip’ is problematic; according to LIV (485) it is a morphological zero-grade _*plăk-_ after full-grade _*plāk-_, but purely on this evidence it is possible that there was a Balto-Slavic-Celtic root _*plăk-_.[23] It is more likely that _lén_ is from _*pl̥h_$_2$_k-no-_, but _*plăk-no-_ cannot be ruled out.[24]

14. OIr. _mlén_ (f. _ā_-stem) ‘groin’ could come from _*mlăk-nā_ < _*ml̥h_$_2$_k-neh_$_2$ (cf. Gk. μαλακός ‘soft’) or from _*mlid-nā_ < _*ml̥d-neh_$_2$ (cf. Skt. _mr̥dúḥ_ ‘soft’; Schrijver 1995: 176).

15. OIr. _mrath_ (n. _o_-stem), MW. _brad_ (m., f.) ‘treachery, treason, betrayal’, OB. _brat_ gl. _seditione_, MB. _barat_ (m.) ‘fraud’, MC. _bras_ (m.) ‘plot, treachery, betrayal’ < _*mr̥h_$_2$_-to-_ are cognate with Gk. μάρναμαι ‘fight’, Skt. _mr̥ṇā́ti_ ‘seizes, lays hold of, plunders’ < _*merh_$_2$_-_ (Schrijver 1995: 176; LIV 440).

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[22] Although Schrijver is cautious, it seems clear that these forms at least are unlikely to have any other origin. For OIr. _frén_ ‘root’, MW. _gwrysc_, W. _gwrysg_ (pl., coll.) ‘branches’ < _*u̯rid-_ (?) see Vine (1999a, esp. 6–9), and Schrijver (2003b: 89–90).

[23] Gk. πλήσσω ‘strike, smite’ may be secondary to an _s_-aorist from _*pleh_$_2$_g-_, so it does not provide evidence for _*pleh_$_2$_k-_ in Greek.

[24] Although MIr. _léssaid_ ‘strikes forcibly’ is listed in both IEW and LIV it is not found in DIL. If it exists, it could come from either _*pl̥h_$_2$_-n-g-se/o-_ or _*pl̥h_$_2$_-n-k-se/o-_ (with unexplained _s_-suffix).

16. MW. *neid*, W. *naid* (f., m.) ‘leap, jump, bound’ < *(*s*)*nătī* or *(*s*)*năti̯o*- is connected by IEW (972) to the root **sneh*$_2$- ‘swim’ (Skt. *snā́ti* ‘bathes’; LIV 572). This is unlikely because of the semantics.

17. MIr. *olann*, (f. *ā*-stem) < **ulănā*, OW. *gulan*, MW. *gwlan* (m.), MB. *gloan* (m.), OC. *gluan* gl. *lana* ‘wool’ < **u̯lănV*- come from **h*$_2$*u̯l̥h*$_{1/2}$*-neh*$_2$. However, as already noted (p. 50), the prehistory of this word is complex and uncertain. Schrijver’s (1995: 177) suggestion of an archaic syllabification **h*$_2$*ulh̥*$_{1/2}$*n-eh*$_2$ has no other evidence to support it. It may be that **u̯lănā* could be the regular result of **h*$_2$*u̯l̥h*$_{1/2}$*-neh*$_2$, but McCone’s (1985: 173–175) Proto-Celtic change **u̯l̥*- > **u̯ul*- > Irish **ul*-, British **u̯l*- might also be referred to here (cf. OIr. *olc* ‘evil’ if from **u̯l̥k*^{w}*o*- ‘wolf’; but see p. 51 fn.44). Depending on the relative chronology, it might be possible to envisage a development **h*$_2$*u̯l̥h*$_{1/2}$*-neh*$_2$ > *(*h*$_2$)*u̯ulh*$_{1/2}$*-neh*$_2$ > **u̯ulănā*. In this case, MIr. *olann* would not be evidence for a sequence **CR̥HC*(*C*)-.

18. MIr. *raith* (f. *i*-stem) ‘fern, bracken’, MW. *redyn*, W. *rhedyn* (pl.) ‘ferns, bracken’, MB. *raden* (coll.), OC. *reden* gl. *filex* ‘fern’, Gaul. *ratis* ‘fern’ < **pr̥H-ti*- are cognate with Lith. *papártis* ‘fern’ (Schrijver 1995: 178).

19. OIr. *rann* (f. *ā*-stem) ‘share, part’, MW. *rann*, W. *rhann*, *rhan* (f.) ‘part, portion, division’, MB. *rann* (f.), MC. *ran* ‘share, part’ come from **pr̥h*$_3$*-sneh*$_2$[25] (Schrijver 1995: 177; LIV 474–475; see OIr. *rath* below).

20. OIr. *rath* (n. *o*-stem) ‘grace, property’, OW. *rat*, MW. *rad*, W. *rhad* (m.) ‘grace, blessing, favour; generosity, bounty’, Gaul. -*ratos* (p.n. element) < **pr̥h*$_3$*-to*- are cognate with Skt. *pr̥ṇā́ti* ‘gives, spends’ < **perh*$_3$- (Schrijver 1995: 178; LIV 474–475).

21. MIr. *slaidid* ‘strikes, slays’, MW. *llad* (v.n.), W. *lladdaf* ‘kill, slay, slaughter’, OB. *ladam* gl. *caedo*, MB. *lazaff* (inf.), B. *lazhañ* (inf.) ‘beat, kill, slay’, MC. *lathaf* ‘kill, slay, put to death’ may come from **sl̥H-de/o*-, but the only comparative evidence is Goth. *slahan* ‘beat’ < **slăk*- (Schrijver 1995: 178; Schumacher 2004: 583, 585).

22. MIr. *snaidid*, MW. *nad* (3sg.) ‘cuts, chips, hews’, W. *naddaf* ‘cut, chip, hew’ may come from **sn̥Hd*^{h}- (Schumacher 2004: 594–595), but the Celtic form is the only reason to reconstruct a laryngeal.

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[25] Schrijver also allows the possibility of -*nn* < *-*t*(*s*)*n*- or *-*d*(*s*)*n*-, but a suffix *-*sneh*$_2$ is well attested for Celtic, while *-*t*(*s*)*n*- or *-*d*(*s*)*n*- are morphologically extremely unlikely.

23. OIr. *srath* (m. *o*-stem?) 'grass, sward, valley', MW. *ystrad* (m.) 'valley, vale, plain', MB. *strat*, B. *strad* (m.) 'bottom, vale; ship's hold' < _*str̥h_3-to-_ are cognate with Skt. *str̥ṇā́ti* 'spreads' (Schrijver 1995: 178–179; LIV 599–600).

24. MW. *yngnat*, W. *ynad* (m.) 'magistrate, judge, wise man', MW. *dirnat*, W. *dirnad* (m.) 'comprehension, understanding', MW. *adnabot*, W. *adnabod* (vn.), MB. *aznauout* (inf.) 'recognise, acknowledge, know', MB. *haznat*, B. *anat* (adj.) 'evident, clear', OIr. *etarcnad* 'known, recognised', perhaps Gaul. *Ategnatus* (p.n.) < _*-gnăto-_ come from _*ĝn̥h_3-to-_ or _*ĝneh_3-to-_.[26] According to Schrijver (1995: 179), *yngnat* and *dirnat* reflect an original noun, but the semantics of MB. *haznat* and OIr. *etarcnad* are best explained as reflecting the old past participle, so these at least ought to go back to _*ĝn̥h_3-to-_. However, OIr. *gnáth* (p. 79) 'customary' < _*gnāto-_ ought to have the same origin. It could be that *yngnat* etc. retain the original vocalism while *gnáth* had acquired an analogical full grade as in Lat. *nōtus* and Skt. *jñātáḥ* 'known' (of course, the reverse would also be possible, if _*gnăto-_ were a super zero grade). However, the same distinction between short vowel in the compound form and long vowel in the base form in this root is also found in MW. *gognaw* 'provoking, exciting' < _*-gnău̯o-_ beside MW. *gno* 'manifest, evident' < _*gnāu̯o-_ < _*ĝn̥h_3-u̯o-_ (see MIr. *gnó* p. 98). A similar development may also occur in Latin: cf. Lat. *cognitus* 'known, proved', *agnitus* 'known, recognised' < _*-gnV̆to-_ (although other sources of the Latin word are possible). I am therefore inclined to attribute the short vowel in *yngnat* to the fact that it is in a compound (for more on this see p. 255 ff.). As with *gnáth*, we cannot tell whether the original preform was _*ĝn̥h_3-to-_ or _*ĝneh_3-to-_.

§ 76. _*CR̥HC(C)-_ > _*CRāC(C)-_

1. OIr. *bláth* (m. *u*-, *o*-stem), MW. *blawd* 'flower, blossom', OC. *blodon* gl. *flos* < _*blātu-_, MB. *blezu*, *bleuzf*, B. *bleuñv* (coll.) 'flowers' < _*blātmV-_ may reflect _*b^{h}l̥h_3-tu-_ or _*b^{h}leh_3-tu-_ (cf. Lat. *flōs* 'flower'; Schrijver 1995: 179).

2. MW. *blawt*, OB. *blot*, MB. *bleut*, B. *bleud* (m.) 'flour', OC. *blot* gl. *farina* < _*blātV-_ may come from _*ml̥h_2-tV-_ (cf. Lat. *molō* 'mill'), but could also come from the same root as OIr. *bláth* above (Schrijver 1995: 179–180).

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[26] Most of the Irish compounds of this word seem to have secondarily become *i*- or *i̯o*-stems (e.g. OIr. *etargnaid* 'recognised, known', MIr. *ergnaid* 'evident, well-known, famous'; Uhlich 1993: 358).

3. OIr. _bráge_ (_t_-stem) 'neck, throat, gullet', OW. _abal brouannou_ gl. _gurgulionibus_, MW. _breuant_ (m. and f.) 'windpipe, throat', OB. _Brehant_ (pl. n.), B. _briant_ (f.) 'windpipe', OC. _briansen_ gl. _guttur_, MC. _bryangen_ (f.) 'throat' may come from *_g^{w}r̥h$_{3}$-g^{h}-_ (cf. Lith. _gérti_ 'devour'), but *_g^{w}rōg^{h}-_ is also possible (Schrijver 1995: 180–181).

4. OIr. _bráth_ (m. _u_-stem) 'judgement', OW. _braut_, MW. _braud_, _brawt_, W. _brawd_ (f.) 'judgement, verdict', MB. _breut_, B. _breud_ (m.) 'debate, plea, lawsuit', MC. _bres_, _breus_, _brues_, _brus_ (f.) 'judgement, sentence, verdict, decision', probably Gaul. βρατου 'gratitude, vow' (Delamarre 2003: 85–86) < *_brātu-_ are far more likely to be derived from *_g^{w}erH-_ (Skt. _járate_ 'sings, greets'; LIV 210–211) than from an 'extended' version of *_b^{h}er-_ 'bear' *_b^{h}erH-_ (discussion and literature in Schrijver 1995: 181; Irslinger 2002: 86–87). However, both roots show full grade I only, which implies that *_brātu-_ is to be derived from *_Cr̥H-tu-_. Schrijver argues that there are examples of _tu_-formations with full grade II built to roots which normally show full grade I, e.g. OHG. _struot_, OE. _strōt_ 'marsh' < *_streh$_{3}$-tu-_ (*_sterh$_{3}$-_, LIV 599–560). For his other example, Goth. _flōdus_, OHG. _fluot_ 'flood', however, full grade II *_pleh$_{3}$-_ is otherwise attested: OE. _flōwan_ 'flow' (LIV 485).[27] The fact that one Germanic form shows variation does not affect the case at hand: the chances that _bráth_ represents a full grade II are extremely small, and it is far more likely that it comes from a zero grade. Schumacher's (2004: 138 fn. 148) suggestion that the long vowel might have been carried over from another verbal abstract, e.g. *_brāmā_ < *_g^{w}r̥H-meh$_{2}$_, is unconvincing without any such form being actually attested.

5. MW. _claud_, _clawd_, W. _clawdd_ (m.) 'soil thrown up when digging a pit; ditch', MB. _cleuz_, B. _kleuz_ (m.) 'ditch', LC. _cleys_ (f.) 'trench, ditch', Gaul. _-cladum_ (pl.n. element) < *_klādo-_ are cognate with Lat. _clādēs_ 'devastation' < *_kl̥h$_{2}$-dV-_. Schrijver's (1995: 171) argument that they come from an old root noun (nom. sg. *_klōd-s_) cannot be correct, because there is no good evidence for an _aniṭ_ root *_kled-_, and because OIr. _claidid_ 'digs' shows (indirectly) that the root must have had a laryngeal (see p. 71).

6. OIr. _clár_ (m. and n. _o_-stem) 'board, plank', MW. _clawr_ (m.) 'plank, cover', B. _kleur_ (m.) 'pin of a pair of shafts on a wagon' < *_klāro-_ are cognate with Gk. κλῆρος 'lot' < *_kl̥h$_{2}$-ro-_ or *_kleh$_{2}$-ro-_.

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[27] The root is confused with *_pleu̯-_ 'swim' in IEW (836).

7. OIr. *cnáim* (m. *i*-stem), MW. *cnaw* ‘bone’ < **knā-mi-* < **kn̥h$_2$-mi-* or **kneh$_2$-mi-* are cognate with Gk. κνήμη (Schrijver 1995: 182).

8. MIr. *crád* (m. *o*-stem) ‘torment, anguish, misery; act of tormenting, persecuting’ < **krādo-* is provided with no etymology by LEIA (C-221). It is tempting to connect **k̂erh$_2$-* ‘break’ (LIV 327–328; *do·cer* p. 183), which would give us **k̂r̥h$_2$-do-*, but this is of course speculative.

9. Gaul. *-crari* (gen. sg.; pl.n. element), *-craro* (dat. sg.; theonym element) may be cognate with Lat. *crābrō*, OLith. *širšuõ* ‘hornet’ < **k̂r̥h$_2$-s-r-on-* (Delamarre 2003: 128). The connection is based only on the formal similarity, and there is no evidence for the length of the *-a-*. Furthermore, according to Kim (2008: 151–152), an **-sr-* sequence ought to have given something like [tˢr] or [đr] (cf. Gaul. *tiδres* ‘three’ < **tisres*), which would have been represented in some way in the orthography. If correct, this would make the etymology of *-crari* from **k̂r̥h$_2$-s-r-* impossible.

10. MIr. *glám* (f. *ā*-stem), NIr. *glámh* ‘satire; outcry, clamour’ is related by IEW (351) to Skt. *gr̥hate* ‘laments’, OHG. *klaga* ‘lament’. The Sanskrit form cannot belong here because of the palatalisation in Av. *jarəzi-* ‘lamenting’, which points to **geRĝʰ-* (LIV 187). MIr. *glám* and OHG. *klaga* could come from an (onomatopoeic?) root **glagʰ-*, but an alternative connection might be possible with OCS. *glagolъ* ‘word’, ON. *kall* ‘cry’, Russ. *gólosъ* ‘voice’ (IEW 350), if *glám* reflected **gl̥H-*. However, the only cognate which implies a laryngeal is Lat. *gallus* ‘cock’, which is rather uncertain (although Schrijver 1991a: 208 considers the possibility that it reflects *gl̥H-o-*, with expressive gemination); ON. *kall* could reflect **golH-o-*, with gemination caused by the laryngeal. Russ. *gólosъ* ‘voice’ < **gol-so-* would have to have lost the laryngeal by the Saussure effect.

If this etymology is correct, which is uncertain, the preform would probably be **gl̥H-meh$_2$* > **glāmā*; the word is frequently spelled *glámh* in Middle Irish texts which show lenition, and in Modern Irish. Although *glámma* is found several times in older texts, which would suggest **gl̥H-smeh$_2$*, the spelling might have been influenced by MIr. *gloimm*, *glamm* ‘noise, din, outcry’.[28]

11. OIr. *gnáth* (*o*-, *ā*-stem adj.) ‘customary’, MW. *gnawt*, *gnawd* (adj.) ‘usual, customary’, OB. *gnot* (adj.) ‘customary’ < **gnāto-* may come from **ĝn̥h$_3$-to-*

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[28] I am grateful to David Stifter for this suggestion.

(Schrijver 1995: 182; LIV 168–170). However, past participles of this root have acquired analogical full grade in both Lat. _nōtus_ and Skt. _jñātáḥ_ ‘known’.

12. Gaul. _gnatha_, _nata_ ‘girl’, _gnate_ (voc.) ‘boy’ come from *_ĝn̥h_1-tV-_ (Skt. _jā́yate_ ‘is born’ < *_ĝenh_1-_; LIV 163–165). Stifter (2011b: 177 fn. 21) supposes a short vowel in the root, on the basis of a poetic analysis of L-119, the inscription containing _gnatha_; but as he admits, this is very speculative. There is no other way of telling the length of the vowel.

13. OIr. _grád_ (n. _u_-stem) ‘love, affection, fondness, charity’ could go back to *_g^{h}r̥h_1d^h-u-_ or *_g^{h}roh_1d^h-u-_ (cf. Goth. _gredus_ ‘hunger’; Schrijver 1995: 183).

14. OIr. _grán_ (n. _o_-stem) ‘grain’, MW. _graun_, W. _grawn_ (pl. and coll.) ‘grain, corn, seed, fruit’, MB. _greun_ (coll.) ‘grain’, OC. _gronen_ (singul.) gl. _granum_ < *_ĝr̥H-no-_ are probably cognate with Lat. _grānum_, Goth. _kaurn_ ‘grain’ (Schrijver 1995: 183), but since they could be a loan-word from Latin cannot be used as evidence.

15. OIr. _lám_ (f. _ā_-stem) ‘hand’, MW. _llaw_ (f.), OB. _lom_ ‘hand’, OC. _lof_ gl. _manus_, MC. _lef_, _luef_, _luf_, Gaul. _Lama-_ (p.n. element) < *_pl̥h_2-meh_2_ are cognate with Lat. _palma_, Gk. παλάμη ‘hand’ (Schrijver 1995: 183).

16. OIr. _lán_ (_o-_, _ā_-stem adj.) ‘full’, MW. _llawn_, MB. _leun_, MC. _luen_, _leun_, _len_ (adj.) ‘full’ < *_pl̥h_1-no-_ are cognate with Lat. _plēnus_, Skt. _pūrṇáḥ_ ‘full’ (Schrijver 1995: 183–184; LIV 482–483).

17. MIr. _láth_ (m. _o_-stem), _láith_ (m. _i_-stem) ‘heat, rutting; warrior’, W. _llawd_ (m.) ‘heat (of a sow)’ < *_lāto-_ are derived by Isaac (2007a: 38–39), following Pedersen (1909–1913: 1.132), from *_pl̥h_1-to-_, to the root *_pleh_1-_ ‘full’ (see OIr. _lán_ above). However, this etymology, which connects the forms with OIr. _líth_ (m. _u_-stem) ‘feast, festival’, MB. _lit_, _lyt_, _lid_, B. _lid_ (m.) ‘feast, joy’ < *_pleh_1-tu-_, is very uncertain (see Irslinger 2002: 113–114, 297–298 for a review with literature). Alternative connections are possible, either with Icelandic _lóða_ ‘on heat (of dogs)’ (GPC 2106), or with MW. _llid_ ‘anger, wrath; passion; inflammation’, which might imply _láth_ < *_loh_1-to-_. Since the etymology is so uncertain, _láth_ cannot be used as evidence.

18. OIr. _láthar_ (n. _o_-stem) ‘arrangement, disposition’ < *_lātro-_ and its derivatives OIr. _láthraid_ ‘explains, expounds, exhibits; arranges, disposes; destroys’, MB. _leuzriff_ (inf.), B. _leuriñ_ (inf.) ‘delegate, depute, send; point out’, are cognate with OIr. _lár_ ‘surface’, OE. _flōr_ ‘floor’ < *_pleh_2-ro-_ (IEW 805–806; Olsen 1988: 25). Consequently, these go back to either *_pl̥h_2-tro-_ or *_pleh_2-tro-_, and

hence do not provide any evidence.[29] MW. _llawdyr_, W. _llawdr_ (m., f.) ‘trousers, breeches’, MB. _louzr_, B. _loer_ (f.) ‘stocking, sock’, OC. _loder_ gl. _caliga_ may also be related (see Schrijver 1995: 251–252 for the phonological and semantic developments).

19. OIr. _mláith_ (_i_-stem) ‘smooth, soft’ could come from *_ml̥h_$_2$_-ti-_ or *_mleh_$_2$_-ti-_ (cf. Skt. _mlātáḥ_ ‘weakened’; Schrijver 1995: 78).

20. OIr. _mnáib_ (dat. pl.) ‘women’ < *_g_^{w}_n̥h_$_2$_-b_^{h}_is_ is not reliable due to the likelihood of paradigmatic levelling (Schrijver 1995: 185).

21. OIr. _ráth_, _ráith_ (m. and f.) ‘surety, guarantor’ may reflect *_pr̥h_$_2$_-teh_$_2$ (cf. Gk. πέρνημι ‘sell’), but other etymologies are also possible, in particular *_roh_$_1$_-to-_ (cf. Lat. _reus_ ‘defendant’; Schrijver 1995: 186–187; Irslinger 2002: 353–355).

22. MW. _raun_, W. _rhawn_ (m.) ‘long coarse animal hair, esp. horsehair, bristle; tail’, MB. _reun_ (coll.) ‘hair (of animals)’, LC. _ren_ (coll.) ‘coarse hair, esp. of the mane or tail’ are connnected by Matasović (2009: 306) with SCr. _prȁmen_ ‘lock (of hair)’ < *_porH-men_, which would suggest a preform *_prāno-_ < *_pr̥H-no-_. Although this is quite a plausible etymology, the existence of OIr. _rúamnae_ ‘blanket’ < *_rau̯m-ni̯o-_, NIr. _rúainne_ ‘single hair’ < *_rau̯n-ini̯o-_, _rón_ ‘horsehair’ < *_rau̯-nV-_ suggests that MW. _raun_ etc. actually come from *_rau̯-nV-_ (Schrijver 1995: 211–212).

23. OIr. _slán_ (_o_-, _ā_-stem adj.) ‘complete, healthy’ < *_sl̥H-no-_ is cognate with Lat. _saluus_ ‘saved, preserved’ (Schrijver 1995: 187).

24. MIr. _snáth_ ‘thread’ may come from *_sn̥h_$_1$_-to-_ or *_snoh_$_1$_-to-_ (see p. 111).

25. MIr. _tláith_ (_i_-stem adj.) ‘weak, soft, feeble’, MW. _tlawt_, W. _tlawd_ (adj.) ‘poor, needy, miserable’ < *_tlāti-_ are semantically and formally close to Gk. τάλᾱς ‘suffering, wretched’, Gk. Hom. τλητός ‘suffering, enduring, patient’, Goth. _þulan_ ‘bear, suffer, endure’ < *_telh_$_2$_-_ (LEIA T-78, LIV 622–623). Schrijver (1995: 187–188) attributes *_tlāti-_ to a full grade II form *_tleh_$_2$_-_ attested in the Greek (root-) aorist ἔτλην ‘bore’. However, this is not necessarily the correct derivation of the Greek form: LIV (622) assumes that the long *_-ā-_ was generalised from the zero-grade weak cases *_tl̥h_$_2$_-_, and full grade II is not otherwise found. Consequently it is better to assume that *_tlāti-_ is the result of *_tl̥h_$_2$_-ti-_ rather than *_tleh_$_2$_-ti-_.

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[29] Fleuriot (1969–1971: 561–567) prefers to separate MB. _leuzriff_ and some senses of OIr. _láthraid_, and attributes them to the root *_pelh_$_2$_-_ (cf Lat. _pellō_ ‘strike, push, drive away’; LIV 470–471). But I do not think this is necessary.

26. OIr. _tráth_ (n. later m. _u_-stem) 'period of time, hour, point of time; day', MW. _trawt, trawd_[30] (m., f.) 'course, way, journey' < _*trātu-_ should, according to Schrijver (1995: 188), be reconstructed as _*treh$_2$-tu-_. However, as observed by Irslinger (2002: 135–136) and Schrijver (1991a: 224), the root in question is _*terh$_2$-_ 'go through, cross' (Hitt. _tarratta_ 'can, may', Skt. _tárati_ 'comes through'; LIV 633–634). None of the forms listed in IEW (1074–1075) must go back to _*treh$_2$-_ rather than _*tr̥h$_2$-_, except Skt. _trā́yate_ 'protects', Av. _ϑrāiieṇte_ (3pl.) 'protect', which are semantically aberrant, and which LIV (646) traces back to a different root _*treH-_.

It is not the case that derivatives in _*-tu-_ normally have a full-grade root, as claimed by Schrijver; Irslinger (2002: 173, 177) collects a great number with zero grade, and there is no verb attested in the Celtic languages from which a root _*trā-_ < _*tr̥h$_2$-_ could be extracted.[31] Consequently, it must be assumed that _*trātu-_ comes from _*tr̥h$_2$-tu-_.

27. MW. _trawd_ (adj.) 'weak', MB. _treut_ (adj.) 'thin' < _*trātV-_ are probably cognate with Gk. τρητός 'bored through' < _*tr̥h$_1$-to-_ (LEIA T-134, Irslinger 2002: 215) to the root _*terh$_1$-_ (Gk. τείρω 'oppress, distress, weaken'; LIV 632–633). To posit a different formation with _schwebeablaut_ and _o_-grade is highly implausible. For a similar semantic development, see OIr. _crín_ 'withered' (p. 125).

§ 77. _*CR̥HC(C)- > *CaRC(C)-_

1. MIr. _bard_ (m. _o_-stem) 'poet, rhymester', MW. _bard_, W. _bardd_ (m.) 'bard, poet', MB. _barz_, B. _barzh_ (m.) 'poet, bard', OC. _barth_ gl. _mimus, scurra_, Gallo-Lat. _bardus_ 'bard' < _*bardo-_ are usually (IEW 478; LEIA B- 18–19; Schrijver 1995: 143–144; Delamarre 2003: 67; Matasović 2009: 56–57) connected with Skt. _gr̥ṇā́ti_ 'calls, praises', Lith. _gìrti_ 'praise' < _*g^werH-_ (LIV 210–211), and derived from _*g^wr̥H-d^hh$_1$-o-_ 'giving praise'. Since the development of _*CR̥HC-_ to _*CaRC-_ is unexpected, there have been various attempts at explanation. Joseph (1980: 102–103) compares _aniṭ_ roots seen in Lith. _gẽrdas_ 'outcry' < _*g^werd^h-_ and _gẽrbti_ 'honours', but _aniṭ_ _*g^wr̥d^h-_ ought to have given ^{x}_brid-_.

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[30] W. _trawdd_ is secondary (GPC 3560).

[31] The only instances of this root in Celtic are the isolated OIr. _tar_, _dar_ 'over, across' < _*tr̥h$_2$-V-_ (p. 170), OIr. _trá_ 'then, therefore' < _*tr̥h$_2$-nt-s_ (p. 179), and MW. _tardu_ 'emerge' < _*tr̥h$_2$-i̯e/o-_ (p. 93). Schumacher (2004: 138 fn. 148) suggests that the stem _*trā-_ is carried over from _*trānts_ > OIr. _trá_, but there was probably never a stage _*trānts_, and even if there were it seems unlikely that it could have influenced _tráth_, since the connection between the two forms must have become obscured very early.

Schrijver (loc. cit.) suggests that *_CR̥HPC-_ > *_CaRPC-_ is a regular Italo-Celtic development; if this is the case, his etymology of OIr. _braigim_ 'fart' < *_b^hr̥h_1g-i̯e/o-_, MIr. _brén_ 'putrid' < *_b^hr̥h_1g-no-_ (p. 71) cannot be correct, but it is uncertain anyway. De Bernardo Stempel (1987: 81) suggests the compound was a late creation, based on the oblique stem of a root noun *_bar-_ 'song' < *_g^wr̥H-V-_.

Matasović (loc. cit.) raises the possibility of loss of laryngeal in a compound. Loss at the Proto-Indo-European stage would of course have produced *_g^wr̥d^h-_ > ^{x}_brid-_, but there seems to have been a Celtic development *_-Cn̥HC-_ > *_-CnăC-_ in compounds (see p. 255 ff.). It is conceivable, although not likely, that *_Cr̥HC-_ might have become *_CarC-_. At any rate, the case of *_bardo-_ is unclear enough that it should not be used as evidence here.

2. MIr. _barn_ 'judge, steward', MW. _barn_ (f.) 'judgement' come from the same root as MIr. _bard_ 'bard' (above) and OIr. _bráth_ 'judgement' (p. 78). They do not reflect *_g^wr̥H-no-_ directly, but are deverbative from *_g^wr̥-n-H-_ > MW. _barnaf_ 'judge' (Schumacher 2004: 213–214).

3. OIr. _cairem_ (m. _n_-stem) 'leather-worker, shoe-maker' < *_kari̯amon-_, MW. _cryd_, W. _crydd_ (m.) 'shoe-maker', MB. _quere_, B. _kere_ (m.) 'shoe-maker', OC. _chereor_ gl. _sutor_ < *_karii̯o-_ are problematic. They are clearly related to Gk. κρηπίς 'a half-boot', Lith. _kùrpė_ 'shoe', which point to *_kr̥h_1p-_. Matasović (2009: 189–190) derives them from *_ker$h_1$pi̯omon-_ > *_kerapi̯omon-_ > *_karapi̯omon-_ (Joseph's law) > *_karai̯omon-_ > *_karēmon-_ > OIr. _cairem_ and *_ker$h_1$pi̯o-_ > *_karapii̯o-_ > *_karai̯i̯o-_ > MW. _cryd_, but this is implausible. It is unlikely that after intervocalic *_-i̯-_ was lost, *_-aö-_ should contract to *_-ē-_ in Irish, and consonants were not palatalised by *_-ē̆-_ when preceded by *_-ā̆-_ (McCone 1996: 116; Sims-Williams 2003: 299). Whatever *_karai̯i̯o-_ would have given in Welsh (^{x}_cra_(_dd_), or, more likely, ^{x}_croe_; cf. MW. _gofwy_ < *_bei̯i̯o-_ < *_-b^hei̯H-o-_, p. 217 ff.), it is unlikely to have been MW. _cryd_.

Ó Flaithearta (2002: 324–326) suggests that, although the *_-p-_ had not yet been lost, the sequence *_-pi̯-_ had the same result on a preceding laryngeal as *_-i̯-_, i.e. that it was lost. However, as he notes, this is _ad hoc_, and it is difficult to understand why *_-p-_ should have a different effect from other consonants. De Bernardo Stempel (1987: 93) suggests another possibilty; that _cairem_ and _crydd_ do not reflect exactly the same root as κρηπίς and _kùrpė_, but are rather from *(_s_)_ker-_ 'cut' (LIV 556; or *(_s_)_kerH-_ 'divide', LIV 558). Stüber (1998: 153) also derives them from *(_s_)_kerH-_. This would then give *_kr̥_(_H_)_i̯-_ > *_kari̯-_ regularly, but it is artificial to separate the Celtic forms from the semantically identical Greek and Lithuanian.

Another difficulty with this etymon is Lat. *carpisculum* ‘a kind of shoe’, which is attested only in the 4th century AD and is generally taken as being a loan-word from Greek[32] (Walde & Hoffmann 1938–1956: 1.72; Ernout & Meillet 1979: 101); one could therefore assume that the Celtic forms are also based on a loan-word with *_karp-_. However, this is chronologically unlikely, because it would have to have been borrowed into Proto-Celtic very early (before *_-p-_ > *_-ø-_), but appears in Latin only much later. It looks as though *cairem* ought somehow to reflect *_kr̥h$_1$p-_, but the form is a well-known *crux*, and it cannot be used as evidence.

4. MW. *darn* (m., f.), MB. *darn* (f.), MC. *darn* (m.) ‘piece, fragment’ look as though they ought to be directly cognate with Skt. *dīrṇáḥ* ‘split’, but are probably deverbative from a nasal present *_dr̥-n-H-_ > Skt. *dr̥ṇā́ti* ‘splits’, which is unattested in Celtic (if this root originally had a laryngeal at all: both *seṭ* and *aniṭ* forms are found; IEW 206–208; EWAIA 1.701–702; LIV 119–121).

5. MW. *sarn* (m. and f.) ‘causeway, path’ does not come from *_str̥h$_3$-no-_, as implied by IEW (1030), but is deverbative from*_str̥-n-h$_3$-_ >*_u̯o-star-na-_ > MW. *gwassarnu* (v.n.) ‘strew straw, rushes etc. under beasts’ (Schumacher 2004: 601–603).

§ 78. *Conclusion*

A morphological explanation for the differing reflexes of *_CR̥HC_(_C_)- in Celtic should be accepted only if no plausible phonological explanation can be found. It is argued below that such a phonological explanation may be available. However, there are also other persuasive reasons to doubt the morphological zero grade theory.

Schrijver (1995: 190) notes that forms such as § 76.11 OIr. *gnáth* < *_ĝn̥h$_3$-to-_, § 76.16 OIr. *lán* < *_pl̥h$_1$-no-_ and § 76.23 OIr. *slán* < *_sl̥H-no-_ do not show short *_-ă-_, despite being forms in which zero grade is expected; he observes that:

> [O]f course analogy does not operate blindly like a sound law and it is often not reasonable to require an explanation for all forms which were *not* affected by analogy. However, the reconstruction of an analogy that operates *randomly* in the class of forms to which it could apply clearly conflicts with sound methodology in historical linguistics. [original italics]

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[32] Although this creates its own problems, since it could not come from *_kr̥h$_1$p-_; we would have to assume an alternative derivation from the root apparently seen in ON. *hrifling* < *_krep-_.

Schrijver's argument is perhaps too strong here, since analogy often affects only some forms while leaving others, equally suitable, unchanged. However, it is true that an analogical explanation, in order to be satisfying, must cover a convincing proportion of the evidence. It is not clear that Joseph's solution in fact does this. Furthermore, Schrijver's objections are supported by some suggestive evidence. As mentioned above, the basis for Joseph's explanation of the operation of morphological zero grade is the statement that "where the full grade of the root in question has the structure *(C)Reh$_2$-, the reason for recharacterization of the zero grade is clear", i.e. that roots of the shape _*CReh$_{2/3}$-_[33] would have _*CRăC(C)-_ in environments where zero grade is expected (such as past participles), a remodelling of original _*CRāC(C)-_ < _*CR̥h$_{2/3}$C(C)-_; this is by analogy with roots of the shape _*Ceh$_{2/3}$-_ which would have an alternation _*Ceh$_{2/3}$C(C)-_ > _*CāC(C)-_, _*Ch$_{2/3}$C(C)-_ > _*CăC(C)-_ by regular sound change.

The whole basis of Joseph's argument rests on this analogical relationship _*Ceh$_{2/3}$C(C)-_ > _*CāC(C)-_ : _*Ch$_{2/3}$C(C)-_ > _*CăC(C)-_ :: _*CReh$_{2/3}$C(C)-_ > _*CRāC(C)-_ : x, where x is _*CRăC(C)-_ ← _*CRāC(C)-_ < _*CR̥h$_{2/3}$C(C)-_. Consequently, we would expect to find a number of Celtic forms in which roots of the shape _*CReh$_{2/3}$-_ are attested in both the full grade and in the zero grade, and where _*CR̥HC(C)-_ gave _*CRăC(C)-_. It is remarkable, therefore, that only two of the fifteen examples given by him (Joseph 1982: 54) belong without doubt to a root of the shape _*CReh$_{2/3}$-_,[34] and the only one which gives without uncertainty the predicted results is § 75.12 MW. _gwreid_ 'roots' < _*u̯r̥h$_2$d-ih$_2$_; full grade _*u̯reh$_2$-_ is attested by ON. _rót_ 'root'. The only other good example of a zero grade to a root of the shape _*CReh$_{2/3}$-_ is § 76.11 OIr. _gnáth_,[35] for which the evidence is conflicting: _gnáth_ < _*gnāto-_ vs. § 75.24 MW. _yngnat_ 'magistrate' < _*-gnăto-_ (see below) and can therefore not be considered probative.[36] All Joseph's other examples reflect roots of the type _*CeRH-_.[37]

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[33] Of course, once _*-ō-_ had become _*-ā-_ in non-final syllables in Proto-Celtic, roots of the type _*CReh$_3$-_ would do just as well as _*CReh$_2$-_.

[34] OIr. _maith_, W. _mad_ 'good' have a short _*-ă-_ regularly from _*m̥h$_2$-ti-_ (see p. 62). Another possible case, not mentioned by Joseph, is MIr. _slaidid_ 'strikes, slays', if this belongs to a root _*sleHd$^{(h)}$-_ of insecure etymology (see p. 76).

[35] Probably _*ĝneh$_3$-_ (Lat. _nōuī_ 'know'; LIV 168–170), though reconstructed by Joseph as _*ĝenh$_3$-_.

[36] Even if one presumes the creation of a new full-grade _*ĝneh$_3$-to-_.

[37] With the exception of MIr. _naiscid_ (see p. 64), which Joseph derives from _*(s)neh$_1$-d-_. As an anonymous reviewer points out to me, one could extend the benefit of the doubt to Joseph by adding the pattern _*Ceh$_1$C(C)-_ > _*CēC(C)-_ : _*Ch$_1$C(C)-_ > _*CăC(C)-_ :: _*CReh$_1$C(C)-_ > _*CrēC(C)-_ : x, x = _*CRăC(C)-_ ← _*CRāC(C)-_ < _*CR̥h$_1$C(C)-_ to the analogical proportions which

Consequently, there seems to be very little evidence for the, otherwise quite plausible, creation of a morphological zero grade because of analogical remodelling actuated by the structure of the original root. Instead we find *_-ă-_ quite well attested in environments in which morphological zero grade cannot be motivated in terms of analogical equations. Therefore, both Joseph's and de Bernardo Stempel's explanations of *_CR̥HC_(_C_)- clusters must be discarded.

Matasović's assumption that *_CR̥HC_(_C_)- gives *_CRāC_(_C_)-, which could be shortened by Dybo's rule, cannot be correct. Although § 75.15 OIr. _mrath_ < *_mr̥h$_2$-tó-_, § 75.20 OIr. _rath_ < *_pr̥h$_3$-tó-_ and § 75.23 OIr. _srath_ < *_str̥h$_3$-tó-_ fit the hypothesis, there are several *_CR̥HC_(_C_)- forms which would be expected to have final stress and do not show a reflex *_CRăC_(_C_)- (as noted by Schrijver 1991a: 335); the Celtic forms are § 76.16 OIr. _lán_ < *_pl̥h$_1$-nó-_, § 76.23 OIr. _slán_ < *_sl̥H-nó-_, § 76.27 MW. _trawd_ < *_tr̥h$_1$-tó-_.

Schrijver's rule *_CR̥HR-_ > *_CRāR-_, *_CR̥HP-_ > *_CRăP-_ is disproved by § 76.4 OIr. _bráth_ < *_g^{w}r̥H-tu-_, § 76.5 MW. _claud_ < *_kl̥h$_2$-dV-_, § 76.25 MIr. _tláith_ < *_tl̥h$_2$-ti-_, § 76.26 OIr. _tráth_ < *_tr̥h$_2$-tu-_, § 76.27 MW. _trawd_ < *_tr̥h$_1$-to-_.

At this point, it may be that all we can do is to observe that none of the explanations thus far put forward seem to succeed in explaining the existence of *_CRăC_(_C_)- from *_CR̥HC_(_C_)- clusters beside regular *_CRāC-_. Since the material has been discussed so many times it may now be impossible to reach a final conclusion.

It is with some hesitation, therefore, that a new formulation is put forward here, not only for the reason just outlined, but also because the phonetic basis for the conditioning factor proposed is extremely speculative. Nonetheless, it seems descriptively to cover the material quite well. Leaving aside for a moment cases of the sequence *_CR̥HCC-_, it is suggested, therefore, that *_CR̥HC-_ clusters gave *_CRăC-_ in Proto-Celtic when the syllable-initial consonant was not a plosive (the actually attested initial consonants are *_-s-_, *_-m-_, and *_-u̯-_) and the laryngeal was followed by a plosive. As will be seen, two of the examples did not begin with *_-s-_, *_-m-_ or *_-u̯-_, but in fact with *_-p-_. If this formulation is correct, it is necessary to assume that *_-p-_ had already become *_-φ-_ (on which see McCone 1996: 44) at the time when *_CR̥HC-_ (or an intermediary stage) became *_CRă̆C-_. For the time being a cover symbol _M_ will be used to represent non-plosives (the reasons why this category is

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might create morphological zero grade. But this gains us very little, because _naiscid_, if in fact it is to be derived from *_n̥h$_1$-d-_ (which is very uncertain) is, like OIr. _maith_, really an example of the context *_R̥HC-_, which gives *_RăC-_ regularly.

problematic will be discussed below). This rule would thus predict that a sequence *_MR̥HP-_ will give *_MRăP-_. The reliable evidence for this consists of: § 75.7 OIr. _flaith_ < *_u̯l̥H-ti-_, § 75.12 MW. _gwreid_ < *_u̯r̥h$_2$d-ih$_2$_,[38] § 75.15 OIr. _mrath_ < *_mr̥h$_2$-to-_, § 75.18 MIr. _raith_ < *_pr̥H-ti-_, § 75.20 OIr. _rath_ < *_pr̥h$_3$-to-_, § 75.23 OIr. _srath_ < *_str̥h$_3$-to-_.[39]

For *_C$_1$R̥HC$_2$-_ > *_CRāC-_ (where _C$_1$_ is not _M_, or _C$_2$_ is not _P_) the reliable evidence is § 76.4 OIr. _bráth_ < *_g^{w}r̥H-tu-_, § 76.5 MW. _claud_ < *_kl̥h$_2$-dV-_, § 76.15 OIr. _lám_ < *_pl̥h$_2$-meh$_2$_, § 76.16 OIr. _lán_ < *_pl̥h$_1$-no-_, § 76.23 OIr. _slán_ < *_sl̥H-no-_, § 76.25 MIr. _tláith_ < *_tl̥h$_2$-ti-_, § 76.26 OIr. _tráth_ < *_tr̥h$_2$-tu-_, § 76.27 MW. _trawd_ < *_tr̥h$_1$-to-_.

Possible counter-evidence is § 75.1 OIr. _braigim_ < *_b^{h}r̥h$_1$g-(i̯)e/o-_, § 75.3 OIr. _claidid_ < *_kl̥h$_2$-d-e/o-_, § 75.4 MW. _crafu_ < *_kr̥Hb$^{(h)}$-(i̯)e/o-_, § 75.10 OIr. _glan_ < *_g^{h}l̥H-no-_, § 75.17 MIr. _olann_ < *_h$_2$u̯l̥h$_{1/2}$-neh$_2$_, and § 75.24 MW. _yngnat_ < *_-ĝn̥h$_3$-to-_.

Of these, _olann_ is already problematic for other reasons, and therefore cannot be used, and the short vowel in _claidid_ is probably analogical. The preform of MW. _crafu_ is very uncertain, and _braigim_ may not reflect a sequence involving a laryngeal. The short vowel in MW. _yngnat_ < *_-ĝn̥h$_3$-to-_ is probably due to its being in a compound. The only form which is really problematic is _glan_; since there is no other serious counterevidence I attribute its short *_-ă-_ to analogy with _glas_, or borrowing from Germanic.

For the sequence *_CR̥HCC-_ the good evidence points to a result *_CRăCC-_: § 75.8 MIr. _flann_ < *_u̯l̥h$_2$-sno-_, § 75.19 OIr. _rann_ < *_pr̥h$_3$-sneh$_2$_, perhaps § 75.6 MW. _ffraeth_ < *_sp$^{(h)}$r̥h$_2$ĝ-to-_. Although on this evidence, it is possible that *_CR̥HCC-_ always gave *_CRăCC-_ in Proto-Celtic, it is also striking that, just as the cases of *_CR̥HC-_ > *_CR̥ăC-_ all have a syllable-initial non-plosive, so do the good examples of *_CR̥HCC-_.

The rules as set out above seem to be descriptively accurate; I will now briefly discuss how they might fit into a broad phonological framework. I assume that the sequence *_CR̥HC(C)-_, phonemically /CR̥HC(C)-/, at some point developed an epenthetic vowel, so that phonetically it was [CRəHC(C)-]. Subsequently, laryngeal loss took place in syllables beginning with a non-plosive and followed by a plosive or two consonants. This phonemicised the preceding vowel, giving /CRaC(C)-/ [CRaC(C)-]. Either simultaneously, or at a later stage, laryngeal loss took place in other environments, this time resulting in compensatory lengthening, the result being /CRa:C(C)-/ [CRa:C(C)-].

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[38] Unless this goes back to *_u̯r̥h$_2$d-i̯oi̯_, in which case it is an example of *_CR̥HCC-_ > *_CRăCC-_ (see below).

[39] Strictly speaking, the environment is *_M(C)R̥HP-_, on the basis of _srath_.

As already hinted at, there is a problem in assuming that a conditioning factor for the development of _*CR̥HC(C)-_ to _*CRăC(C)-_ is an initial non-plosive, which is that non-plosives do not make up a natural class of segments; that is, there is no single phonological feature which characterises all of them. One feature that does categorise at least fricatives, sibilants and glides is [+continuant]. Leaving aside the problem of _*-m-_ for the time being, a possible explanation for the developments proposed here is that laryngeal loss without compensatory lengthening in the sequence _*MR̥H.-_ (i.e. _*MR̥HP-_ or _*MR̥HCC-_) is to be seen as a kind of dissimilation in a syllable containing three segments with the feature [+ cont], whereby "a phonetic feature covering a sequence of segments may be interpreted as having its source in a single segment" (Blevins 2004: 149). It is required by this theory that the third in the sequence of continuants is the laryngeal, i.e. that the laryngeals were fricatives or some other type of continuant at the time of the development.[40] As already noted, a problem for this proposal is that nasals are not generally viewed as being [+cont], since they involve complete closure of the vocal tract (e.g. Lass 1984: 89). However, airflow through the nose is of course not blocked, and nasals do usually act in the same way as other continuants in Indo-European languages. Even if nasals are not to be considered as continuants, nasals and [h] are acoustically similar, and cases of context-free shift from aspiration to nasalisation or vice versa are attested (Blevins 2004: 135–136). Consequently, dissimilation between nasals and [h] may perhaps also be possible, and may have occurred here when the syllable began with a nasal. If this is correct, it may be the case that at least *-h_2- and *-h_3- had fallen together as [h] by this stage of Proto-Celtic.

The restriction of the dissimilation to sequences of _*MR̥H-_ followed by plosives or sequences of two consonants can be explained if the domain of the dissimilation was the syllable. According to the rules assumed up to now, as discussed on p. 7 ff., both the sequences _*CR̥H.C-_ and _*CR̥H.CC-_ would have had their syllable boundary after the laryngeal. However, it would be possible to suppose that a change in syllabification occurred in Proto-Celtic whereby an intervocalic sequence _*-C.R-_ could be syllabified as _*-.CR-_, while other _*-C.C-_ sequences kept the original syllabification (compare the tautosyllabicity of _*-PL-_ clusters in early Latin poetry; Weiss 2009: 67–70; for a more detailed discussion of the developments see Sen 2009: 171–306). If this were the case, there would be a difference in the position of the syllable boundary between *_CR̥H.P-_ and *_CR̥.HR-_,[41] while the laryngeal would have to belong to the first syllable in a sequence *_CR̥H.CC-_.

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[40] On the basis of the data discussed here, strictly speaking only *-h_2- and *-h_3- need have been fricatives, since there is no evidence involving *-h_1-. But if the same process of dissimilation is also seen in *h_1n̥h_3-mn- > OIr. _ainm_ (see p. 38 and p. 44 ff.), then it is required that *-h_1- was not a plosive. For the phonetics of the laryngeals see p. 4 ff.

The extremely speculative nature of the phonological explanation for the development suggested here must be admitted. Nonetheless, the distribution observed here, that *_C_1R̥H.C(C)-_ only gives *_CRăC-_ when _C_1_ is not a plosive, does seem to hold good, and will be assumed to be correct henceforth. This can be expressed in terms of the following two rules, in chronological order: 1) *_MR̥H.P/CC-_ > *_MRăP/CC-_, 2) *_C_1R̥HC_2-_ > *_CRāC-_ (where either _C_1_ is a plosive or _C_2_ is a sonorant).[42]

#_CR̥Hi̯-_

§ 79. _Introduction_

The loss of laryngeals in the contexts *_CR̥Hi̯-_ and *_CeRHi̯-_ in Celtic was observed by Joseph (1980: 9–10), and seems to have been generally accepted (de Bernardo Stempel 1987: 47; Ringe 1988: 424–425; McCone 1996: 53; Schumacher 2004: 135); *_CeRHi̯-_ sequences will be discussed elsewhere (p. 201 ff.). It is possible that *_CR̥Hi̯-_ > *_CR̥i̯-_ occurred in other languages: in Greek, Balto-Slavic and Latin (but explicitly not Sanskrit) according to Peters (1980: 80 fn. 38). G.-J. Pinault (1982) argues for loss of laryngeal in the environment *_-CHi̯-_ in a non-initial syllable in Proto-Indo-European, but gives two Greek examples of apparent loss in *_CR̥Hi̯-_ in an initial syllable.[43]

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[41] Note that a syllabification *_CR̥.HR-_ would not prevent the emergence of a long vowel by compensatory lengthening. Compensatory lengthening as a diachronic process does not rely on the lost consonant being moraic (Kavitskaya 2002, esp. 37–102).

[42] There is no certain evidence for the sequence *_C_1R̥HC_2-_, where _C_2_ is *_-s-_, but since *_-s-_ is an obstruent, the same result as in *_CR̥H.P-_ sequences would presumably be expected (i.e. *_MR̥H.s-_ > *_MRăs-_, otherwise *_PR̥Hs-_ > *_PRās-_). The Proto-Celtic desiderative/future suffix was *_-āse/o-_, the result of a resegmentation of reduplicated derivatives of the type *_Ci-CR̥H-se/o-_ (McCone 1991b: 137–182; LIV 24; Schumacher 2004: 57–58). Consequently, verbal roots beginning with a non-plosive would be expected to have a desiderative in *_-ăse/o-_, while those beginning with a plosive would have *_-āse/o-_. No doubt this difference would have been levelled out, apparently in favour of the long vowel variant. This removes the need to explain the *_-āse/o-_ desiderative as analogical on the basis of the very small group of primary root presents with present stem *_CaRă-_, as supposed by Schumacher (loc. cit.), who accepts Schrijver's suggestion that *_CR̥Hs-_ gave *_CRăs-_.

[43] Gk. σκάλλω 'stir up, hoe' < *_skl̥H-i̯e/o-_ (see MIr. _scoltaid_, p. 246), (ἀ)σπαίρω 'gasp' < *_spr̥H-i̯e/o-_ (see MIr. _seir_ p. 218). But in both cases Lithuanian cognates show acute intonation.

It should be noted that it is often difficult to identify a Celtic form which reflects a sequence **CR̥Hi̯-* rather than **CR̥Hii̯-*. Proto-Indo-European had noun and adjective formants in both **-i̯o-* and **-ii̯o-*,[44] but the distinction was erased entirely (or almost entirely) in Irish by phonological developments. In British Celtic the distinction between inherited **-i̯o-* and **-ii̯o-* was largely maintained, although there is some slight evidence for a development **-i̯o-* > **-ii̯o-* in some unclear circumstances (Uhlich 1993; Schrijver 1995: 282–289; McCone 1996: 109; Balles 1999). Consequently, without British evidence it is hard to be certain that any given noun which seems to reflect a sequence **CR̥Hi̯-* does not in fact come from **CR̥Hii̯-*, which would be expected to give **CaRii̯-* (for the development of **CR̥HV-* sequences see p. 169 ff.).

In the case of verbs, things are easier because there was no verbal suffix **-ii̯o-*. However, in recent years attempts have been made to demonstrate the existence of an athematic Indo-European *i*-present (e.g. Jasanoff 2003: 91–127; Schrijver 2003a). Although Jasanoff and Schrijver's approaches are very different, both propose an athematic suffix **-i-* (with **-ei̯-/-i-* ablaut according to Schrijver) in addition to **-i̯o-*, but which was sometimes secondarily thematised and thus fell together with it. If either Jasanoff or Schrijver is right in positing a verbal *i*-suffix,[45] it would be possible to maintain that apparent cases of **CR̥Hi̯e/o-* > **CaRi̯e/o-* are really to be explained as **CR̥Hi-* > **CaRi-*, with subsequent thematisation. Neither Jasanoff's nor Schrijver's theories regarding the existence of an *i*-present have yet been widely accepted by mainstream scholarship. Consequently, I will assume the existence only of a verbal suffix **-i̯e/o-*. The Celtic data for **CR̥Hi̯V-* > **CRi̯V-* (§ 80) and **CR̥Hi̯V-* > **CRăi̯V-* (§ 81) will be discussed in that order.

It has sometimes been assumed (Ringe 1988: 424–425; Schumacher 2004: 135; doubtfully McCone 1996: 53–54) that laryngeals followed by **-u̯-* underwent the same changes as those followed by **-i̯-* in Proto-Celtic. However, de Bernardo Stempel (1999: 214, 454 fn. 54), while assuming that this is the case in the places cited, in the same work (1999: 220 fn. 148) argues that **CR̥Hu̯-* gave Proto-Celtic **CRău̯-*. A consideration of all the data ought clearly to be fruitful. The Celtic data for **CR̥Hu̯V-* > **CR̥u̯V-* will be collected first (§ 82). It is often not possible to tell the difference on the basis of Irish between **CR̥Hu̯V-* > **CRāu̯V-* and **CR̥Hu̯V-* > **CRău̯V-*; since some of the forms which seem to show _*CRā̆u̯V-_ are attested only in Irish, these will all be collected in the same section (§ 83), and be discussed in the Conclusion.

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[44] For their original distribution see Balles (1999: 5–7). On the origin of the suffix **-ii̯o-* see Klingenschmitt (1975: 154 fn. 10), Harđarson (1993b: 164 fn. 25), Mayrhofer (1986: 161, 165–166), Widmer (2005).

[45] For an argument against part of Schrijver's theory, see Zair (2009: 214).

§ 80. _*CR̥Hi̯- > *CRi̯-_

1. OIr. _aire_ (m. _k_-stem) 'free man; nobleman, chief' is connected by Thurneysen (1936) with Gaul. _Aresaces_ (tribal name) < _*arisak-_, which is phonetically possible.[46] However, Pokorny (1956: 308) argues that _aire_ was originally a _i̯o_-stem on the basis of forms like _airib_ (dat. pl.) and _Lóigaire_ (p.n.). This is supported by Gaul. _Ario-_ (p.n. element). If correct, then a connection between _aire_ and Skt. _áryaḥ_ 'master, leader' (e.g. IEW 67) becomes possible. Alternatively, _*ari̯o-_ might be derived from _*pr̥H-i̯o-_ (cf. OIr. _air_ 'before', Skt. _purā́_ 'before' < _*pr̥HV-_), as assumed by e.g. de Bernardo Stempel (1999: 184 fn. 35). Given the uncertainty, _aire_ cannot be used as evidence.

2. MIr. _caile_ 'serving girl, maid' is reconstructed by de Bernardo Stempel (1995: 432) as _*kʷl̥h_$_1$_-i̯o-_ (cf. Gk. τελέθω 'come into being', Toch. A _källäṣ_ 'leads, brings', (post-Vedic) Skt. _cīrṇáḥ_ 'practised, observed' < _*kʷelh_$_1$_-_; LIV 386–388). The same semantics are found in Gk. ἀμφίπολος 'handmaid'. Formally, however, this cannot be correct because _*kʷl̥̯i̯o-_ would give _*kʷali̯o-_ > _*kʷoli̯o-_ > ˣ_coile_ by rounding of _*-a-_ to _*-o-_ after _*kʷ-_ (McCone 1996: 118). Therefore _caile_ remains unexplained (LEIA C-12).

3. OIr. _cailech_ (m. _o_-stem) 'cock', Og. _CALIACI_, MW. _keilyawc_, W. _ceiliog_ (m.), MB. _quilleguy_ (pl.), _quillocq_, B. _kilhog_ (m.), OC. _chelioc_ gl. _gallus_, MC. _kullyek_, _colyek_ (m.; with unexpected spelling of the first vowel) 'cock' < _*kali̯āko-_, derived from _*kl̥h_$_1$_-i̯o-_, are cognate with Lat. _calō_, Gk. καλέω 'call, summon', OHG. _hellan_ 'resound' < _*kleh_$_1$_-_ (LIV 361–362; LEIA C-12).[47]

4. OIr. _cain_ (_i_-stem adj.) 'fine, good, fair, beautiful',[48] OW., MW. _kein_, W. _cain_, MB. _quen_ (adj.) 'fine, fair, beautiful' could both come from _*kani̯o-_, if Uhlich (1993, esp. 353, 366) is right to identify the Irish word as an example of retained _*-i̯o-_ (subsequently transferred to the _i_-stems by analogy).

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[46] In fact Thurneysen reconstructs nom. sg. _*aresak-s_ > _aire_, gen. sg. _*aresak-os_ > _airech_, which would not give the Irish forms. Gaul. _-e-_ is due to confusion of short _*-e-_ and _*-i-_ in Gaulish; cf. OIr. _air-_ 'before' < _*ari_.

[47] Note that the Welsh forms prove that the preform is not _*kalii̯āko-_, which would give ˣ_celiog_, since internal affection of preceding _*-a-_ by _*-i̯-_ gives Welsh _-ei-_, while affection by _*-i-_ gives _-e-_ (Schrijver 1995: 259).

[48] Guaranteed by rhyme (DIL C-30). OIr. _caín_ (_i_-stem adj.) 'fine, good, fair, beautiful' may be a borrowing from Brittonic.

Reconstructing **kani̯o-* has the advantage of deriving both the Irish and Brittonic forms from the same preform, which is also found in Gk. καινός 'new, fresh'. There is some evidence that the root of these forms ended in a laryngeal, on the basis of OCS. *čьnǫ* 'begin' < **kn̥H-e/o-*, Skt. *kanyā́* 'girl' < **konH-i-h$_3$en-*[49] (IEW 564; Stüber 1998: 119; *pace* LIV 351), although the Sanskrit word may not in fact belong here (see MIr. *cana* p. 209). The final laryngeal may be **-h$_1$-*, on the basis of OIr. *cenél* (n. *o*-stem) 'kindred, race', OW. *cenetl*, W. *cenedl* (f.) 'nation, tribe, kindred', OC. *kinethel* gl. *generatio* < **kenh$_1$-e-tlo-*.[50] However, these could be based secondarily on **ken(H)-i̯e/o-*[51] > OIr. *cinid* 'is born, descends from'. In this case, we could plausibly reconstruct **kn̥h$_{(1)}$-i̯o-* > **kn̥i̯o-* > **kani̯o-* > OIr. *cain*.[52]

But Balles (1999: 14) points out the existence of this word in the second element of Og. QUNOCANOS (p.n. gen. sg.), which points to an *i*-stem in Irish, which would then come from **kn̥h$_{(1)}$-i-*. The Brittonic forms would therefore seem to be a late thematisation of the *i*-stem (**kan-i-* is not a possible preform for Brittonic; Schrijver 1995: 257–259, 265–268).

5. OIr. *caire* (f. *i̯ā*-stem) 'crime, fault, sin', OW. *cared* gl. *nota* gl. *nequitiae*, MW. *karet*, W. *caredd* (f.) 'transgression, sin, crime', MB. *carez*, B. *karez* (f.) 'blame, reproach' < **kari̯i̯ā* are cognate with Lat. *carinō* 'use abusive language', Gk. Hesych. κάρνη· ζημία, Latv. *karinât* 'pester', OCS. *korъ* 'contumely', OHG. *harawēn* 'mock', Toch. A *kärn-*, Toch. B *karn-* 'vex' (IEW 530; de Vaan 2008: 93–94). The Tocharian forms go back to **kr̥-* or **kr̥H-*. An *aniṭ* root **kr̥-/*kor-* would explain all the forms except Lat. *carināre*, while **kr̥H-/*korH-* would explain all forms except Gk. κάρνη; this might be a secondary form, either from a nasal present **kr̥-n-H-* or a thematic present **kr̥H-e/o-*. Alternatively, Schrijver (1991a: 429, 434–435) suggests the Latin form might be due to a rule **-e-* > **-a-* after a pure velar (but see Meiser 1998: 82–83). On balance, **kr̥H-* is more likely than **kr̥-*, but this is not certain. Either way, the Brittonic forms show that we are dealing with a suffix **-i̯i̯eh$_2$* rather than **-i̯eh$_2$*.

6. OIr. *daimid* 'endures, suffers; submits to, permits' < **dami̯e/o-*, MW. *adef* (3sg.), W. *addefaf* 'own, acknowledge, confess' < **ad-dami̯e/o-*, MB. *gouzaff*,

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[49] Without lengthening by Brugmann's law.

[50] Hardly from **kenh$_1$-tlo-*, as supposed by de Bernardo Stempel (1999: 302–303 fn. 125), since, as she herself observes, the Brittonic forms guarantee **-e-tlo-*.

[51] Or denominative from **kenh$_1$-i-* (LIV 351).

[52] Gk. καινός, also from **kn̥h$_{(1)}$-i̯o-* would then be due to an identical loss of laryngeals before **-i̯-* (Peters 1980: 80 fn. 38).

B. _gouzañv_ (inf.) ‘submit, suffer’, MC. _gothaf_ (v.n.) ‘submit, suffer’ < _*u̯o-dami̯e/o-_ < _*dm̥h_2-i̯e/o-_ are cognate with Gk. δάμνημι ‘tame’ < _*demh_2-_ (LIV 116–117). There is no other evidence for a _i̯e/o_-present in Proto-Indo-European,[53] so although _daimid_ appears to reflect _*dm̥h_2-i̯e/o-_ it is possible that it could be based on other forms in which the new root _*dam-_ was regular, e.g. MIr. _damnaid_ ‘ties, fastens, binds’ < _*dm̥-n-h_2-_.

7. MIr. _dairid_ ‘bulls’ < _*dari̯e/o-_ < _*d^hr̥h_3-i̯e/o-_ is cognate with Gk. θρώσϰω ‘leap, spring; mount’ < _*d^herh_3-_ (LIV 146–147). All other forms of this root in Irish are derived from the present stem, so there is no source for a secondary root _*dar-_ in Celtic. However, there is no other proof for an original _i̯e/o_-present in Proto-Indo-European. MW. _kynndared_, W. _cynddaredd_ (f.) ‘rage, anger; rabies’, OB. _cunnaret_ gl. _rabies_ < _*cuno-dari̯i̯ā_ reflect _*dr̥h_3-i̯i̯eh_2_ directly; Gaul. _Dario_ (p.n.) might come from _*dr̥h_3-(i)i̯o-_ directly, or be derived from the verb: cf. _-darus_ and _Dari-_.

8. OIr. _·gainedar_ ‘comes to life, is born’, MW. _genir_ (impers.) ‘is born’, MB. _ganat_ (impers. pret.) ‘has been born’, MC. _genys_, _gynys_ (p.p.) ‘having been born’ < _*gani̯e/o-_ < _*ĝn̥h_1-i̯e/o-_ are exactly cognate with Skt. _jā́yate_ ‘is born’ < _*ĝenh_1-_ (cf. Gk. γένεσις ‘origin, birth, race, creation, family’; LIV 163).

9. OIr. _·laimethar_ ‘dares, ventures’ < _*lami̯e/o-_ < _*$h_3$lm̥H-i̯e/o-_ is cognate with Lith. _lémti_ ‘ordain’, Gk. _νωλεμές_ ‘untiring’ < _*$h_3$lemH-_ (Stüber 1998: 135; LIV 412; Schumacher 2004: 446–447).

10. MW. _tardu_ (inf.), W. _tarddaf_ ‘emerge, issue, appear (suddenly)’, B. _tarzhañ_ (inf.) ‘explode, break’, MC. _tarʒe_ (v.n.) ‘burst, explode’ < _*tari̯e/o-_ probably come from _*tr̥h_2-i̯e/o-_ (Schrijver 1995: 144–145; Schumacher 2004: 620–621) < _*terh_2-_ ‘come through, cross’ (LIV 633–634). Although the _i̯e/o_-suffix in this verb is not inherited,[54] there are no other forms from which an _aniṭ_ root could be extracted (being otherwise found in the isolated forms OIr. _trá_ ‘then, therefore’ p. 179, OIr. _tar_ ‘over, across’ p. 170, and OIr. _tráth_ ‘period of time’ p. 82). Consequently, it is quite likely that _tarddaf_ is the regular result of _*tr̥i̯e/o-_ < _*tr̥h_2-i̯e/o-_.

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[53] Skt. _dā́myati_ ‘controls’ is late, and semantically divergent (Ringe 1988: 425 fn. 33).

[54] Unless Lat. _intrāre_ ‘enter’ < _*-trāi̯e/o-_ is remodelled from an original _*-tr̥h_2-i̯e/o-_ (LIV 634 fn. 16, contra Klingenschmitt 1982: 97–98).

§ 81. *_CR̥Hi̯-_ > *_CRāi̯-_

1. OIr. _lae_, _lá_ (n. _i̯o_-stem) ‘day’ < *_lā̆i̯o-_ is not definitely a separate word from OIr. _laithe_ ‘day’. GOI (180) thinks _lae_ is due to dissimilation in the phrase _lathe bratho_ ‘Doomsday’, while Pedersen (1909–1913: 1.133) assumes reduction due to lack of stress. While possible, neither explanation is particularly compelling. Pokorny (1922: 43–44) argues for a derivation from *_plāi̯o-_ < *_pl̥h$_2$-i̯o-_ ‘a turning’, from *_pelh$_2$-_ (cf. Gk. πλῆτο (aor.) ‘drew near’, OIr. _ad·ella_ ‘visits, approaches’; IEW 801–802; LIV 470–471). However, this etymology is not essential either. The origin of _lae_ remains uncertain.

§ 82. *_CR̥Hu̯-_ > *_CR̥u̯-_

1. OW. _caru_, MW. _carw_ (m.) ‘deer, stag, hart’, MB. _caru_, _caro_, B. _karv_ (m.) ‘deer’, OC. _caruu_ gl. _ceruus_, MC. _carow_, _karow_ (m.) ‘stag, hart’ < *_karu̯o-_ < *_kr̥-u̯o-_ (cf. full-grade Lat. _ceruus_ ‘stag, deer’) have often been taken to reflect a _seṭ_-root *_k̂erh$_2$-_ (e.g. Beekes 1976a: 12). However, Nussbaum (1986, especially 2–18) has shown that most forms—including all _u_- and _u̯o_-stems—derived from this root must be _aniṭ_ (e.g. Skt. _śr̥ngam_ ‘horn’ < *_k̂r̥-n-go-_, W. _carn_ ‘hoof’ < *_k̂r̥-no-_, Toch. A _śaru_, Toch. B _śerwe_ ‘hunter’ < *_k̂ēr-u̯o-_), and that forms which show laryngeal reflexes are derived from a noun with a stem formant *_-h$_2$-_.[55] Two forms raise particular difficulties for this analysis: the first is the group SCr. _krȁva_, Russ. _koróva_, Lith. _kárvė_ ‘cow’, which could point to *_k̂orh$_2$-u̯o-_ (with incomplete satemisation), but which Nussbaum (1986: 7–8) explains as a _vr̥ddhi_ derivative *_k̂ōr-u̯o-_. The other is Gk. κάρη, κάρᾱ (n.) ‘head’, which Nussbaum traces back to an original hysterodynamic noun with nom. sg. *_k̂r-ēh$_2$_.[56] He explains the disyllabic reflex of this in Greek as due to Lindeman’s law, whereby in an original monosyllable a variant *_k̂r̥r-ēh$_2$_ arose (Nussbaum 1986: 55, 122). However, although Lindeman’s law is widely accepted, it is possible to doubt whether it affected nasals and liquids (as opposed to glides), at all (see especially Sihler 2006: 180–182). If one does not accept that Lindeman’s law affected non-glides, it is nonetheless still possible to explain Gk. κάρη as due to generalisation to the original nominative of the stem *_kar-_ which is to be found in e.g. the original genitive *_k̂r̥-h$_2$-es_. Since none of the forms absolutely require a _seṭ_-root, and since

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[55] According to Nussbaum (1986: 155–157) Gk. κεραός ‘horned’ does not come from *_k̂erh$_2$-u̯o-_, but is derived from κέρας ‘horn’ < *_k̂er-h$_2$-s_.

[56] Note that Nussbaum (1986: 122 fn. 32) does not accept failure of the laryngeal to colour long *_-ē-_ according to Eichner’s law (see p. 249 ff.) in Greek.

there is positive evidence for an _anit̥_-root, it is probable that OW. _caru_ goes back to _*k̂r̥-u̯o-_ rather than _*k̂r̥h$_2$-u̯o-_.

2. MIr. _dalb_ (f. _ā_-stem) 'falsehood, lie, untruth' < _*dalu̯ā_ is derived by LEIA (D-18) from the same root as OIr. _delb_ 'form, appearance' < _*delu̯ā_ (p. 206), and MIr. _dolb_ 'sorcery, illusion' < _*dolu̯ā_ (p. 245) < _*delh$_1$-_ 'hew, split' (Lat. _dolāre_ 'hew with an axe', _doleō_ 'suffer pain', Latv. _dil̂t_ 'take away'; LIV 114). In principle, therefore, _dalb_ ought to come from _*dl̥h$_1$-u̯eh$_2$_. However, the profusion of forms with different vowel-grades and the same suffix in Celtic is worrying, and suggests that some kind of secondary derivation may have occurred.

3. MW. _galw_ (m., f.) 'a call, calling', OB. _galu_ gl. _pean_, MB. _galu_, B. _galv_ (m.) 'call, cry' < _*galu̯o-_ may reflect _*gl̥H-u̯o-_ if MIr. _glám_ 'satire; outcry, clamour', which looks as though it should be related, has a long vowel from a laryngeal (p. 79). But this is very uncertain.

§ 83. _*CR̥Hu̯- > *Crā̆u̯-_

1. OIr. _amrae_ (_i̯o-_, _i̯ā_-stem adj.) 'wonderful, marvellous, extraordinary' may, if related to Lat. _prāuus_ 'crooked, irregular, deformed', reflect _*n̥-prā̆u̯i̯o-_ < _*pr̥H-u̯-_ (LEIA A-68). However, _prāuus_ has no further etymology (de Vaan 2008: 487),[57] and, if it were Indo-European, could reflect _*preh$_2$-u̯o-_.

2. MIr. _blá_ (adj.) 'yellow' is apparently connected to Lat. _flāuus_ 'golden yellow', OHG. _blāo_ 'blue'.[58] LEIA (B-55) reconstructs _*bʰlōu̯o-_. Vendryes (1902: 117, 191) earlier considered it a Latin loan-word, but this ought to have given Irish ˣ_slá_ (GOI 571). IEW (160) assumes a late loan-word from Old English (only attested in OE. _blǣhwen_ 'bluish'); the semantics are problematic, unless the word also meant 'yellow' in Old English. An earlier loan-word from Germanic (before the presumed shift 'yellow' to 'blue') is possible only if _*-āu̯V-_ gave Irish _-á_, for which this form is the only evidence (see p. 101). If the full grade of this word is _*bʰleh$_1$-_, as suggested by the Germanic forms (and cf. MLG. _blāre_ 'blaze, cow with a blaze', if this belongs here), then _blá_, if inherited, would have to come from _*bʰl̥h$_1$-u̯o-_. _O_-grade _*bʰloh$_1$-u̯o-_ would also be possible, but the assumption of three different ablaut grades for the three different language families is excessive. If Schrijver (1991a: 298–301)

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[57] Despite Ernout & Meillet's (1979: 533) strange attempt to connect Skt. _pū́rvaḥ_ 'first; former, earlier'.

[58] Also perhaps 'golden, yellow' (Karg-Gasterstädt & Frings 1968: 1176).

is right to reconstruct _*b^{h}leh$_3$-_ for the root, then _blá_ could come from _*b^{h}leh$_3$-u̯o-_ or _*b^{h}l̥h$_3$-u̯o-_. MIr. _blá_, whether borrowed or inherited in origin, does not necessarily represent _*CR̥Hu̯-_.

3. OIr. _bráu_, MIr. _bró_ (_n_-stem) ‘quern, mill-stone; grinding’, MW. _breuan_ (f.) ‘hand-mill, quern, millstone’, MB. _brou_, _breau_, B. _brev_ (f.) ‘hand mill’, OC. _brou_ gl. _mola_, Gaul. Βραῦον, OBrit. _Brovonacis_, _Braboniaco_ (pl.n.s; Delamarre 2003: 86) < _*g^{w}rāu̯ō̆n-_ come from a paradigm whose strong cases would have reflected _*g^{w}reh$_2$-u̯on-_, the weak _*g^{w}r̥h$_2$-un-_ (Hamp 1975a). In all cases other than the Celtic dative plural (_*g^{w}r̥h$_2$-u̯n̥-b^{h}is_) the latter would have been syllabified _*g^{w}r̥h$_2$un-_, which ought to have given ^{x}_g^{w}arun-_ (Schrijver 1995: 122), or, more likely, have given _*g^{w}ruh$_2$n-_ > _*g^{w}rūn-_ (see p. 111 ff.). Consequently, the Celtic forms probably reflect the generalised full grade.

4. MIr. _bró_ ‘dense mass; multitude, crowd’ is derived by de Bernardo Stempel (1999: 220), following IEW (476), from _*g^{w}r̥h$_2$-u̯o-_, cognate with Skt. _gurúḥ_ ‘heavy, weighty’, Gk. βαρύς ‘heavy’ < _*g^{w}r̥h$_2$-u-_, Lat. _grauis_ ‘heavy’ < _*g^{w}reh$_2$-u-_. However, according to DIL (B-194), this is a metaphorical usage from OIr. _bráu_, MIr. _bró_ ‘quern, millstone’. Since _bró_ ‘multitude’ is also an _n_-stem (dat. sg. _bróin_) this is quite likely.

5. W. _breuad_ (m.) ‘grave worm, corpse worm’ < _*brāu̯ato-_ or _*brŏu̯ato-_, W. _breuog_ (m.) ‘grave worm; toad’ are derived by Joseph (1982: 33) from _*g^{w}r̥h$_3$-u̯-_ (root _*g^{w}erh$_3$-_ ‘devour’, Gk. βιβρώσκω ‘eat’; LIV 211–212). This is semantically attractive, but morphologically problematic, as noted by Schrijver (1995: 181–182); the connection with MW. _breu_, W. _brau_ (adj.) ‘brittle, fragile, worn away’ (LEIA T-162) is equally likely.

6. OIr. _clói_ (nom. pl., m. _i̯o_-stem) ‘metal spike; bud, graft’ < _*klāu̯i̯o-_, MW. _clo_ (m.) ‘lock, bolt’, MB. _clou_, B. _klao_, _kleo_, _klaou_ (m.) ‘hinge’ < _*klāu̯V-_ are cognate with Lat. _clāuus_ ‘nail’, _clāuis_ ‘key’, Gk. Ion. κληΐς ‘bar, bolt, key’, SCr. _kljȕka_ ‘key, hook’, from a root _*kleh$_2$u̯-_. Both _*kl̥h$_2$u̯-V-_ and _*kleh$_2$u̯-V-_ are possible preforms.[59] It is also possible that the Irish and Brittonic words are loanwords from Lat. _clāuus_ ‘nail’ and _clāuis_ ‘key’ respectively, but the Irish form is not an _o_-stem, and the Brittonic forms consistently show masculine gender, while _clāuis_ is feminine, so this is less likely.

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[59] According to Schrijver (1991a: 175, 298–301), Lat. _clāuus_, _clāuis_ can only come from _*kleh$_2$u̯-V-_ because _*CR̥Hu̯-_ gave _*CaRu̯-_ in Latin, on the basis of Lat. _caluus_ ‘bald’ < _*kl̥H-u̯o-_. This would make a reconstruction _*kleh$_2$u̯-V-_ more likely for the Celtic forms also. However, it seems likely that _*-lu̯-_ gave _*-ll-_ in Latin (Nussbaum 1997: 190–192, 1999: 386, 410), in which case _caluus_ must come from _*kalVu̯o-_. Consequently it is possible that _*CR̥Hu̯-_ gave _*CRāu̯-_ in Latin.

7. OIr. _cnaí_ (f.) ‘fleece’, MB. _kneau_, _cnev_, B. _kreoñ_[60] (m.) ‘fleece’, MC. _knew_ (m.) ‘fleece’ seem to reflect *_knău̯ī_ (LEIA C-128–129); but since the Brittonic forms are masculine, perhaps they come from *_knău̯i̯o-_. According to Matasović (2009: 211), they may be derived from the root *_kneh_$_2$- ‘scrape, rub’ (Gk. Att. _ϰνῇ_ ‘scratches’; LIV 365). The semantics of the Celtic verb (MIr. _·cná_ ‘gnaws’) make this less likely, unless the formation is old, before the shift in meaning of this root to ‘gnaw’ in Celtic. If they do represent *_kn̥h_$_2$_-u̯ih_$_2$, then they argue for a change *_CR̥Hu̯-_ > *_CRău̯-_. However, *_knāu̯ī_ from either *_kn̥h_$_2$_-u̯ih_$_2$ or *_kneh_$_2$_-u̯ih_$_2$ would probably give the Breton and Cornish forms (cf. MB. _breau_, B. _brev_ ‘hand mill’ < *_brāu̯ī_; B. _nev_ ‘trough’ < *_nāu̯ī_; Schrijver 1995: 122, 300), so the only evidence for length comes from Irish. The word is normally spelled _cnai_, once _cnái_ (DIL C-263), so it is possible that _cnaí_ really contains a long *_-ā-_.[61] MW. _cneif_, W. _cnaif_ (m.) ‘a shearing, clipping’ probably does not reflect *_knău̯ī_, as supposed by LEIA and Matasović: *_-ắu̯ī_ would give ^{x}_cneu_,[62] like MW. _cenau_ ‘whelp’ < *_kaneu̯ī_ < *_kaneu̯ō_ (see p. 209).[63] The origin of MW. _cnu_, _cnuf_ (m.) ‘fleece’ is unclear,[64] but it cannot come from *_knou̯o-_ as supposed by Matasović, because this would give ^{x}_kneu_ (Schrijver 1995: 325–333, 343). OIr. _cnaí_ is not certain evidence.

8. W. _drewg_ (m.) ‘tare, cockle, darnel; millet; poppy’, B. _draog_, _dreog_ ‘rye-grass’ may go back to *_drāu̯ākā_.[65] Gaul. *_drāu̯ā_ gives OFr. _droe_, _drave_ (Delamarre 2003: 147–148). The Welsh form is aberrant: we would expect ^{x}_dreuog_, but _-wg_ for _-og_ is found both as a South Welsh dialect feature and as a variant in some later Welsh forms (Russell 1990: 25–28). Alternatively, borrowing, either from English _drawk_ ‘grass growing as a weed among corn’, or from Latin, if the borrowing seen in Gaul. *_drāu̯ā_, Late Latin _drauoca_ in fact went the other way, might also explain the Welsh form.[66]

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[60] Middle Breton _kn-_ and _tn-_ gave Modern Breton _kr-_, _tr-_, with nasalisation of the following vowel (Jackson 1967: 801–802).

[61] David Stifter (p.c.) points out to me that _cnai_ seems to rhyme with the short diphthong _mbai_ in _SR_ 5303–5304, but it is not clear that length distinctions in diphthongs were important for rhyme, at least by the 10th century.

[62] Although _-f-_ for _-u-/-w-_ is sometimes found in Welsh (Morris Jones 1913: 28), this is a secondary development, and should not make a difference to the vowel affection. We would expect *_knău̯ī_ > *_cneu_ > ^{x}_cnef_. Besides, there is usually fluctuation between _-f-_ and _-u-/-w-_; in this case only _cneif_ is found (GPC 517).

[63] It might be cognate with Gk. _ϰνήφη_ ‘itch’ and come from *_knăb_^{h}_i̯o-_ (if *_CR̥HCC-_ always gave *_CRăCC-_; see p. 69 ff.), but the semantics are not very close.

[64] Possibilities include *_knoi̯mo-_, *_knoi̯bo-_, *_knou̯mo-_, or *_knou̯bo-_.

[65] Cf. Late Latin _drauoca_, assumed to be Gaulish.

[66] For *_CRāu̯-_ as the reflex of *_CR̥Hu̯-_ in Latin see fn. 59 above.

If these forms are Celtic, _*drāu̯ā_ would be exactly cognate with Skt. _dū́rvā_ 'bent grass, panic grass' < _*dr̥H-u̯eh_$_2$, and would imply _*Cr̥Hu̯-_ > _*Crāu̯-_, but Lith. _dir̃vą_ (acc. sg.) 'field of wheat', which is otherwise apparently identical, shows an _anit̥_ root. Since neither the Celticity of these forms, nor the status of the laryngeal in the root, is completely certain, they cannot be used as evidence.

9. MB. _frau_, B. _frav_ (m.) 'crow, jackdaw' < _*sprău̯o-_ is similar to Goth. _sparwa_, OHG. _sparo_, Gk. σποργίλος, OPruss. _spurglis_ 'sparrow', and perhaps Lat. _parra_, U. **parfam** (acc. sg.) 'kind of bird'. One could connect all of these by supposing a root _*(s)perH-_, in which case the Greek and Germanic forms would represent _o_-grade _*sporH-u̯-on-_ and _*sporH-g-_ respectively (with loss of laryngeal in Greek by the Saussure effect), Old Prussian the zero-grade (though with a formation extremely close to that of Greek), and Italic a derivative of an old _s_-stem, hence _*pr̥H-es-eh_$_2$. The Celtic forms would then point to _*spr̥H-u̯o-_ > _*sprău̯o-_. However, the plethora of forms with differing suffixes and vowel grades (especially in Greek, where Hesychius also attests types of birds called σπαράσιον and (σ)πέργουλος) makes etymology problematic. De Vaan (2008: 447) suggests borrowing from a non-Indo-European language, and onomatopoeia may also have played a part.

10. MW. _glo_ (m., coll.) 'coal, charcoal', MC. _glow_ (coll.) 'coal, charcoal', MB. _glou_, B. _glaou_ (coll.) 'coal' come from Proto-Celtic _*glāu̯V-_ (Schrijver 2011a: 26). They are cognate with OS. _glōian_, ON. _gluoen_ 'burn', OE. _glōwan_ 'shine' < _*glōi̯e/o-_ (IEW 429–434),[67] and perhaps with Gk. χλωρός 'greenish yellow', so _glo_ may come from _*g_^{h}_l̥h_$_{2/3}$_-u̯V-_ or _*g_^{h}_leh_$_{2/3}$_-u̯V-_.

11. MIr. _gnó_ (m.) 'business, matter, concern', MW. _gno_ (adj.) 'evident, clear, manifest, well-known' (not in Modern Welsh), MB. _gnou_ (adj.) 'manifest, evident' and MW. _gognaw_ (adj.) 'provoking, exciting; ardent, persistent, fierce, agitated' are all likely to be related. OIr. _gnóe_ (_i̯o-_, _i̯ā_-stem adj.) 'beautiful, fine, exquisite; illustrious, noteworthy' is quite likely also to belong here (< *'known'). Although _gnó_ can come from _*gnāu̯o-_ or _*gnău̯o-_, _gnóe_ can only come from _*gnāu̯i̯o-_, because _*gnău̯i̯o-_ would have given ^{x}_gnúa_ (Uhlich 1995: 17). MW. _gno_, MB. _gnou_ can also only come from _*gnāu̯o-_ (Schrijver 2011a: 26). MW. _gognaw_,[68] on the other hand, implies _*-gnău̯o-_ (Jackson 1953: 369, 373).

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[67] IEW attributes OE. _glōwan_, ON. _glóa_ to another 'root' _*glōu̯-_, but this is unnecessary.

[68] From _*upo-_ + _-gn-_, where + stands for some other preverb not ending in a vowel (otherwise _*-g-_ in _*upo-gn-_ would have undergone lenition).

Leaving the divergent vowel length aside, and taking the apparently direct cognates Lat. (_g_)_nāuus_ 'zealous, energetic' < *_gnāu̯o-_ and ON. _knár_ 'hardy, vigorous, having strength and energy' < *_gnēu̯o-_ at face value, we could assume a root *_gneh$_1$-_. In that case, OIr. _gnóe_, MB. _gnou_ could come from *_gnoh$_1$-u̯o-_ and MW. _gognaw_ from *_-gn̥h$_1$-u̯o-_. This would mean assuming three different ablaut grades for this _u̯o_-derivative in total, which is unattractive.

However, a connection with *_ĝneh$_3$-_ 'know, perceive' (Gk. ἔγνων 'knew'; LIV 168–170) is usually assumed (e.g. IEW 378), and is semantically appealing. A way to derive the Latin, Celtic, and Germanic forms from *_ĝneh$_3$-u̯o-_ would be to follow Schrijver (1991a: 298–301), who argues that delabialisation of *_-h$_3$-_ occurred before *_-u̯-_ in Germanic and Italic to give *_-h$_1$-_ and *_-h$_2$-_ respectively (for the phonetics of the laryngeals see p. 4 ff.). If this is correct, both the Latin and the Norse forms would start from *_ĝneh$_3$-u̯o-_, and it is plausible that the Celtic forms also reflect *_ĝneh$_3$-u̯o-_.

However, Schrijver's argument for the delabialisation rests largely on his claim that Lat. (_g_)_nāuus_ cannot come from *_ĝn̥h$_3$-u̯o-_, which he would expect to give ^{x}_ganuus_. But this development is based on weak evidence (see p. 96 fn. 59). Without Schrijver's delabialisation theory, Lat. (_g_)_nāuus_ must come from *_ĝn̥h$_3$-u̯o-_.[69] A possible way to explain the variation in the vowel length in _gnóe_ etc. vs. _gognaw_ would be to reconstruct *_ĝneh$_3$-u̯o-_ for the former, on the basis that *_CEHC-_ gives *_CĒC-_ (see p. 109 ff.), and assume that the latter is the regular result of *_ĝn̥h$_3$-u̯o-_. But, having established that the Latin reflects *_ĝn̥h$_3$-u̯o-_, there is no comparative evidence for a full grade. Furthermore, it is implausible to suppose that MW. _gognaw_ on the one side, and all the other British and Irish forms on the other, represent different vowel grades.

The most likely reconstruction is therefore *_ĝn̥h$_3$-u̯o-_, but this leaves the problem of the difference in vowel length between MW. _gno_ etc. and MW. _gognaw_. A possible explanation, which would suggest that *_gnāu̯o-_ is the regular result of *_ĝn̥h$_3$-u̯o-_, is that the short vowel in _gognaw_ is due to loss of the laryngeal in composition (for more on this see p. 255 ff.).[70]

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[69] One could then see ON. _knár_ < *_ĝnēu̯o-_ as being derived from the verb _kná_ 'can' < *_ĝnē-_, of somewhat uncertain origin: LIV (168–170, esp. fn. 17); Jasanoff (1988).

[70] Although _-nou_ < *_gnāu̯o-_ is often the last element of proper names in Old Breton (e.g. _Carantnou_; Fleuriot & Evans 1985: 1.177), so it must be assumed that these were created after the rule affected compounds.

12. MW. _gro_ (coll.) ‘gravel, shingle’, OC. _grou_ gl. _harena_[71] < _*grāu̯ā_ are connected by IEW (460–462) and Matasović (2009: 167) with forms such as Gk. χραύω* ‘scrape, graze, wound slightly’ < _*g^{h}rau̯-e/o-_, ON. _grjón_ ‘groats, meal’, MHG. _grien_ ‘coarse sand’ < _*g^{h}reu̯-no-_, SCr. _grȕda_ ‘lump’ < _*g$^{(h)}$rūdā_, and Lith. _grúodas_ ‘frost, frozen mud’ < _*g$^{(h)}$rōdo-_. The Celtic words must go back to a root containing a laryngeal, and Gk. χραύω* should probably in fact be connected with Gk. ἔχραον (aor.) ‘attack, assault’, Lat. _ingruō_ ‘attack’, Lith. _griáuju_ ‘pull down, demolish’ < _*g^{h}reh$_1$(u̯)-_ (LIV 202; Zair forthcoming).[72] The Celtic forms could go back to _*g^{h}r̥h$_1$u̯-eh$_2$_, but _*g^{h}roh$_1$u̯-eh$_2$_ is also possible.

13. MIr. _snáu, snó_ ‘stream’ is derived by de Bernardo Stempel (1999: 220) from _*sn̥h$_2$-u̯V-_, but _*sneh$_2$-u̯V_ is equally possible, since the root is _*sneh$_2$-_ ‘swim’ (LIV 572; IEW 971–972); it is well attested in Celtic (cf. OIr. _snaid_ ‘swims’).

14. OW. _tnou, tonou_, W. _tyno_ (m.), MB. _tnou, tnaou_ (m.) ‘valley’ does not have a published etymology, as far as I am aware. However, it must come from _*tnāu̯o-_, and it has been suggested to me (by the anonymous reviewer of an article) that it comes from _*tn̥h$_2$-u̯o-_ ‘strait, passage’, by derivation from the _u_-stem adjective _*tenh$_2$-u-_ which also lies behind OIr. _tanae_ ‘tender, thin’ (see p. 210). This seems to me to be extremely plausible.

§ 84. _Conclusion_

There are several good etymologies which point to _*CR̥Hi̯V-_ > _*CR̥i̯V-_: § 80.3 OIr. _cailech_ < _*kl̥h$_2$-i̯-eh$_2$-ko-_, § 80.7 MIr. _dairid_ < _*d^{h}r̥h$_3$-i̯e/o-_, § 80.8 OIr. _·gainedar_ < _*ĝn̥h$_1$-i̯e/o-_, § 80.9 OIr. _·laimethar_ < _*h$_3$lm̥H-i̯e/o-_, § 80.10 MW. _tardu_ < _*tr̥h$_2$-i̯e/o-_. The only counter-evidence is § 81.1 OIr. _lae_ < _*pl̥h$_2$-i̯o-_ and this is uncertain. Laryngeals seem to have been lost in many environments before _*-i̯-_, including after high vowels (p. 102 ff.) and consonants (p. 201 ff.).

There are no good examples of _*CR̥Hu̯V-_ > _*CR̥u̯V-_. The evidence for _*CR̥Hu̯V-_ > _*CRā̆u̯V-_ is very limited: § 83.14 OW. _tnou_ < _*tn̥h$_2$-u̯o-_ is probably the best example. § 83.11 MIr. _gnó_ < _*ĝn̥h$_3$-u̯o-_ is also plausible, but a preform _*ĝneh$_3$-u̯o-_ cannot be completely ruled out. These forms suggest _*CR̥Hu̯V-_ > _*CRāu̯V-_. An alternative development to _*CRău̯-_ may be suggested by § 83.9 MB. _frau_ < _*spr̥H-u̯o-_. But _frau_ is very uncertain.

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[71] B. _gro_ is a ghost word (Anders Jørgensen, p.c.).

[72] I reconstruct _*g^{h}reh$_1$(u̯)-_ rather than LIV’s _*g^{h}reh$_1$u̯-_ on the basis of Lith. _grúodas_ < _*g^{h}roh$_1$-do-_.

As a matter of interest, if the evidence of _gnó_, _tnou_ and _frau_ were to be trusted, the variation in vowel length is exactly what we would expect on the basis of _*CR̥H.P-_ sequences, where the result is _*CRāP-_ unless the first consonant of the syllable is not a plosive, in which case the result is _*CRăP-_ (compare _*CR̥.HR-_ > _*CRāR-_ regardless of the initial consonant; on this see p. 69 ff.). Insofar as the evidence is reliable, this would suggest the syllabifications _*ĝn̥h$_3$.u̯o-_, _*tn̥h$_2$.u̯o-_ and _*spr̥H.u̯o-_ and imply that an intervocalic sequence _*-Cu̯-_ was treated as heterosyllabic rather than becoming tautosyllabic like _*-CR-_ sequences (as also discussed on p. 84 ff. and p. 267 f.). The non-heterosyllabicity of _*-Cu̯-_ is also hinted at by OIr. _Sadb_ if its short vowel is due to shortening by the 'Wetter Regel' from _*su̯ād.u̯o-_ < _*su̯eh$_2$d-u̯eh$_2$_ (p. 155). Once again, however, it must be stressed how limited the evidence is.

§ 85. _Excursus: The Origin of MIr. blá_

According to de Bernardo Stempel (1999: 220) it is possible to distinguish in Irish between _*-ău̯E-_ (where _-E-_ is _*-o-_ or _*-ā-_ in a final syllable) > OIr. _-áu_ > MIr. _-ó_ and _*-āu̯E-_ > MIr. _-á_. This is against the standard approach, which sees both _*-ău̯E-_ and _*-āu̯E-_ as giving OIr. _-áu_, MIr. _-ó_ (Uhlich 1995: 34–45). She gives the following forms as evidence for _*CR̥Hu̯-_ > _*CRău̯-_:

_*kr̥H-u̯o-_ > _*krău̯o-_ > MIr. _cró_ 'enclosure'
_*gn̥h$_3$-u̯o-_ > _*gnău̯o-_ > MIr. _gnó_ (sic) 'beautiful, fine, exquisite; illustrious'
_*g^{w}r̥h$_2$-u̯o-_ > _*g^{w}rău̯o-_ > MIr. _bró_ 'dense mass; multitude, crowd'
_*sn̥h$_2$-u̯eh$_2$_ > _*snău̯ā_ > MIr. _snáu_, _snó_ 'stream'

None of these are probative: as we have seen, _snáu_ can equally come from _*sneh$_2$-u̯eh$_2$_ (p. 100). OIr. _gnóe_ > MIr. _gnó_ must come from _*gnāu̯i̯o-_ ← _*ĝneh$_3$-u̯o-_ or _*ĝn̥h$_3$-u̯o-_ (p. 98 f.), but is a _i̯o_-stem anyway, and therefore does not belong here. MIr. _cró_ originally comes from _*kruu̯o-_ or _*kreu̯o-_, so does not belong here (p. 170). MIr. _bró_ probably does not come from _*g^{w}r̥h$_2$-u̯o-_ (p. 96).

It should be noted that none of these forms disprove the thesis that _*CR̥Hu̯-_ > _*CRău̯-_ gave Old Irish _CRáu_; but none of them can act as evidence for it, because none of them can be proved to reflect _*CR̥Hu̯-_. De Bernardo Stempel does not refer to Brittonic evidence, but since this does distinguish between _*-āu̯-_ and _*-ău̯-_ (Jackson 1953: 369–375, 383–385), it is the only reliable way to see if Irish _*-āu̯-_ and _*-ău̯-_ developed differently. There are two forms which suggest that _*-āu̯V-_ gave Old Irish _-áu_, as noted by Uhlich

(1995: 36–37):[73] OIr. _bráu_ < *_g^{w}rāu̯ō_ (cf. MW. _breuan_ < *_g^{w}rāu̯on-_, p. 96) and OIr. _náu_, MIr. _nó_ 'boat' < *_nāu̯ā_ (cf. MW. _noe_ (f.) 'kneading trough, bowl' < *_nāu̯i̯ā_, B. _nev_ 'trough' < *_nāu̯ī_ and Lat. _nāuis_; Schrijver 1995: 299–300).

Consequently, *_-āu̯-_ did give OIr. _-áu-_ > MIr. _-o-_, and MIr. _blá_ (p. 95) cannot come from *_blāu̯o-_, from either *_b^{h}l̥H-u̯o-_ or *_b^{h}leh_3-u̯o-_. It is possible that _blá_ 'yellow' was borrowed from OE. *_blǣhw_ 'blue', but the semantics are against this, and anyway we might expect this to be borrowed as ^{x}_bláu_. An earlier loan word from Germanic *_blāu̯a-_ ought of course also to have given ^{x}_bláu_. Perhaps we should reconstruct _blá_ < *_b^{h}lāi̯o-_ < *_b^{h}leh_3-i̯o-_.

#CIHI̯-

§ 86. _Introduction_

Irslinger (2002: 61 fn. 76) suggests that laryngeals could have been lost in the environment *_CIHi̯-_, parallel to the loss in *_CR̥Hi̯-_. Consequently, the sequence *_CIHi̯-_ is treated separately here, rather than as part of the sequence *_CIHC-_, for which see p. 111 ff., p. 132 ff., and p. 150 ff. Cases of *_CIHi̯-_ > *_CIi̯-_ are discussed first (§ 87), followed by *_CIHi̯-_ > *_CĪi̯-_ (§ 88). For a more detailed discussion of some of the evidence put forward here, see Zair (2009). For the possible existence of _i_-presents in the Celtic verbal system see p. 90. De Bernardo Stempel (1999: 214, 454 fn. 54) explicitly includes *_CIHu̯-_ > *_CIu̯-_ in the environments in which laryngeals are lost before *_-u̯-_. Evidence for *_CIHu̯-_ > *_CIu̯-_ is collected first (§ 89), followed by *_CIHu̯-_ > *_CĪu̯-_ (§ 90).

§ 87. *_CIHi̯-_ > *_CĬi̯-_

1. OIr. _airle_ (f. _i̯ā_-stem) 'advising, counsel, handling' < *_ari-le/ĭi̯ā_ and its denominative verb _airlithir_ 'advises, counsels; takes advice; looks after' are compared by DIL (A-226 s.v. _airlithe_) with OIr. _líim_ 'charge, accuse, impute to' (p. 104). The connection seems unlikely, however, given the opposite meanings. According to IEW (665) _airlithir_ is cognate with Gk. Dor. *λάω 'wish, desire', Gk. λῆμα 'will, desire', λαιμός 'gluttonous, greedy; bold, wanton', λῑρός 'bold, shameless, lewd'; but the Doric forms and λῆμα in fact come from *_u̯elh_1-_ 'wish' (cf. Gortynian ΛΕΙΟΙ (opt.) ΛΕΟΝΤΙ (subj.); Harđarson 1993a:

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[73] OIr. _gáu_ 'falsehood', also cited by Uhlich, is not good evidence, because it must go back to *_gŏu̯ā_ or _guu̯ā_, given gen. sg. _gue_ < *_go/uu̯i̯ās_ (cf. gen. sg. _naue_, _noe_ 'boat' < *_nāu̯i̯ās_). Although note that de Bernardo Stempel (1999: 59) reconstructs *_gāu̯ā_!

83–84; LIV 677–678). Gk. λαιμός 'gluttonous, greedy; bold, wanton', λῑρός 'bold, shameless, lewd' and ON. _lǫđ_ 'invitation' would be compatible with a root *_leh_$_2$_(i̯)-_. If _airle_ belongs here it might reflect *_lh_$_2$_i-i̯eh_$_2$ > *_lih_$_2$_-i̯e/o-_ > *_lĭ̯e/o-_. But if the form is based on the metathesised root *_lih_$_2$_-_ extracted from other environments, *_lih_$_2$_-eh_$_2$ is also possible. The semantic and formal connections between all the forms are anyway quite weak. The etymology of _airle_ is unclear.

2. OIr. _biid_, MW. _byd_ (3sg.), MB. _bez_ (3sg.), MC. _beth_ (3sg.) 'is wont to be' come from *_bĭ̯e/o-_. The Brittonic forms show the original vowel length; although forms like OIr. _bímmi_ (1pl.) suggest *_bī̯e/o-_, this is probably by analogy with other hiatus verbs in which the long vowel was inherited (Zair 2009). Since the present stem was *_b_^{h}_uH-i̯e/o-_ (Lat. _fī̆ō_ 'become', Gk. Att. φῠ́ομαι 'grow'; LIV 98–101), Proto-Celtic *_bĭ̯e/o-_ probably reflects a stage *_bŭi̯e/o-_ < *_b_^{h}_uH-i̯e/o-_, either by way of a resyllabification to *_bu̯ii̯e/o-_ (Schumacher 2004: 246) or by a change directly to *_bĭ̯e/o-_ by a rule *_-ŭi̯-_ > *_-ĭ̯-_. Since the Italic forms from this root show a long vowel, the short vowel in Irish cannot be due to Dybo's rule (Zair 2009: 215; for Dybo's rule see p. 132 ff.).

3. OIr. _dé_ (f. _t_-stem) 'smoke, haze' < *_dĕät-_ < *_d(u̯)ĭ̯ot-_ < *_dŭi̯ot-_ < *_d_^{h}_uh_$_2$_-i̯-ot-_ (IEW 263; Watkins 1966a: 104) is derived from a verb *_d_^{h}_uh_$_2$_-i̯e/o-_, to a root *_d_^{h}_u̯eh_$_2$_-_ (LIV 158; see MIr. _dúil_ p. 115). This is directly cognate with Lat. _suffio_ 'fumigate' (< *_-d_^{h}_ū-i̯e/o-_. Again, the Latin form does not show shortening by Dybo's rule, so _dé_ is good evidence for *_CIHi̯-_ > *_CIi̯-_.

4. MW. _dillyd_ (3sg.) 'flows, floods, pours' < *_-lĭ̯e/o-_ comes from *_liH-i̯e/o-_ or *_liH-e/o-_ (< *_lei̯H-_; LIV 405–406; Schumacher 2004: 451–452; see OIr. _ler_ p. 140). MW. _lliant_ (m.) 'flood, flow', OIr. _lie_ (m. _i̯o_-stem) 'flood, spate' < *_liHi̯ant-_ can come from *_lī̯ant-_ or *_lĭ̯ant-_, since *_-ĭ-_ fell together with *_-ī-_ in hiatus in British (Jackson 1953: 360–361; McCone 1996: 47–48). MW. _lli_ (m.) 'stream, flow' is just a form of MW. _llif_ rather than the continuant of nom. sg. *_liHi̯ants_ (see Jackson 1953: 415–418; _contra_ IEW 664). These forms do not provide any evidence.

5. MIr. _fé_ 'fence?' is attested only in the nominative and only in O'Davoren's glossary (DIL F-48). IEW's (1121) reconstruction *_u̯ī̯ā_ would have given ^{x}_fí_. The root is probably *_u̯i̯eh_$_1$_-_ (LIV 695; see MIr. _fíthe_ p. 119), and _fé_ could come from *_u̯ĭ̯ā_ < *_u̯ih_$_1$_-i̯eh_$_2$, *_u̯ih_$_1$_-eh_$_2$ or *_u̯ei̯h_$_1$_-eh_$_2$ (or *_u̯ĭ̯o-_ etc.), so does not count as evidence.

6. OIr. _glé_ (adj.) 'clear, plain, evident', MW. _gloyw_ (adj.) 'bright, shining', OB. _gloeu_ 'shining', Van. _gleau_, _gloeaù_ 'rare, clear', W. _gledd_ (m., f.) 'land; sward,

turf', are compared by IEW (432)[74] with Gk. χλῑ́ω 'be, become warm', Old Frisian _glīa_ 'glow', OS. _glīmo_ 'brightness', OHG. _glīmo_ 'little glow worm'. The Greek long vowel suggests the presence of a laryngeal, and the semantic connection between the Greek and Germanic words is clear. If the Celtic forms belong here, then MW. _gloyw_ points to *_glai̯u̯o-_, which would allow us to reconstruct the root as *_g^{h}leh$_2$i̯-_. OIr. _glé_ cannot come from *_g^{h}lai̯u̯o-_, nor from *_g^{h}lei̯-u̯o-_, as claimed by IEW, since this would give ˣ_glía_ (cf. _día_ 'god' < *_dei̯u̯o-_). A possible form could be *_g^{h}lih$_2$-i̯o-_, if laryngeals were lost in this cluster, or *_g^{h}lih$_2$-o-_. In an effort to derive the Welsh and Irish word from the same original form we could assume that they represent an original _u_-stem, with Welsh thematising the full-grade root and Irish the zero-grade. However, this is difficult because *_g^{h}l̥Hi̯-u-_ ought to have given *_gali̯u-_. Apparently, therefore, the Welsh and Irish forms must represent different derivations of the same root.

The existence of W. _gledd_ is doubtful anyway (GPC 1406); if it is a real word, and comes from this root, which is semantically more problematic, then it probably represents *_glī̆i̯ā_, from either *_g^{h}lih$_2$-i̯eh$_2$_ or *_g^{h}lih$_2$-eh$_2$_. Since neither _gledd_ nor OIr. _glé_ must come from *_g^{h}lih$_2$-i̯E-_, they cannot be considered evidence.

§ 88. *_CIHi̯-_ > *_CĪi̯-_

1. OIr. _liim_ (1sg.) 'charge, accuse, impute to' < *_līi̯e/o-_ (cf. 1pl. _límmi_) is cognate with Lat. _līs_ 'lawsuit' < _slīs_ (Joseph 1986). If this reflects an Indo-European inheritance, the root will be *(_s_)_liH-_ (Schumacher 2004: 452), but it could more recent and reflect *(_s_)_lī-_ directly rather than *_sliH-_. Even if the root did have a laryngeal, the long vowel may be due to analogy with other hiatus verbs rather than directly reflecting *_liH-i̯e/o-_ (see OIr. _biid_ p. 103). Therefore, _liim_ is not good evidence.

§ 89. *_CIHu̯-_ > *_CĬu̯-_

1. OIr. _béu_, _béo_ (_o-_, _ā_-stem adj.) 'living, quick, alive', MW. _byw_, MB. _beu_, B. _bev_, OC. _biu_ gl. _uita_, MC. _byw_, _bew_ 'alive, living' come from *_bĭu̯o-_ < *_g^{w}ih$_3$-u̯o-_. Since Lat. _uīuus_ 'alive' retains the long vowel, it is possible that the short *_-ĭ-_ is a purely Celtic development rather than due to Dybo's rule (p. 132 ff.).

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[74] Along with MIr. _gléinech_ 'glänzend, klar', which is not in DIL, and therefore will not be considered amongst the evidence here.

2. OIr. _bréo_ (f. _d_-stem) ‘flame’ may come from *_brĭu̯o-_ < *_b^{h}riH-u̯o-_ < *_b^{h}r̥Hi-u̯o-_,[75] but its etymology is far too uncertain for it to be used as evidence (see p. 126).

3. MW. _bryw_ (adj.) ‘lively, vigorous, strong’ can come from *_brŭu̯ī̆-_, *_brŏu̯ī̆-_, or *_brŭu̯i̯o-_ (Schrijver 1995: 297–299, 338–340). If it is related to Lat. _grauis_ < *_g^{w}reh$_2$-u-_, Gk. βαρύς ‘heavy’ < *_g^{w}r̥h$_2$-u-_ (as supposed by IEW 476), *_brŏu̯ī̆-_ would be difficult to motivate. Furthermore, simple thematisation to give *_g^{w}r̥h$_2$-u̯o-_ would not be expected to give *_bruu̯-_ (whatever the regular result of *_CR̥Hu̯-_ was; see p. 89 ff.). A preform *_g^{w}ruH-o-_ would give *_bruu̯o-_, but metathesis of a laryngeal is expected only in *_CHIC-_ clusters (see p. 111). However, further derivations from *_g^{w}r̥h$_2$-u-_ were apparently possible at an Indo-European level: Lat. _brūtus_, Latv. _grũts_ ‘heavy’ < *_g^{w}ruh$_2$to-_ < *_g^{w}r̥h$_2$u-to-_ (de Vaan 2008: 76). In principle, therefore, _bryw_ could represent *_g^{w}rŭu̯o-_ < *_g^{w}ruH-u̯o-_ < *_g^{w}r̥Hu-u̯o-_, with subsequent derivation to give *_bruu̯ī̆-_ or *_bruu̯i̯o-_. This would require that laryngeals were lost before *_-u̯-_. Since there is no other evidence for a suffix *_-u̯o-_ added to this stem, and since the meaning of _bryw_ is not ‘heavy’, such a reconstruction is hardly reliable.

4. MIr. _céo_, _céu_ (f. or m.) ‘mist’ probably reflects *_kĭu̯-_, although the original inflection is doubtful (DIL C-133; GOI 204). According to Lubotsky (1989: 56, 65 fn. 3), all the forms related to this word by IEW (540–541) reflect an original root *_k̂h$_1$ei̯-_ seen in ON. _hārr_ ‘grey, old’, OCS. _sěry_ ‘grey’ < *_k̂h$_1$oi̯-ro-_, Lith. _šývas_, OCS. _sivъ_ ‘grey (of horses)’ < *_k̂ih$_1$-u̯o-_ < *_k̂h$_1$i-u̯o-_; Skt. _śyāváḥ_ ‘(dark-) brown’, _śyāmá-_ ‘dark-coloured’, Lith. _šẽmas_ ‘blue’ reflect a secondary full grade *_k̂i̯eh$_1$-_ based on the metathesised zero grade.[76] The (original) position of the laryngeal in *_k̂h$_1$ei̯-_ rests only on Lubotsky’s belief that the Slavic *_χ-_ behind forms such as OCz. _šěrý_ ‘grey’ is due to aspiration by the laryngeal (cf. Skt. _śā́khā_ ‘branch’, ORuss. _soxa_ ‘wooden plough, pole’). However, in order to reconcile OCS. _sěry_ < *_k̂h$_1$oi̯-_ and Skt. _śyāváḥ_ < *_k̂i̯eh$_1$-_, _schwebeablaut_ is required, and the assumption of a laryngeal metathesis is a good motivation for it. OIr. _cíar_ (_o_-, _ā_-stem adj.) ‘dark, murky, black’, gen. sg. _ceir_ might also imply *_k̂h$_1$ei̯-_ or *_k̂eh$_1$i̯-_ if *_k̂ei̯h$_1$-_ would have given gen. sg. ^{x}_ciair_ (see p. 225 ff.). All this would imply that *_k̂h$_1$i-u̯-_ > *_k̂ih$_1$-u̯-_ gave Proto-Celtic *_kĭu̯-_.

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[75] For the possible metathesis of the laryngeal in this form see p. 112.

[76] Skt. _śiti-_ ‘white’ probably does not belong here; it is apparently due to a dissimilation of _śviti-_ ‘white’ in compounds beginning with a labial (Debrunner 1938: 171–173).

There are other forms given by IEW (541) which do not seem to fit the reconstruction of a root *_k̂h$_1$ei̯_-. Gk. _ϰίραφος_, Lac. _ϰίρα_ 'fox', Hesych. _ϰιρρός_ 'orange-yellow' are not trustworthy (they seem to reflect a root *_kir_-); MIr. _cir_ 'jet' may really be _cír_ if gen. sg. _cera_ belongs to OIr. _céir_ 'wax' (DIL C-199), and cf. MIr. _círdub_ 'jet-black?' (DIL C-201). However, Goth. _hiwi_ 'shine, appearance' < *_k̂ĭu̯i̯o_- (beside OE. _hīw_ 'appearance, colour, beauty', ON. _hȳ_ 'fine hair, down' < *_k̂īu̯o_-) might show that an _aniṭ_ root existed in another language family (as noted by Casaretto 2004: 134 fn. 395), unless it is due to Osthoff's law, or unless these forms do not belong here at all (which is possible, since all the other words mean 'dark colour').

It is possible that _céo_ comes from *_k̂ih$_1$-u̯V_- < *_k̂h$_1$i-u̯V_-, but the etymology is too speculative for it to be reliable evidence. If it is correct the shortening could also be due to Dybo's rule (p. 132 ff.).

5. OIr. _eó_ (_o_-stem) 'stem, shaft; tree', MW. _yu_, W. _yw_ (coll., m.) 'yew-wood', OC. _hiuin_ (singul.) gl. _taxus_, MB. _ivin_[77] (coll.), _iuinenn_ (singul.) 'yew-trees', Gaul. _Iuo_- (p.n. element) < *_ĭu̯o_- are cognate with Arm. _aygi_ 'grape-vine', Lat. _ūua_ 'bunch of grapes', Gk. ὄιη, ὄη, ὄα 'service-tree', OHG. _īwa_, OE. _īw_ 'yew', Lith. _ievà_, Latv. _iẽva_ 'breaking buckthorn', OPruss. _iuwis_ 'yew', SCr. _ȉva_ 'willow' (IEW 297). Hitt. _eyan_- 'an evergreen tree with leaves' may also belong here (Kloekhorst 2008: 233–234).

Latv. _iẽva_ < *_He/oi̯H-u̯eh$_2$_ or *_HeHi-u̯eh$_2$_ and SCr. _ȉva_ < *_He/oi̯H-u̯eh$_2$_, *_He/oHi-u̯eh$_2$_, or *_HiH-u̯eh$_2$_ imply a laryngeal (Kortlandt 1975: 53); OHG. _īwa_ can also go back to *_Hei̯H-u̯o_-, *_HeHi-u̯o_-, or *_HiH-u̯o_-. The quality of the initial laryngeal (or whichever was responsible for vowel colouring if the original form was *_HeHi-u̯o_-) is difficult to determine. Lat. _ūua_, Gk. ὄιη suggest *_h$_{(3)}$eh$_{(3)}$i-u̯o_-[78] or *_Hoi̯H-u̯o_-, Hitt. _eyan_- could only go back to *_h$_1$eh$_1$i̯-on_- or *_h$_1$ei̯H-on_- and Arm. _aygi_ suggests *_h$_2$eh$_2$i-u̯o_- or *_h$_2$ei̯H-u̯o_- unless Arm. _ay_- can go back to *_oi̯_- (Kortlandt 1983: 13).[79] Leaving aside the Armenian problem, *_h$_1$eiH-u̯o_- or *_h$_1$eh$_1$i̯-u̯o_- would match all forms, but we would have to assume three *-_u̯o_- formations with different ablaut grades. Pronk (2011a) argues that the Balto-Slavic forms, which provide the only evidence of the laryngeal, are in fact the result of the generalisation to full grades of a Balto-Slavic rule which caused an acute tone on initial *_Hi_-. He therefore posits an original form **Hi-u̯-* → **Hoi̯-u̯eh*$_2$, with the usual *o*-grade associated with *ā*-stems in Balto-Slavic.

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[77] With secondary _i_-affection (Jackson 1953: 594).

[78] Assuming that *_h$_3$e_- did not have the same Saussure effect as apophonic *-_o_-. If it did, then *_h$_3$ei̯H-u̯o_- would also be possible.

[79] Eichner (1978: 151 fn. 8) reconstructs *_h$_{1/3}$ai̯H_-, but assuming _a/o/e/ø_ ablaut is surely a last resort.

For Celtic the colour of the laryngeals is probably unimportant, since *eó* can only go back to **HiH-u̯o-* or **HHi-u̯o-* (assuming the Balto-Slavic acute does reflect a medial laryngeal). If the former, it is apparently evidence for loss of laryngeal before *-*u̯*-; if the latter we might expect **HHi-u̯o-* > **HiHu̯o-*, since **CHIC-* becomes **CIHC-* in Celtic (see p. 111 ff.), but it is possible that **HHIC-* developed differently from **CHIC-*. OIr. *eó* may come from **HiH-u̯o-*, but this is not certain; if it did, the short vowel may be the result of Dybo's rule (p. 132 ff.).

6. MIr. *feo* (adj.) 'withered', MW. *gwyw*, *gwiw*, W. *gwyw* 'withered, faded' < **u̯ĭu̯o-* are cognate with Lat. *uiēscō* 'shrink up, shrivel, wither', Lith. *výtau* (pret.) 'weakened', the long vowel of which suggests a laryngeal (LIV 665). However, ON. *visinn* 'weak' seems to show an *aniṭ* root. It is possible, but not certain, that *feo* comes from **u̯iH-u̯o-*.

7. MIr. *reo* 'stripe, streak' suggests **rĭu̯o-* < **riH-u̯o-* (cf. Lith. *rievà* 'chasm, hill', Latv. *riêwa* 'cleft, fold, furrow'; IEW 857), but it is found only in the name *Lugaid Reo*(*n*)*derg*. This is glossed as *sriabh ndeargh* 'red stripe' (see DIL R-47, 53 and S-374), which is not entirely reliable.

§ 90. **CIHu̯- > CĪu̯-*

1. OIr. *bí* 'pitch' < **bīu̯ā* or **bī̆u̯ī* is cognate with Arm. *kiw* 'tree sap, mastic', Russ. *živíca* 'resin' (Thurneysen 1937: 300–301). It is possible that the form was **gʷiHu̯-*, but both Armenian and Russian -*i*- can come from *-*ei̯*-, so the root may have been *aniṭ*. Even if there was a laryngeal, we could not tell if it was lost in Celtic, because both **gʷiHu̯ih*$_2$ > **gʷīu̯ī* and **gʷiHu̯ih*$_2$ > **gʷĭu̯ī* would give OIr. *bí*: *-*u̯*- was lost after *-*ī̆*- (GOI 124), and the resulting **bī̆* would become *bí* by lengthening in monosyllables.

2. MW. *briw* (m.) 'wound, injury, hurt' < **brīu̯o-* probably belongs to the root **bʰrei̯H-* 'cut' (LIV 92–93; see OIr. *bríathar* p. 226) and hence reflects **bʰriH-u̯o-*.

3. OIr. *íriu* (f. *n*-stem) 'land, earth soil; the earth, world', W. *Iwerddon* 'Ireland' go back to **īu̯erii̯ō*(*n*) < **piH-u̯er-ih*$_2$*-ō* (< **pei̯H-*; LIV 464–465; see OIr. *íth* p. 116).[80] They are probably derived from the adjective seen in Skt. *pī́varī* (f.)

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[80] As David Stifter (p.c.) points out, the long vowel in this form is only certainly attested by

‘swollen, fat’, itself from an _r/n_-stem attested in Gk. πῖαρ ‘fat’ (Stüber 1998: 95–97). According to Isaac (2009), the use of W. _Iwerddon_, originally also ‘land’, to mean ‘Ireland’ is the result of confusion with MW. _Ywerdon_ ‘Ireland’, which is precisely cognate with OIr. _Ériu_ ‘Ireland’ < _*epi-h$_2$u̯er-ii̯o-n-_ ‘place near the water’. Despite the Welsh complications, the derivation of OIr. _íriu_ and W. _Iwerddon_ seems secure.

4. OIr. _lí_ (indeclinable; _g_-stem?) ‘beauty, lustre, colour’, OW. _liu_, MW. _lliw_ (m.) ‘colour, tint, hue’, OB. _liou_ gl. _neuum_, MB. _liu_, _lyu_, B. _liv_ (m.) ‘colour’, OC. _liu_ gl. _color_, Gaul. _Liuilla_ (p.n.) < _*līu̯V-_ < _*(s)liH-u̯V_, are cognate with Lat. _līuor_ ‘bluish colour’, OCS. _sliva_, SCr. _šlȉva_ ‘plum’ < _*sliH-u̯-_, OHG. _slēha, slēwa_ ‘sloe’ < _*slei̯H-k^{w}o-_. Joseph (1980: 171–178) suggests that the Irish _g_-stem could be reconciled with the British forms by reconstructing _*(s)liH-g^{wh}-_, but, as he accepts, the supposition of an Indo-European _*-g^{wh}-_ suffix is extremely problematic. Note that _*-g^{wh}-_ cannot give the Germanic forms, as claimed by Joseph. They can only go back to _*-k^w-_ or _*-ku̯-_ (Ringe 2006: 100). The Irish inflection is probably secondary.

5. MW. _lliw_, _llyw_, W. _lliw_ (m.) ‘information or accusation that someone is a thief’ < _*(s)līu̯o-_ is cognate with Lat. _slīs_ ‘law-suit’ (see OIr. _liim_ p. 104); since there are no other Indo-European connections, this may be a later root _*(s)lī-_ rather than _*(s)liH-_.

§ 91. _Conclusion_

§ 87.2 OIr. _biid_ < _*b^{h}uH-i̯e/o-_, § 87.3 OIr. _dé_ < _*d^{h}uh$_2$-i̯e/o-_ are good evidence for _*CIHi̯-_ > _*CIi̯-_. It is possible that the short vowel is due to Dybo’s rule (by which pretonic long vowels were shortened; see p. 132 ff.) rather than loss of laryngeal before _*-i̯-_, since _*-i̯e/o-_ verbs were stressed on the suffix. However, Lat. _fī̆ō_ ‘become’ < _*b^{h}ūi̯e/o-_ < _*b^{h}uH-i̯e/o-_, _suffiō_ ‘fumigate’ < _*-d^{h}ūi̯e/o-_ < _*d^{h}uh$_2$-i̯e/o-_ suggest that shortening by Dybo’s rule did not occur in these forms. There is no good evidence for _*CIHi̯-_ > _*CĪi̯-_.

There is good evidence for _*CIHu̯-_ > _*CĪu̯-_: § 90.2 MW. _briw_ < _*b^{h}riH-u̯o-_, § 90.3 OIr. _íriu_ < _*piH-u̯er-ih$_2$-ō_, § 90.4 OIr. _lí_ < _*liH-u̯V-_. Therefore the forms which seem to show _*CIHu̯-_ > _*CIu̯-_ probably have other explanations: § 89.1 OIr. _béu_ < _*g^{w}ih$_3$-u̯o-_ must be the result of Dybo’s rule, and perhaps also § 89.4 MIr. _céo_ if it comes from _*k̂h$_1$i-u̯V-_. § 89.5 OIr. _eó_ may reflect _*HHi-u̯o-_, or be the result of Dybo’s rule.

W. _Iwerddon_, since _*ĭu̯erii̯ō(n)_ would have given _*ĭi̯riū_ by syncope and palatalisation of _*-u̯-_, whence also OIr. _íriu_.

#CEHC-

§ 92. _Introduction_

There is no disagreement that the regular result of _*CEHC-_ clusters in Proto-Celtic is _*CĒC-_, with colouring of _*-e-_ when followed by _*-h$_2$-_ or _*-h$_3$-_. Celtic evidence cannot distinguish between original _*-ō-_ and _*-ā-_, except in final syllables, so these clusters cannot provide evidence as to whether _*-o-_ was coloured by _*-h$_2$-_. Consequently, only a few representative examples are given. Since the regular results of _*CEHC-_ are already known, this section will have no conclusion. Examples of _*CEHC-_ > _*CĔC-_ are collected in the section on Dybo's rule (p. 132 ff.). The material is ordered as follows: § 93 _*Ceh$_1$C-_, § 94 _*Ceh$_2$C-_, § 95 _*Ceh$_3$C-_, § 96 _*Coh$_1$C-_, § 97 _*Coh$_2$C-_. Since it has not been possible to distinguish any forms which must represent _*Coh$_3$C-_, possible examples are included under _*Ceh$_3$C-_.

§ 93. _*Ceh$_1$C-_

1. OIr. _síl_ (n. _o_-stem) 'seed', MW. _hil_ (f., m.) 'seed, offspring', B. _hil_ (m.) 'race, offspring, posterity', Gaul. _Sila, Silus_ (p.n.s) < _*sīlV-_ come from _*seh$_1$-lo-_ (LEIA S-108–109, IEW 890, McCone 1996: 51; LIV 517–518; see MW. _had_ p. 57).

2. OIr. _sír_ (_o_-, _ā_-stem adj.) 'long, lasting, constant', OW., MW. _hir_, MB. _hyr_, B. _hir_, OC. _hir_ gl. _longus_, MC. _hyr_ (adj.) 'long, lengthy', Gaul. _Sirus_ (p.n.) < _*seh$_1$-ro-_[81] are cognate with Lat _sērus_ 'late', _sinō_ 'allow' (_*seh$_1$(i̯)-_ 'let go'; LIV 518).

§ 94. _*Ceh$_2$C-_

1. OIr. _áth_ (m. _u_-stem) 'ford' < _*i̯ātu-_ < _*i̯eh$_2$-tu-_ is cognate with Lat. _iānus_ 'covered passage', Skt. _yā́ti_ 'goes, moves' (LIV 309–310). The same root may be found in MW. _iawn_ (adj.) 'right, correct, true', (m.) 'rightness, verity, truth', OB. _eunt_, MB. _effn_, B. _eeun_,[82] OC. _eun-_ (in _eunhinsic_ gl. _iustus_), MC. _evn, ewen_ (adj.) 'just, right', perhaps MIr. _an_ gl. _fír_, if they go back to a meaning 'right course' from 'course' (Pokorny 1949–1950: 129–130). At any rate, all the other proposed etymologies (LEIA A-72; J.E.C. Williams 1997) are semantically unlikely or formally impossible.

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[81] _*sih$_1$-ro-_ < _*sh$_1$i-ro-_ is also possible, but Lat. _sērus_ shows _*seh$_1$-ro-_.

[82] The supposed Old Breton forms _ion, iun_ probably do not exist (Lambert 1984: 191, 193, 198).

2. OIr. *bráthir* (m. *r*-stem), MW. *brawt*, W. *brawd* (m.), OB. *brotr*, MB. *breuzr*, *breur* (m.), OC. *broder* gl. *frater*, MC. *broder*, *bruder* (m.) 'brother', Gaul. *Bratronos* (p.n.) < _*b^{h}rātēr_ < _*b^{h}reh$_2$tēr_ are cognate with Lat. *frāter*, Skt. *bhrā́tā*, OHG. *bruoder* 'brother', Gk. φρήτηρ 'member of a phratry' (IEW 163–164).

§ 95. _*Ceh$_3$C-_

1. OIr. *dán* (m. *u*-stem) 'gift, bestowal, endowment, present', MW. *dawn* (m., f.) 'gift; faculty, intellectual gift' < _*dānu-_ < _*deh$_3$-nu-_ are cognate with Lat. *dōnum*, Skt. *dā́nam* 'gift', Gk. δῶρον, OCS. *darъ* 'gift', Gk. δίδωμι 'give' (LIV 105–106); the original formation can have been _*deh$_3$-nu-_ or _*doh$_3$-nu-_.

2. OIr. *scáth* (n. *o*- and *u*-stem) 'shadow, shade; spectre; mirror; covering', MW. *ysgaud*, W. *ysgod* (m.) 'shade, shadow, darkness, night; soul, spirit; appearance, form, fright', MB. *sceut*, *squeut*, B. *skeud* (m.) 'shadow', OC. *scod* gl. *umbra* < _*skātV-_ are cognate with Gk. σκότος 'darkness', Goth. *skadus*, OE. *sceadu* 'shade'. IEW (957) reconstructs a root _*skot-_, which assumes lengthened grade _*skōtV-_ for the Celtic forms. Irslinger (2002: 125–127) argues against this because there is no morphological reason for the lengthening.[83] She suggests that these words may belong to the root _*sk̂eH(i̯)-_ 'shimmer, shine' (Skt. *chāyā́* 'shadow'; LIV 546), which would imply _*-h$_3$-_. _*-h$_1$-_ and _*-h$_2$-_ have also been suggested for this root on the basis of OCS. *sěnь* 'shadow, shade' and Gk. Dor. σκᾱνά 'covered place, tent' respectively. An alternative derivation (Lühr, *apud* Irslinger loc. cit.) of OIr. *scáth* and Goth. *skadus* from an ablauting *tu*-abstract _*sk̂eh$_2$-tu-_ would permit the connection with σκᾱνά but not σκότος, and the formal and semantic connections between σκότος, *skadus* and *scáth* require them to be kept together. We should reconstruct Proto-Celtic _*skeh$_3$-tV-_ or _*skoh$_3$-tV-_, which may or may not be the same root as _*sk̂eH(i̯)-_.

§ 96. _*Coh$_1$C-_

1. OIr. *már* (*o*-, *ā*-stem adj.) 'big, great', OW. *maur*, MW. *mawr*, OB. *mor*, MB. *meur*, OC. *-muer*[84] (in *clochmuer* cl. *campana*) (adj.) 'great', Gaul. *Marus*, *Maros* (p.n), Lep. *-MARUI* (dat. sg. p.n. element) < _*māro-_ < _*moh$_1$-ro-_ are cognate with the second element of Gk. Hom. ἐγχεσίμωρος 'great in spear-craft', OHG. *-mār* (p.n. element) < _*mēro-_ (IEW 704).

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[83] Affective lengthening, assumed by de Bernardo Stempel (1999: 528), is unlikely.

[84] The alternative form *maur* in the *Vocabulum Cornicum* is a Welsh word (Graves 1962: 407).

2. MIr. _snáth_ (m. or n. _o_-stem) 'thread', OB. _notenn_ (singul.) gl. _a filo_, MB. _neut_, B. _neud_ (coll.) 'thread', OC. _noden_ gl. _filum_ < _*snāto-_ come from the root _*sneh$_1$-_ 'spin' (LIV 571–572; Irslinger 2002: 261; see OIr. _nath_ p. 65). The form probably goes back to _*snoh$_1$-to-_ rather than _*sn̥h$_1$-to-_, for two reasons. Firstly, it would then be formally identical with OE. _snōd_ 'hairband'. Secondly, _*sn̥h$_1$-to-_ would be expected to give ^{x}_snath_ (p. 69 ff.).

§ 97. _*Coh$_2$C-_

1. OIr. _báidid_ 'submerges; extinguishes', MW. _bodi_ (v.n.), W. _boddaf_ 'drown, sink, submerge; extinguish', MB. _beuzif_, B. _beuziñ_ (inf.) 'drown, submerge', MC. _buthy_, _bethy_ (v.n.) 'drown' < _*bādī-_ are cognate with Skt. _gādhám_ 'ford, shallow', and perhaps Gk. Dor. βᾶσσα 'glen' (but there are semantic problems; Matasović 2009: 52). This connection could suggest a root _*g^{w}eh$_2$d^h-_, whence Celtic _*g^{w}oh$_2$d^h-ei̯e-_ (LIV 206; the _o_-grade is appropriate to the causative suggested by the semantics, and the _*-ī-_ conjugation in Irish). Since the Greek connection is doubtful, the other laryngeals are also possible.

2. MIr. _dóid_ 'kindles, burns' < _*dā̆u̯ī-_, MW. _kynneu_ (3sg.), W. _cynneuaf_ 'kindle, ignite, set fire to' < _*kom-dā̆u̯ī-_ are cognate with Gk. δαίω 'light up, make to burn, kindle' < _*deh$_2$u-i̯e/o-_, Gk. Hom. δέδηε (perf.) ← _*de-doh$_2$u̯-e_. They probably reflect a causative _*doh$_2$u̯-ei̯e-_ (LIV 104–105).

#CIHC- and #CHIC-

§ 98. _Introduction_

In most Indo-European languages the usual result of _*CIHC-_ clusters was _*CĪC-_, although there is some evidence for a development in at least some environments in some languages to _*CI̯ĒC-_: see Rasmussen (1990–1991a [1999]), Ringe (1996: 22–24) and Olsen (2009). Such a realisation does not seem ever to have been suggested for Proto-Celtic. In general, it is accepted that the regular result of _*CIHC-_ is _*CĪC-_ (Ringe 1988: 418–421; Schrijver 1991a: 531–534; Schumacher 2004: 119–120). Examples of _*CIHC-_ > _*CĬC-_ are usually considered to be due to Dybo's rule, according to which long vowels were shortened (or laryngeals lost) in pretonic syllables in Proto-Celtic, Proto-Italic and Proto-Germanic. The precise environment in which Dybo's rule operated, or even whether it existed at all, remains uncertain; the evidence for _*CIHC-_ > _*CĬC-_ is collected in the section devoted to the rule (p. 132 ff.). Another possible source of short vowels in the sequence _*CIHCC-_ is the so-called 'Wetter Regel'; sequences of this type are discussed on p. 150 ff. Since

*_CIHI̯-_ sequences may have undergone different developments from other *_CIHC-_ sequences, they are also discussed elsewhere (see p. 102 ff.).

It is usually assumed that *_CHIC-_ clusters underwent a metathesis to *_CIHC-_ in Proto-Indo-European (Winter 1965: 192; Mayrhofer 1986: 175), with subsequent development identical to *_CIHC-_ clusters. However, Kortlandt (1975: 2–4, 81; 1981: 15; 1986: 89–91; 1988: 302) and Schrijver (1991a: 226–230, 237–249, 512–536) argue that some cases of short *_-ĭ-_ and *_-ŭ-_ in Italic, Celtic and Greek can be explained by assuming that these come from *_CHIC-_ clusters. This is based largely on Balto-Slavic accentological evidence: as mentioned on p. 12, Hirt's law leads to retraction of an originally oxytone accent onto the preceding syllable when this contains *_-VH-_ or *_-IH-_. According to Kortlandt and Schrijver, some examples of the failure of Hirt's law are due to the pretonic syllable containing original *_CHIC-_ rather than *_CIHC-_. Although *_CHIC-_ clusters do give *_CĪC-_ in Balto-Slavic, presumably via *_CIHC-_, it is argued that the metathesis occurred only after Hirt's law had ceased to function in Balto-Slavic. Some apparent cases of *_CIHC-_ > *_CĬC-_ in Celtic, Italic and Greek are explained by Kortlandt and Schrijver as due to a similar process, whereby *_CHIC-_ in pretonic syllables did not undergo metathesis and gave *_CĬC-_. In addition to evidence for a full grade of the shape *_CeHI-_, evidence for original *_CHIC-_ in any single language can be provided, for Kortlandt and Schrijver, by short *_-Ĭ-_ in Greek, Celtic or Italic (where this is not due to Dybo's rule), or by the failure of Hirt's law to operate in cognate zero-grade forms in Balto-Slavic.

Included in this section are some words which cannot strictly be described as reflecting the sequence *_CHIC-_, such as MIr. _fíthe_ and OIr. _mín_, which have been argued to reflect *_u̯h_1i-to-_ and *_mh_1i-ni-_ respectively. If these reconstructions were correct, we would expect them to have syllabified as *_uh_1i-to-_ and *_m̥h_1i-ni-_ according to the Indo-European rules, and therefore not to provide the correct environment for metathesis. As it happens, I will argue that the reconstructions are not correct, but they have been considered by Schrijver and Kortlandt as germane to the evidence for the laryngeal metathesis, so it seems appropriate to include them here.

Also included here are some forms which may reflect the environment *_CR̥HIC-_, in particular OIr. _crín_ < *_kr̥h_1i-no-_. These forms would normally be expected to develop to *_CaRIC-_ (see p. 169 ff.), but at least in the case of _crín_ this does not seem to have been in the case. Presumably as a result of analogy with other verbal forms such as the nasal present *_kri-n-h_1-_, the expected syllabification was resisted, and, as we shall see, metathesis of the laryngeal occurred to give *_krih_1-no-_. Since some possible forms of this type seem to show a long vowel and others show a short vowel, as with the real *_CHIC-_

sequences, it is appropriate to discuss the _*CR̥HIC-_ type here as well. Alleged examples of _*CHIC-_ > _*CĪC-_ (§ 100) and _*CĬC-_ (§ 101) in Proto-Celtic will be discussed after _*CIHC-_ sequences (§ 99), followed by cases of _*CR̥HIC-_ > _*CRĪC-_ (§ 102) and _*CRĬC-_ (§ 103).

Since it is alleged that the key to the difference in the reflexes of _*CHIC-_ is the position of the Proto-Indo-European accent, a note on how this is to be ascertained is required. The original accentuation can to some extent be recovered by the position of the accent in Greek, Sanskrit and in Balto-Slavic, and by Verner's law in Germanic. However, such evidence is often not available, and anyway many Indo-European noun formations showed mobile accentuation. For example, formations in both _*-ti-_ and _*-tu-_ were, or at least could be, proterodynamic in Proto-Indo-European, and the position of the accent was generalised differently in different languages (Schumacher 2000: 39–43; Irslinger 2002: 75–76, 189; Meier-Brügger 2003: 206–208). With the possible exception of Dybo's rule we have no way of knowing what had happened to the Indo-European accent at the earliest stage of Proto-Celtic. Therefore, the position of the accent in other languages is only proof for the position of the accent in Proto-Celtic for formations with originally static accent (assuming that Proto-Celtic retained the Proto-Indo-European accent at all). In practice this effectively means only thematic formations;[85] in particular, it is safe to assume that all zero-grade adjectives with the suffixes _*-ro-_, _*-no-_, _*-to-_ and _*-mo-_ were stressed on the suffix (see e.g. Ringe 2006: 62–63; Hamp 1982; *pace* Schrijver 1991a: 355–356). These adjectives could subsequently be substantivised, so zero-grade nouns with these suffixes are included. Since it seems likely that nominalisation tended to lead to accent retraction, these forms should, however, be treated with care.

§ 99. _*CIHC-_ > _*CĪC-_

1. OIr. ·*bíth* (pret. pass.) 'was struck' < _*bīto-_, *bíthe* (p.p.) 'having been struck' < _*bīt(i)i̯o-_, OIr. *bíth* 'act of striking, wounding' < _*bītV-_, W. *bid* (f.) 'hedge, bush' < _*bītā_, OB. *bitat* gl. *resicaret* < _*bītā-_, Celtib. *-bituđ* (*tinbituđ* 3sg. impv.) < _*bītōd_ all reflect _*b_^{h}_iH-tV-_, cognate with OLat. *perfines* (2sg. subj.) 'would break', OCS. *bijǫ* 'strike' (LIV 72; Schumacher 2004: 226–232).

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[85] Acrostatic formations (see Schindler 1972) also had fixed accent, on the first syllable. None of the forms considered for _*CHIC-_ can be shown to have faithfully preserved an acrostatic accent.

2. MW. *blin* (adj.) 'weary, tired; tiring, tiresome', OB. *blin* gl. *tepore mentis*, *blinion* (pl.) gl. *inertes* < **mlīno-* are probably cognate with Latv. *blīnis* 'tired man', SCr. *mlȉtati* 'be lazy' (IEW 717), and hence probably reflect **mliH-no-*. Fleuriot & Evans' (1985: 1.86) reconstruction of **mlēno-*, connected with Lat. *molō* 'grind', cannot be correct because the root is **melh$_2$-* (see MW. *malaf* p. 169). However, their alternative etymology, with (post-Vedic) Skt. *glā́yati* 'feel aversion or dislike; be languid or weary', *glānáḥ* 'feeling aversion or dislike; languid, weary' is possible if this comes from **g^{w}leh$_1$-* (EWAIA 1.510 gives no certain connections).

3. MW. *bliu*, W. *blif* (m.) 'catapult, battering ram' < **blīmo-* or **blībo-* is of uncertain derivation. According to IEW (161, 472) it is connected either with Gk. Aeol. Ion. φλῑ́βω 'press, squeeze, pinch', or Gk. βλῆμα 'throw, cast'. According to LIV (88–89) the root of φλῑ́βω is **b^{h}lei̯ĝ-* (Lat. *flīgō* 'beat, dash down', Latv. *bliêžu* 'strike; drag'); φλῑ́βω itself is a thematised *u*-present **b^{h}lei̯ĝ-u̯e/o-* with iotacism. Although there is no other evidence for a laryngeal because the Latvian acute intonation is due to lengthening before a voiced stop by Winter's law, it is possible that the root is really **b^{h}lei̯Hĝ-*. In this case φλῑ́βω and *blif* could come regularly from **b^{h}liHĝ-*. The alternative connection with βλῆμα is only possible if this reflects **g^{w}leh$_1$-mn̥* rather than **g^{w}l̥h$_1$-mn̥*. Since the usual full grade of this root seems to be **g^{w}elh$_1$-* (OIr. *a-t·belt* 'died', Gk. βέλεμνα 'javelins, darts'; LIV 208), βλῆμα may reflect zero grade or be analogical on forms like ἔβλην (aor.) 'threw'. The origin of *blif* is uncertain.

4. MW. *brig* (m.) 'top, summit', (coll.) 'tree-tops, topmost branches' < **brīkV-* is cognate with Gk. φρῑ́σσω 'bristle, stand up on end', which suggests **b^{h}riHk-* (LIV 93), but there is no other evidence for the root.

5. OIr. *bríg* (f. *ā*-stem) 'value, worth; strength, power', MW. *bri* (m.) 'honour, esteem', MB. *bry*, B. *bri* 'regard, respect', MC. *bry* (m.) 'account, value, esteem', Gaul. *Brigo-* (p.n. element) < **brīgV-*[86] might be cognate with Gk. βρῖθος 'weight', βρῖμη 'strength, bulk', Latv. *grins* 'angry' (IEW 477), which suggests **g^{w}riH-gV-*. But the etymology is semantically distant, since the base meaning of the Celtic words seems to be 'worth', not 'strength'.

6. OIr. *cích* (m. and f.) 'female breast', MW. *cic*, W. *cig* (m.) 'meat, flesh', OB. *cic*, MB. *quic*, B. *kig* (m.), OC. *chic*, *kig* gl. *caro*, MC. *kyk*, *kyc* (m.) 'flesh, meat' <

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[86] Not **brĭgV-*, as according to Matasović (2009: 77–78), which would give OIr. ^{x}*brig*, MW. ^{x}*bry* etc. Consequently, his etymology (< **b^{h}r̥g^h-*) is not correct.

*kīkV- are compared by Pedersen (1909–1913: 1.51) with Gk. κῖκυς 'strength, vigour', hence _*kiHku-_. But the semantic connection is not good (as noted by LEIA C-95–96).

7. W. _clir_ (adj.) 'clear, bright, pure' < _*klīrV-_ or _*klūrV-_ is derived by IEW (607) from the root seen in Goth. _hlūtrs_ 'clean, bright' (_*kleu̯H-_; LIV 335). However, according to GPC (500) it is a loan word from NE. _clear_, which seems plausible.

8. OIr. _·críth_ (pret. pass.) 'was bought', MW. _prid_ (adj.) 'dear, costly, expensive, valuable, precious', _prid_ (m.) 'price, cost, purchase', perhaps Gaul. _-pritom_ in _tiopritom_ 'barter (?)', < *$k^w rih_2$-_to-_ are cognate with Gk. πρίατο (3sg. middle aor.) 'bought', Skt. _krīṇā́ti_ 'buys', _krītáḥ_ 'bought' (*$k^w rei̯h_2$-; LIV 395–396; Irslinger 2002: 92–93).

9. OIr. _crú_ (_u_-stem) 'blood' < *$kruh_2$-_s_ is cognate with Skt. _kravíḥ_, Gk. κρέας 'raw meat' < *$kreu̯h_2$-, Lat. _cruor_ 'gore' (Joseph 1988). But since long vowels are lengthened in monosyllables in Irish it is impossible to tell whether the result was _*krŭs_ or _*krūs_.

10. MW. _dic_, W. _dig_ (m) 'anger, wrath; grief', (adj.) 'angry, wrathful; sorrowful' < _*dīko-_ is cognate with Lith. _dỹkas_ 'high-spirited, wanton, unbusy, idle', Russ. _díkij_ 'wild', probably from *$d^{(h)}$_iHk-_ (IEW 187), but there is no other evidence for the root.

11. OIr. _dír_ (adj.) 'due, proper, meet, fit; belonging to, appertaining to; necessary', MW. _dir_ (adj.) 'sure, certain, fated; necessary; inexorable' < _*dīrV-_ may be cognate with Lat. _dīrus_ 'fearful, horrible, dire', which would imply _*diHrV-_; this is semantically justifiable, but not certain (LEIA D-95). Matasović (2009: 100) derives them from *$d^h eh_1$-_ro-_ 'established'.

12. MIr. _drúth_ (adj.) 'wanton, unchaste', Gaul. _Drutos_ (p.n.) < _*drūto-_ is attributed by LEIA (D-205–206) and IEW (214–216) to a wide range of Indo-European forms derived from the word for '(oak-) tree' categorised by IEW under the heading _*deru-_, _dŏ̄ru-_, _dr_(_e_)_u-_, _drou-_; _dreu̯ə_: _drū-_. Further Indo-European cognates assembled by IEW include Lith. _drū́tas_ 'strong', ON. _trūđr_ 'juggler' and OE. _trūđ_ 'clown, trumpeter'. As Irslinger (2002: 294–295) observes, the derivational (and semantic) history of this 'root' is opaque. At any rate, there is Indo-European evidence for a form _*drūto-_, presumably from _*druH-_.

13. MIr. _dúil_ (f. _i_-stem) 'desire, fondness' < _*dūli-_ < *$d^h uh_2$-_li-_ is cognate with Skt. _dhūliḥ_ 'dust', Lith. _dū́lis_, Latv. _dũlis_ 'fumigation' (LEIA D-215), Hitt.

antuwaḫḫaš- 'man' (*_d^{h}u̯eh$_2$-_; LIV 158). For the different semantics compare Lat. *fūmus* 'smoke' and Gk. θῡμός 'soul'.

14. OIr. *dún* 'fort' (n. *o*-stem, later *s*-stem), MW. *din* (m.) 'city, fort', OB. *din* gl. *arx*, Gaul. *-dunum*/-δουνον (pl.n. element) < *_dūno-_ < *_d^{h}uh$_2$-no-_ are cognate with OE. *dūn* 'hill', Lat. *fūnus* 'funeral' and Hitt. *tuḫḫušta* 'it is finished' (Watkins 1991).

15. MIr. *fí* 'venom, poison' < *_u̯īso-_ is cognate with Lat. *uīrus* 'slime, poison' and Gk. ῑ̓ός 'poison'. It is not clear why Skt. *viṣám* 'poison' should have a short vowel; otherwise we would reconstruct *_u̯iHso-_ without difficulty.

16. MW. *gwit*, *guid* (m.) 'feast, banquet, liquid, honey' < *_u̯ītV-_ < *_u̯ih$_1$-tV-_ is cognate with Skt. *vītíḥ* 'enjoyment, feast', Lat. *uīs* (2sg.) 'want', Gk. ῑ̔́εμαι 'send myself, hasten' (IEW 1123–1124; LIV 668–669).

17. OIr. *íth* (n.? *u*-stem) 'fat, lard, grease' < *_ītu-_ < *_piH-tu-_ is cognate with Gk. πῑμελή 'soft fat, lard', πῖαρ 'fat', Skt. *-pīnaḥ* 'fat', *ā́-pītaḥ* 'steeped', and perhaps Lat. *pītuīta* 'slime' (LIV 464–465; Irslinger 2002: 109; Widmer 2004: 19).

18. OIr. *lúth* 'power of movement, motion; vigour, power, energy; rejoicing', Gaul. *Lutu-* (p.n. element) and perhaps MW. *llid* (m.) 'anger, wrath; passion; inflammation' < *_lūtV-_ may be cognate with OCS. *ljutъ* 'angry' < *_leu̯-to-_ (Matasović 2009: 250). If so, the long *_-ū-_ in Celtic would imply *_luH-tV-_. However, there is an alternative etymology for *llid* (see MIr. *láth* p. 80), and if it does not belong here the semantic connection is not so good. Since this root is only found in Celtic and Slavic the similarity of forms could just be coincidence.

19. OIr. *múnigim* (1sg.) 'make water, piss', MIr. *mún* (m.) 'urine' < *_mūn-_ are cognate with Skt. *mū́tram* 'urine', Av. *mūϑra-* 'diarrhoea', Skt. *mī́vati* 'moves, urges', Lat. *moueō* 'move'. Although LIV (445–446) reconstructs *_mi̯eu̯h$_1$-_, it is also possible that the root was *_mi̯eh$_1$u̯-_, as *mī́vati* suggests. MIr. *múr* (m.) 'mire; sandbank, shoal?' (DIL M-204) may also belong here (IEW 741), but Stokes (1901: 470) suggests a loan word from ON. *mýrr* or OE *mýre*, NE *mire*.

20. MIr. *níth* (m., originally *u*-stem?) 'fighting, conflict; spirit, pugnacity; anger, resentment' < *_nītV-_ < *_niH-tV-_ is cognate with Skt *nītíḥ* 'leading', *nī́thā* 'means, knack', Goth. *neiþ* 'envy', OE. *nīđ* 'combat, hate, enmity' (< *_nei̯H-_ 'lead, guide'; LIV 450; Irslinger 2002: 119). The long vowel is not due to expressive lengthening as claimed by LEIA (N-17) and de Bernardo Stempel (1999: 528).

21. MW. _rhidiaf_ 'copulate' < *_rītV-_ may be cognate with Skt. _rītíḥ_ 'going, motion, course', OE. _rīđ_ 'small stream' < *_h$_3$riH-t-_ (cf. Gk. ὀρίνω 'stir, move; incite'; IEW 330; LIV 305–306).

22. OIr. _rím_ (f. _ā_-stem) 'the act of counting, enumerating', MW. _rif_, W. _rhif_ (m.) 'sum, number' < *_rīmā_, OB. _eirimotor_ (impersonal) 'is counted' < *_ad-rīm-_ < *_h$_2$riH-meh$_2$_ are cognate with OE. _rím_ 'number', OHG. _rīm_ 'account, series, number', Gk. ἀρῐθμός 'number', νήρῐτος 'countless'. OIr. _renaid_ 'sells' probably also belongs to this root (Schumacher 2004: 551–552, McCone 1991b: 38–40). The root-final laryngeal is suggested by the Celtic and Germanic long vowel in *_rīmā_, and the Celtic nasal present. The short vowel in Greek may be due to the Wetter Regel.[87]

23. OIr. _rún_ (f. _ā_-stem) 'something hidden or occult, mystery; secret', MW. _rin_, W. _rhin_ (m., f.), B. _rin_ (m.) 'secret, mystery' < *_rūnā_ are directly cognate with Goth. _rūna_ (f.) 'secret', OE. _rūna_ 'whisper'. It has been suggested that either the Celtic or Germanic word is a loan from the other language (LEIA R-53), but there seems to be no real reason to think so. If *_rūnā_ is connected with Skt. _tuvī-rávaḥ_ 'strong-roaring', Gk. ὠρῡ́ομαι 'howl' < *_h$_3$e-h$_3$ruH-i̯e/o-_ (LIV 306), it comes from *_h$_3$ruH-neh$_2$_. The semantics are a problem for this connection, although Lat. _rūmor_ 'shout; report, rumour, hearsay' may show how the change occurred.

24. OIr. _-túth_ (hapax in _dochumtúth_ Sg 31b8) 'preservation' < *_-tū-tV-_ is to be connected with Lat. _tūtus_ 'safe' and thus comes from *_tuH-tV-_ (LEIA T-164–165; Irslinger 2002: 434; LIV 639).

25. OIr. _úathad_ (n. _o_-stem) 'a small number, few, one', MW. _odit_, W. _odid_ (m.) 'rare, wonderful, exceptional thing' < *_au̯tīto-_ are derived by Greene (1971: 178–180) from the original past participle of OIr. _tinaid_ 'melts away' < *_ti-n-h$_1$-_ (cf. Hitt. _zēari_ 'is cooked', Lat. _tītiō_ 'burning brand' < *_ti̯eh$_1$-_ 'burn'[88]).[89] OIr. _úathad_ would therefore reflect *_-tih$_1$-to-_. The connection is possible, but the semantics are not certain enough for this to be good evidence.

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[87] This is more likely than analogy with the nasal present, as suggested by McCone (loc. cit.), which is unattested in Greek.

[88] LIV (617–618) reconstructs *_tei̯h$_1$-_, but the assibilation of *_t-_ in Hittite shows that it is followed by *_-i̯-_, as pointed out by Kloekhorst (2008: 1033–1034, 1036–1038), who, however, doubts that the Hittite word belongs here at all.

[89] Although Greene mistakenly connects _tinaid_ with Gk. φθιτός 'liable to perish' < *_d^{h}g^{wh}ei̯-_ (LIV 150–152).

§ 100. *_CHIC-_ > *_CĪC-_

1. OIr. _cúl, cúil_ (f. _ā_- and _i_-stem; DIL C-610) ‘corner, recess’ < *_kūlV-_, and perhaps also OIr. _cúl_ (m. _o_-stem) ‘back, rear, back of head, neck’, MW. _kil_, W. _cil_ (m.) ‘corner, angle; back, nape of the neck; covert, nook’, OC. _chil_ gl. _ceruix_, MB. _quil_, B _kil_ (m.) ‘back, nape of the neck’ < *_kūlo-_, W. _ysgil_ (m.) ‘pillion, back’ < *_skūlV-_, which are most closely related to Lat. _cūlus_ ‘arse’ and Prakrit _kūla_ ‘in the rear-guard’, OCS. _kyla_ ‘bulge’ (LEIA C-268–269, C-283), belong to a root reconstructed by IEW (951–952) as (_s_)_keu-_, (_s_)_keu̯ə-_: (_s_)_kū-_ ‘cover, shelter’. However, it is not clear that all the words collected here belong together:[90] for example, we find both Gk. σκῦλα ‘arms stripped from a slain enemy’, with long *-_ū_-, and σκῠ́λος ‘skin, hide’, with short *-_ŭ_-. The Celtic long *-_ū_- suggests that the root behind these forms had a laryngeal at any rate, and Schrijver (1991a: 247) identifies the root as *(_s_)_keh$_1$u̯-_ on the basis of Arm. _c^{c}iw_ ‘roof, cover’ < *_skēu̯o-_. However, according to Olsen (1999: 56), _c^{c}iw_ is a later singular derived from the _plurale tantum c^{c}owk^c*_ ‘ceiling’ by analogy with forms like _aniw_, _anowoy_ ‘wheel’. Consequently, we cannot be certain in reconstructing *(_s_)_kh$_1$ulV-_ rather than *(_s_)_kuHlV-_ for the Celtic forms.

2. OIr. _dínu_ (m. _nt_-stem) ‘lamb’ is evidently related to MW. _dynagvet_, W. _dyniawed, dynawed_, _dyniewed_ (m.) ‘yearling, stirk, young bullock’, OC. _deneuoit_ gl. _iuuencus_, but the exact preforms are difficult to determine (Campanile 1974a: 37). The origin of _dínu_ may be *_d^{h}īnunt-_[91] < *_d^{h}h$_1$i-nu-nt-_[92] if it is originally a participle to the root *_d^{h}eh$_1$(i̯)-_ ‘suck’ (Skt. _dhinoti_ ‘nourishes, satiates, satisfies’, Gk. θήσατο (aor.) ‘sucked’; Pedersen 1909–1913: 1.249; LEIA D-94; LIV 138–139). According to de Bernardo Stempel (1999: 526–527), the long vowel in _dínu_ is due to ‘expressive’ lengthening, but it is more likely that the British forms were remodelled with *-_ĭ_- on the basis of *_dĭ-n-h$_1$-_ > MW. _dynu_ (v.n.), MB. _denaff_, MC. _dene_ (v.n.) ‘suck’. However, this verb seems to have formed a nasal-infix present in Celtic (OIr. _denait_ (3pl.) ‘suck’) rather than a _nu_-present (LIV 138–139; McCone 1991b: 14–15), _nu_-presents are rare in Celtic (McCone 1991b: 13), and the Brittonic forms are not well explained from this starting point. Schumacher (_apud_ Griffith 2005: 60) reconstructs Irish *_du̯īno-u̯ōt-s_, British *_du̯īno-u̯et-s_ ‘two-year old’, with secondary _nt_-inflection in Irish. OIr. _dínu_ may reflect *_d^{h}h$_1$i-nu-nt-_, but this is uncertain.

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[90] “One of Pokorny’s umbrella entries”, according to Joseph (1980: 323).

[91] Not *_d^{h}īn-ont-_ (de Bernardo Stempel 1999: 434 fn. 74), which would probably have given ^{x}_dína_ (Griffith 2005).

[92] Not *_d^{h}eh$_1$-nu-_: verbs with the suffix *-_n_(_e_)_u_- always have their root in the zero grade (LIV 17).

3. MIr. _fíthe_ (_i̯o_-, _i̯ā_-stem adjective) ‘woven, plaited’ < *_u̯īt(i)i̯o_- ← *_u̯īto_- < *_u̯ih$_1$-to_- is cognate with Skt. _ávyat_ (aor.) ‘bound’, Lith. _vejù_ ‘wind’, Lat. _uiēre_ ‘wind, bend’, from a root *_u̯i̯eh$_1$_- or *_u̯ei̯h$_1$_- (LIV 695). According to Schrijver (1991a: 245) the root was originally *_u̯eh$_1$i̯_- because of the lack of retraction of the accent by Hirt’s law in Russ. _vilá_ (fem. pret.) ‘wound’, Latv. _vîte_ ‘tendril’. Since he would expect ^{x}_fithe_, he explains the long vowel in _fíthe_ : present *_fenaid_ (OIr. _for·fen_ ‘finishes, completes’) by analogy with OIr. _críthe_ (p. 115): _crenaid_, _bíthe_ (113): _benaid_. OIr. _fithis_ ‘circular course, circuit’ < *_u̯ĭtissī̆_, MB. _guedenn_, B. _gwedenn_ (f.) ‘string for tying faggots’ < *_u̯ĭtisnā_ do have short vowels, but it is doubtful whether they belong here; on the basis of the semantics and the short *-_ĭ_- they go in a different group with Gk. ἴτυς, Aeol. ϝίτυς ‘felloe, shield rim’, and perhaps OE. _wiđu-winde_, ON. _viđ-vindill_ ‘honey-suckle’, Lith. _žil-vìtis_ ‘grey willow’ (see Schrijver 1991a: 520 for doubts about the derivation of ἴτυς from *_u̯ei̯h$_1$_-).

4. OIr. _mílech_ (n. and m. _o_-stem) ‘brooch’ < *_mīliko_- is compared by LEIA (M-52) with Gk. σμῖλαξ, Att. μῖλαξ ‘yew, convolvulus’ (on the grounds of the spininess of the latter) and Gk. σμῑ́λη ‘knife for cutting, carving or pruning; graving tool, chisel’. According to IEW (697, 968), σμῑ́λη can be further connected with OIr. _máel_ ‘crop-headed, shorn’, MW. _moel_ ‘bald, crop-headed’, which might go back to *_meh$_2$i̯-lo_-. If this were correct, _mílech_ might reflect *_m̥h$_2$i-l_-. But LEIA also mentions an alternative connection with Gk. μήλη ‘probe’, which would suggest *_meh$_1$l_-, while Meid (2009: 100) sees _mílech_ as a derivative of OIr. _míl_ ‘animal’, suggesting it is an item of jewellery decorated with animals or in the shape of an animal. Altogether, a derivation from *_m̥h$_2$i-l_- is very uncertain.

5. OIr. _mín_ (_i_-stem adj.) ‘smooth, level’, Gaul. -_minius_ (p.n. element) < *_mīni_- are cognate with Lat. _mītis_ ‘soft’, Skt. _máyaḥ_ ‘comfort, ease’, Lith. _míelas_, _mylùs_, Latv. _mĩļš_, SCr. _mȉo_ ‘dear’ (IEW 711–712). A laryngeal in the root is guaranteed by the Lithuanian acute tone in _míelas_.[93] According to Schrijver (1991a: 244), the root was *_meh$_1$i_-, but the Baltic evidence for retraction of the accent by Hirt’s law is contradictory: Lith. _mylùs_ (AP 3) does not show retraction, which would prove *_mh$_1$i-lu_- according to Schrijver, but Latv. _mĩļš_ (AP 1) does demonstrate retraction, which would imply *_miH-lu_- (see p. 12 ff., and Schrijver 1991a: 5–9, 228–229). However, mobility is productive in acute _u_-stems in Lithuanian (Stang 1966: 294), so the Latvian

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[93] There is no reason to suppose that the Celtic long vowel is due to ‘affective lengthening’ (LEIA M-53; de Bernardo Stempel 1999: 526).

evidence is probably original. Since Skt. _máyaḥ_ suggests _*mei̯H-es-_ rather than _*meh$_1$i̯-es-_ > ^{x}_māyaḥ_ (EWAIA 2.315–316), and the Baltic evidence suggests retraction (even if lack of retraction is evidence for _*CHI-_), it is reasonable to suppose that _mín_ comes from _*miH-ni-_.

6. OIr. _sín_ (f. _ā_-stem) ‘bad weather, storm’, MW. _hin_ (f.) ‘weather, bad weather’, B. _hinon_ (f.) ‘clear weather’ < _*sīnā_ could come from _*siH-neh$_2$_ or _*seh$_1$-neh$_2$_. One might consider the possibility of a connection with the root of Lat. _saeculum_ ‘generation, life’, MW. _hoedyl_, W. _hoedl_ (f.) ‘life, lifetime, age’, (early) B. _hoazl_, B. _hoal_ (m.) ‘age’, with the same sort of semantic shift that occurred in Latin _tempestas_ ‘time’ → ‘weather’ (cf. Lat. _tempus_ ‘time’, Fr. _temps_ ‘time, weather’). This would mean reconstructing _*sih$_2$-neh$_2$_ < _*sh$_2$i-neh$_2$_.[94] However, this etymology is purely speculative, and since there are no cognates outside Celtic there is no certainty that _*sīnā_ is not a purely Celtic word without an Indo-European origin.

7. MIr. _sín_ ‘the ring or collar worn by Morann Mac Máin’ (if this really exists: DIL S-235), OW. _hin_ gl. _limite leuo_, perhaps Gaul. _Sino-_, _-sinus_ (p.n. element) < _*sīnV-_ < _*sh$_2$i-nV-_ are cognate with Hitt. _išḫāi_ ‘binds’ < _*sh$_2$ei̯-_ (LIV 544–545).

8. MIr. _sínid_ ‘stretches, stretches out, extends’ is denominative from an original _*sīnV-_ < _*sih$_1$-nV-_ < _*sh$_1$i-nV-_ or < _*seh$_1$-nV-_ (_*seh$_1$(i̯)-_; LIV 518; see MIr. _sith-_ p. 124).

9. OIr. _súil_ (f. _i_-stem) ‘eye’ < _*sūli-_ < _*sh$_2$u-l-i-_ is generally agreed (e.g. LEIA S-201–202; IEW 881; Hamp 1975b: 99; Schrijver 1995: 422) to be related to MW. _heul_, W. _haul_ (m., f.) ‘sun, sunlight’, MB. _heaul_, _heol_, B. _heol_ (m.) ‘sun’, OC. _heuul_ gl. _sol_, MC. _houl_, _howl_ (m.) ‘sun, sunlight’ < _*seh$_2$u̯-_, despite the difference in semantics (‘eye of the sky’ = ‘sun’, on which see West 2007: 198–199). Although the exact preform of the Brittonic forms is uncertain, it clearly belongs to the same root as e.g. Gk. Hom. ἠέλιος, Dor. ἀέλιος ‘sun’ (Jackson 1953: 374; Hamp 1975b; NIL 606–601; Matasović 2009: 324). Derivatives from the original _l/n_-stem are well attested in the Indo-European languages; cf. Skt. _sū́ryaḥ_ ‘sun’ < _*suh$_2$li̯o-_.

10. MIr. _úr_ (_o_-, _ā_-stem adj.) ‘fresh, new’, MW. _ir_ (adj.) ‘verdant, new, green, juicy, fresh’ < _*pūro-_ < _*puH-ro-_ are cognate with Lat. _pūrus_ ‘pure’, Skt. _pūtáḥ_ ‘clean’ < _*puH-to-_, _pávate_ ‘is clean’, _pavītā́_ ‘purifier’ < _*peu̯H-_ (LIV 480). If Schrijver (1991a: 247, 535) is right that this is the same root as _*peh$_2$ur-_ (> Hitt.

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[94] But according to Watkins (1995: 351), _saeculum_ comes from _*seh$_2$i-tlo-_ ‘link’ (the root is in fact _*sh$_2$ei̯-_; see MIr. _sín_ below).

paḫḫur 'fire'; NIL 540–545), _úr_ comes from _*ph$_2$u-ro-_, but this is not certain (doubted by EWAIA 2.106).

§ 101. _*CHIC- > *CĬC-_

1. OIr. _béu_, _béo_ (_o-_, _ā_-stem adj.) 'living, quick, alive', MW. _byw_, MB. _beu_, B. _bev_ (adj.), OC. _biu_ gl. _uita_, MC. _byw_, _bew_ 'alive, living', Lep. _PIUO-_ (p.n. element) < _*g^{w}ĭu̯o-_ are cognate with Goth. _qius_ 'alive' < _* g^{w}ĭu̯o-_ (but see below), Lat. _uīuus_, Lith. _gývas_, Latv. _dzîvs_, Skt. _jīváḥ_ 'alive' < _*g^{w}īu̯o-_, Gk. ζωός 'alive' < _*g^{w}i̯eh$_3$-u̯o-_ (or < _*g^{w}ih$_3$-u̯o-_; Klein 1988; Olsen 2009). For the laryngeal, cf. Gk. ζωός, βίοτος 'life' < _*g^{w}ih$_3$-eto-_ (IEW 467–468; LIV 215–216).

The evidence for an original zero grade _*g^{w}h$_3$i-_ consists of the lack of retraction by Hirt's law in Latv. _dzîvs_, and Slavic forms exemplified by Czech _živý_ (Kortlandt 1981: 15; Schrijver 1991a: 245, 248–249, 526), but Kortlandt adds, in support of this root shape, "the absence of palatalisation in Gr. _bíos_ < _*g^{w}Hiu̯o-_, _béomai_, Arm. _keam_". It is not clear what Kortlandt means by this. Perhaps he means that otherwise _*-g^w-_ ought to have given _*-d-_ before _*-i-_ in Greek rather than _*-b-_, which would make it parallel to _*-k^w-_ > _*-t-_ before _*-i-_ and _*-e-_ but > _*-p-_ before _*-a-_ and _*-o-_? This would be a very controversial explanation (for the usual view see Sihler 1995: 164), and Gk. ὄφις, Skt. _áhiḥ_, Av. _ažiš_ 'snake' < _*h$_3$eg^{wh}i-_ demonstrate that _*-g^{wh}-_ became _*-p^h-_ before _*-i-_ in Greek without the presence of any laryngeals.

The more natural reading would be that Kortlandt expected _*g^{w}ih$_3$-u̯o-_ to give _*g^{w}i̯ōu̯o-_, with subsequent palatalisation of _*g^w-_ to give ζωός, which was blocked by _*g^{w}h$_3$i-u̯o-_ > βίος. But this is hardly compelling, since βίος need not come from _*g^w(h$_3$)i(h$_3$)-u̯o-_ at all (e.g. from _*g^{w}ih$_3$-o-_; for several different possible derivations see Cowgill 1965: 150 fn. 13; Bammesberger 1983: 232; Klein 1988).[95] As for Armenian _keam_ 'live', one would expect palatalisation, as with _*-k^w-_ > _-č^c-_ before _*-i-_ and _*-e-_, e.g. _č^{c}ork^c_ 'four' < _*k^{w}etu̯ores_). But there are other good examples of its failure to occur, e.g. _kin_ 'woman' < _*g^{w}enh$_2$_, _ker_ 'food' < _*g^{w}erh$_3$-_.

Even if it did come from _*g^{w}h$_3$i-u̯o-_, there are two reasons why _béu_ would not be good evidence for _*CHIC-_ > _*CĬC-_ in pretonic syllables (final accentuation is demonstrated by the Balto-Slavic and Sanskrit forms). Firstly, Lat. _uīuus_ shows a long vowel,[96] although pretonic _*CHIC-_ is also supposed by

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[95] And, insofar as one can take him as representative of Kortlandt's thinking, Schrijver (1991a: 526) reconstructs Gk. ζωός 'alive' < _*g^{w}i̯eh$_3$-u̯o-_.

[96] Osc. **bivus** (nom. pl.), which is often also taken to reflect _*g^{w}īu̯o-_, could also come from _*g^{w}ĭu̯o-_, since it is found in an inscription written in the older version of the native Oscan alphabet in which <i> can represent _*-ī-_, _*-ĭ-_ and _*-ē-_.

Kortlandt and Schrijver to give **CĬC-* in Italic (the long vowel is due to analogy with the barytone verb *uīuere* 'live', according to Schrijver 1991a: 245, 248–249). Secondly, *$*g^wh_3$i-u̯ó-* > *$*g^wih_3$-u̯ó-* would have given *$*g^w$ĭu̯o-* anyway by Dybo's rule, at least according to Schrijver's formulation of the rule[97] (see p. 132 ff.).

OIr. *bith* (m. *u*-stem) 'the world, existence, life', MW. *byt*, W. *byd* (m.) 'world, existence, life', OB. *bit*, MB. *beth*, *bet*, B. *bed* (m.) 'world, nature, universe', OC. *bit* gl. *mundus l. cosmus*, MC. *bys*, *beys* (m.) 'world', Gaul. *Bitu-* (p.n. element) < *$*g^w$ĭtu-* are better from this point of view, since Schrijver does not expect Dybo's rule to affect **-IH-* clusters before a stop, but it is possible that the vowel was shortened by analogy with *$*g^w$ĭu̯o-*.

Hamp (1976b: 89) seems to argue that the short vowels in *béu* and *bith* are due to the generalising of a short vowel resulting from a sequence *$*g^wih_3$-V-*, with regular loss of laryngeal between vowels. This is the same explanation put forward for all apparent Dybo's rule forms by Ringe and Joseph (see p. 132 ff.). In this particular case, it seems unlikely, because all the Celtic forms from this root point to *$*g^wih_3$-C-*, but this explanation cannot be entirely ruled out.

We can conclude that OIr. *béu* < *$*g^w$ĭu̯o-* is probably regular rather than analogical, but it is not clear that this is due to **CHIC-* > **CĬC-* rather than Dybo's rule or some other process; the only at all plausible evidence for *$*g^wh_3$i-u̯o-* is the lack of retraction of the accent in Balto-Slavic cognates.

2. OIr. *both* (f. *ā*-stem) < *$*b^h$ŭtā*, *buith* (*i*-stem) 'being, existing' < *$*b^h$ŭti-*, *bothae* (pret. pass.) 'was' < *$*b^h$ŭto-*, MW. *bot*, W. *bod* (m.) 'being, existence', OB. *bot* (inf.), MB. *bout* (inf.) 'be', B. *boud* (m.) 'being, existence', MC. *bos* (v.n.) 'be' < *$*b^h$ŭto-* (Irslinger 2002: 400–409)[98] are cognate with Skt. *bhūtáḥ* 'having

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[97] Although the same shortening would of course also be expected of Lat. *uīuus*. Shortening by Dybo's rule is the only explanation for Goth. *qius*, if it really represents *$*g^w$ĭu̯o-* < *$*g^wih_3$-u̯o-*, since Schrijver (1991a: 535–536) argues that **CHIC-* always gave **CIHC-* > **CĪC-* in Germanic. But the matter is confused by ON. *kvikr*, OE. *cwic* 'alive' < *$*g^w$ĭgu̯o-*; according to Ringe (2006: 68–66) Germanic **-g-* is due to regular 'hardening' of the laryngeal, with dissimilation in Goth. *qius*. Müller (2007: 116–117, 141) suggests that *qius* may reflect shortening in hiatus in Gothic, via *$*g^wih_3$-u̯o-* > *$*k^w$īu̯as* > *$*k^w$īus* > *qius*. He connects the other Germanic forms with dialectal Latvian *dzîga* 'life', Lat. *uīxī* 'I lived' < *$*g^w$īg-*. It is worth noting that if Ringe is right, Dybo's rule in Germanic must have occurred after *$*-h_3$u̯-* > **-gu̯-*, which is a purely Germanic change.

[98] OIr. *both* (f. *ā*-stem) 'hut, bothy, cot; cabin', MW. *bod* (f.) 'abode, dwelling, residence', OB. *bot* 'residence, habitation' < **bŭtā* are not included here. Although they seem to belong here both formally and semantically, Lith. *bùtas* 'house' argues for a separate root without a laryngeal.

been', _bhū́tiḥ_ 'being', Latv. _bût_ 'be', Lith. _bū́tas_ 'having been' (for the root see IEW 146–150; Jasanoff 1997; LIV 98–101).

According to Schrijver (1991a: 228, 240, 512–517, 524–525, 526–527) the root was *_bʰHu-_; the evidence is the lack of retraction of the accent by Hirt's law shown by Latv. _bût_, and forms with short *_-ŭ-_ in Greek and Latin such as Gk. φῠτόν 'plant', Lat. _fŭtūrus_ (fut. part.) 'about to be'. We would expect oxytone accentuation in the original past participle OIr. _bothae_ < *_bʰŭto-_ (cf. Skt. _bhūtáḥ_).

However, regardless of whether the evidence for a root shape *_bʰHu-_ is reliable (for which see p. 128 ff.), OIr. _both_ etc. cannot be used to prove *_CHIC-_ > *_CIHC-_. Firstly because it is possible that they have a short vowel by Dybo's rule. Secondly because they may well have a short vowel due to analogy, either as the result of a productive system of long vowel/short vowel ablaut in Celtic (McCone 1991b: 128), or because the short vowel was generalised from the present stem *_bŭi̯e/o-_ < *_bʰuH-i̯e/o-_, where it was regular through loss of the laryngeal before *_-i̯-_ (see p. 102 ff.).

3. OIr. _guth_ (m. _u_-stem) 'voice, sound', Gaul. _gutu-_ (in _gutuatrum_ (acc. sg.) 'father of invocation') < *_gŭtu-_ are usually thought (IEW 413; accepted by Irslinger 2002: 108–109) to be cognate with Skt. _hávate_ 'calls', _hūtáḥ_ 'called', _hávīman-_ 'invocation', from a root *_ĝʰu̯eH-_ or *_ĝʰeu̯H-_ (LIV 180–181). On the basis of Gk. καυχάομαι 'speak, call loudly' (with intensive reduplication) and the Vedic injunctive 1pl. _hóma_ < *_ĝʰeHu-me_, Schrijver (1991a: 517) argues that the root shape is in fact *_ĝʰeh$_2$u-_, and consequently that OIr. _guth_ should be reconstructed as *_ĝʰh$_2$u-tu-_.

However, according to Tichy (1983: 110–111), καυχάομαι is denominative from an onomatopoeic word Gk. Dor. καύχᾱ 'elation'; cf. καυχᾱ́σαιτο (Sappho), and καύχημα 'boast' (Pindar). Skt. _hóma_ could be a back-formation, either on the basis of the 3pl. injunctive *_ĝʰeu̯H-n̥t_, where the laryngeal was lost before a vowel, or on the thematic present, in which there was similar laryngeal loss.

An alternative possibility is the etymology of Vendryes (1918: 268–269), who derives _guth_ from the root *_ĝʰeu̯-_ 'pour' (Gk. χέω 'pour', Skt. _juhóti_ 'pours'; LIV 179). Irslinger (loc. cit.) considers this derivation less likely for semantic reasons, but collocations of the root with words for speech in Greek such as θείη δέ μιν ἀμφέχυτ' ὀμφή 'the divine voice was poured on him' (Iliad 2.41) and ἥ τε θαμὰ … χέει πολυηχέα φωνήν 'and she often pours her many-toned voice' (Odyssey 19.521) mean that it must remain a possibility (García-Ramón 2011: 90–95).

Consequently, it is not possible to say with certainty that _guth_ comes from a *_CHIC-_ cluster, or even that it originally contained a laryngeal at all.

4. MIr. _sceith_ (f.) 'act of vomiting, spewing, vomit', MW. _chwyt_, W. _chwyd_ (m.) 'vomit, vomiting', and the denominal verbs W. _chwydu_ (v.n.), MB. _huedaff_, B. _c'hwedañ_ (inf.) 'vomit' come from *_skĭtV-_. On the basis of the lowering of the *_-ĭ-_ to *_-ĕ-_ in Irish, the original form was probably *_skĭtā_, with replacement of the nominative by the dative singular (Irslinger 2002: 357–358). Irslinger attributes these forms to the root *_sk̂ʰeh$_2$(i̯)-_ 'cut up, skin' (LIV 547; see OIr. _scían_ p. 240), which would imply *_sk̂ʰh$_2$i-tV-_ (although Irslinger raises the possibility of an _aniṭ_-root *_skei̯-_ extracted from the metathesised present stem *_skei̯h$_2$-e/o-_ found in MIr. _sceïd_ 'vomits'). The semantic development is difficult to understand: the other Celtic and Germanic forms quoted by Irslinger all have meanings much closer to that of the original root. Schumacher (2004: 578–579) reconstructs a root *_sk̂ʰei̯-_ which is not otherwise attested, but of which *_sk̂ʰei̯-d-_ 'split, separate, tear up' (LIV 547–548) is an extended form. For the semantics he compares the development of this root to NHG. _scheißen_ 'shit'. The lack of any direct cognates is a disadvantage of this theory. It is possible that _sceith_ comes from *_sk̂ʰh$_2$i-tV-_, but it is not good evidence for *_CHIC-_ clusters.

5. MIr. _sim_ 'chain or loop used in securing a cattle pound' may be related to Gk. ἱμάς 'leather strap or thong', ON. _sīmi_, OE. _sīma_, OS. _sīmo_ 'rope, tie' (IEW 892; Schrijver 1991a: 519–520), Skt. _sinā́ti_ 'fetters', Hitt. _išḫāi_ 'binds' < *_sH$_2$ei̯-_ (LIV 544–545). This being the case, the reconstruction of _sim_ ought to be *_sh$_2$imV-_. However, since _sim_ is only attested twice (DIL S-229), it is possible it should be _sím_, with a long vowel.[99]

6. MIr. _sith-_ (adj.; only in compounds) 'long-', _sithithir_ (equative) 'as long as', MW. _hyd_ (m., f.), MB. _het_, B. _hed_ (m.) 'length', MC. _hes_, _heys_, _hys_ (m.) 'length, extent' < *_sĭ-tu-_ or *_sĭ-ti-_ are cognate with OE. _sīd_ 'long', OHG. _sīto_ 'lax', and OS. _sīth_, OHG _sīd_ 'since' < *_sih$_1$-to-_ < *_sh$_1$i-to-_ or < *_seh$_1$i-to-_, Lat _sērus_ 'late', _sinō_ 'allow' (*_seh$_1$(i̯)-_ 'let go'; Rasmussen 1989: 59; Schrijver 1991a: 527; LIV 518; Irslinger 2002: 140 and see OIr. _sír_ p. 109). The Celtic forms must come from *_sh$_1$i-tV-_ > *_sĭtV-_.[100] The short vowel could be due to Dybo's rule or to *_CHIC-_ > *_CĭC-_ (see p. 132 ff.). According to Rasmussen, the shortening is due to the use of MIr. _sith-_ in compounds, but the Welsh, Cornish and Breton forms are not restricted to compounds, and _sithithir_ shows that originally neither was MIr. _sith-_.

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[99] Stokes (1907: 249) supposes _sím_.

[100] Raising of *_seh$_1$-ti-_ > *_sĕti-_ is unlikely because raising does not usually occur across a voiceless stop (McCone 1996: 110–111).

7. OIr. _suide_ (f. _i̯ā_-stem) < *_sŭd(i)i̯ā_, W. _huddygl_ (m.) ‘soot’, MB. _huzel_, B. _huzil_ (f.) ‘soot’, LC. _filgeth_[101] (m.) ‘soot’ < *_sou̯d-_ are generally connected to Lith. _súodžiai_ ‘soot’, OE. _sōt_ ‘soot’ (IEW 886; Matasović 2009: 358–359). Although _suide_ is never written with _-ú-_, it is not well attested, and probably has a long vowel, as implied by NIr. _súithche_ ‘soot’ and Fr. _suie_, Catalan _sutje_ < Gaul. *_sūdi̯ā_. Matasović reconstructs British *_sou̯d-_ < *_sh$_3$eu̯d-_, Irish and Gaulish *_sūd-_ < *_suh$_3$d-_ < *_sh$_3$ud-_ beside *_seh$_3$u̯d-_ for Lithuanian and Old English. However, both Old English and Lithuanian point to *_sōd-_ (the Lithuanian acute tone is regular before a voiced stop, by Winter’s law) rather than *_sou̯d-_ < *_seh$_3$ud-_. Despite the apparent similarities between the forms, we must follow LEIA (S-201) in separating the Celtic forms from the others (but see Delamarre 2003: 284 for an alternative suggestion). Driessen & Aan de Wiel (2003) show that the British forms are borrowed from a Latin *_sūdiculV-_, itself probably based on the Gaulish form.

§ 102. *_CR̥HIC-_ > *_CRĪC-_

1. OIr. _crín_ (_o-_, _ā_-stem adj.) ‘withered, decayed; old, decrepit’, OW. _crin_ gl. _ar_[_i_]_dum_, MW. _crin_ ‘withered, brittle, sere’ < *_krīno-_ or *_krēno-_ are connected by Campanile (1982: 153) with OIr. _ara·chrin_ ‘decays, fails, withers’, Skt. _śr̥ṇā́ti_ ‘smashes, crushes, breaks’ < *_k̂r̥-ne-h$_1$-_, which would derive _crín_ from *_k̂reh$_1$-no-_. This account has several problems: in the first place, *_-r̥n-_ ought to give Irish *_-arn-_ (McCone 1991b: 16–17; 1996: 49).[102] Secondly, the root in question is *_k̂erh$_2$-_ (cf. Gk. ἀκέραιος ‘pure, unmixed; whole, entire’, κεραΐζω ‘ravage, despoil, plunder’; LIV 329); even if it had a full-grade II, *_k̂reh$_2$-no-_ would have given Ir. ^{x}_crán_, W. ^{x}_crawn_. Lastly, this etymology provides no explanation for the Celtic full grade in what should be a zero-grade *_-no-_ verbal adjective (cf. Skt. _śīrṇáḥ_ ‘broken, crumbled’ < *_k̂r̥h$_2$-no-_).[103]

De Bernardo Stempel (1987: 75) explains the vocalism of _ara·chrin_ as being due to remodelling from *_karn-_ by analogy with the adjective _crín_, but this of course does not explain the aberrant structure of _crín_ itself. Consequently, McCone’s (1991b: 17–18) etymology is appealing. Formally, he compares W. _gogrynaf_ ‘sift, cleanse, riddle’ < *_upo-kri-nV-_, Lat. _cernit_ ‘sifts, separates, discerns’ < *_kri-n-e/o-_, Gk. κρίνει ‘separates, determines’ < *_kri-n-i̯e/o-_. The root is probably *_kreh_$_1$_(i̯)-_; cf. Gk. κρησέρα ‘flour-sieve’, OCS. _krajь_ ‘side, edge’ < *_kroh_$_1$_i̯ -o-_, Lat. _crēuī_ ‘separated, sifted’ < *_kreh_$_1$_-_ or *_krei̯h_$_1$_-_ (see LIV 277 s.v. *_h_$_2$_lei̯H-_). Although there is evidence for full grade II in Balto-Slavic (Latv. _kreju_ ‘skim off’ < *_krei̯h_$_1$_-e/o-_, OCS. _krojǫ_ ‘cut up’ < *_kroi̯h_$_1$_-ei̯e-_), these forms could reflect a new full grade based on the metathesised zero grade *_krih_$_1$_-_ < *_kr̥h_$_1$_i-_ (Rasmussen 1989: 276; LIV 366–367). If McCone’s etymology is correct, _crín_ must come from original *_kr̥h_$_1$_i-no-_. Semantically, of course, the connection is less appealing. McCone sees a possible source of the Celtic meaning by way of a stage in which it meant ‘riddled’. Since Campanile’s explanation is very problematic, McCone’s is to be preferred; OIr. _crín_ probably comes from *_kr̥h_$_1$_i-no-_ > *_krih_$_1$_-no-_.

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[101] With _f-_ as a mistake for _h-_ by Lhuyd (1707 [1971]: 21), or the result of a sporadic sound change.

[102] This admittedly relies on discounting precisely the evidence currently being discussed. And see now Hill (forthcoming).

[103] Joseph (1980: 111–112) sees the problems and somewhat anticipates McCone by suggesting that _crín_ comes from an _i_-extension of *_k̂erh$_2$-_; hence *_k̂r̥h$_2$i-no-_ (and verbal _ara·chrin_ < *_k̂ri-n-h$_2$-_). Since there is no other evidence for such an extension to this root it is better to follow McCone’s attribution to *_kreh$_1$(i̯)-_.

OIr. _crích_ (f. _ā_-stem) ‘boundary, limit’, OW. _crip_ gl. _pectens_, MW. _crib_ (f., m.) ‘comb, crest, ridge’, MB. _crib_, B. _krib_ (f.) ‘comb’, LC. _krib_ ‘ridge’ < *_krīku̯ā_ < *_kr̥h_$_1$_i-k_^{w}_eh_$_2$ probably also belong here (LEIA C-234–235) rather than with Russ. _krókva_ ‘stake’, Lith. _krẽklas_ ‘rafter’ (Matasović 2009: 224). For the suffix cf. OHG. _slēha, slēwa_ ‘sloe’ < *_slei̯-k_^{w}_o-_.

2. OIr. _gnúis_ (f. _i_-stem) ‘face, countenance’, MW. _gnis_ (m.) ‘jaw, chin, face’ < *_gnūsti-_ are probably connected with Skt. _hánuḥ_, Gk. γένυς ‘jaw’, OIr. _giun_ (m. _u_-stem) ‘mouth’ < *_ĝ_^{h}_enu-_ (IEW 381; Joseph 1980: 91–92; Irslinger 2002: 428). Apart from the long vowel in Celtic, the evidence for a laryngeal in the root comes from Lith. _žándas_ ‘jawbone’ < *_ĝ_^{h}_onH-d_^{h}_o-_. Therefore, _gnúis_ may come from *_gnuH-sti-_ < *_gn̥H-u-sti-_. However, Gk. γνάθος ‘jawbone’ is problematic, because it cannot reflect a laryngeal directly (morphological zero grade, according to Joseph loc. cit.; non-Indo-European, according to Beekes 1969: 91). An alternative to a root-final laryngeal is that Proto-Celtic *_gnūsti-_ is derived from an original neuter plural *_ĝ_^{h}_(e)nu-h_$_2$, in which case this would not be an example of *_CHIC-_. The suffix *_-sti-_ is of unclear origin (Irslinger 2002: 411, 418).

§ 103. *_CR̥HIC-_ > *_CRĬC-_

1. OIr. _bréo_ (f. _d_-stem)[104] ‘flame’ < *_brĭu̯od-_ is derived by IEW (132–133) from a stem *_b_^{h}_(e)rī̆-_, itself an extended form of a root *_b_^{h}_er(ə)-_ ‘boil up, stir up violently’. This root is *_b_^{h}_erh_$_2$_-_ (Hitt. _paraḫzi_ ‘chases, attacks’; LIV 81), so if

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[104] According to DIL (B-177). But LEIA (B-85) has it as a neuter. IEW (133), followed by de Bernardo Stempel (1999: 215) assumes an (original?) _o_-stem formed with the suffix *_-u̯o-_. It was certainly a _d_-stem in Middle Irish.

IEW's supposition were correct, it would imply a reconstruction **bʰr̥h$_2$i̯u̯od-*. The evidence for the 'extended' root suggests an *aniṭ* root however: ON. *brimi* 'fire' (semantically the closest link), Gk. φρῐμάσσομαι 'neigh and prance' (if related). OHG. *brīo*, OE. *brīw* 'pulp, mash' < **bʰrīu̯o-*, formally but not semantically similar to the Irish form, can go back to **bʰrei̯u̯o-*. On this basis, therefore, there is no reason to suppose that *bréo* was derived from a *seṭ* root.

However, Lühr (1976: 78–79) derives OHG. *brinnan* 'burn' from **bʰrei̯H-* 'cut' (Skt. *bhrīṇánti* (3pl.) 'harm'; LIV 92–93), which might imply **bʰriHu̯o-* for *bréo* (and OHG. *brīo*). The etymology relies on a semantic shift from 'cut' to 'burn' via 'cause a burning pain', which, while not impossible, is unlikely; it also leaves ON. *brimi* unexplained. Seebold (1980: 478–479) proposes an alternative derivation for *brinnan*: a thematised *nu*-present to the root **gʷʰer-* 'be warm'. Zero-grade **gʷʰr̥nu̯e/o-* was then remade to **gʷʰrenu̯e/o-* with false restoration of the full grade. Both etymologies are problematic, and which, if either, is correct remains uncertain. A derivation of *bréo* from **bʰr̥h$_2$i-u̯o-* cannot be assumed, and the etymology remains unclear.

2. OIr. *bruth* (n., later m. *u*-stem) 'heat, blaze, glow', OW. *brut* gl. *animus*, MW. *brut*, W. *brwd* (adj.) 'hot, warm, heated, ardent', (m.) 'heat, brewing', MB. *brout* (adj.) 'very hot, ardent', (m.) 'embers' < **brŭtu-* are connected by IEW (476; translating *bruth* as 'Gewicht, Masse') with Skt. *gurúḥ* 'heavy, weighty', Gk. βαρύς 'heavy', Lat. *grauis* 'heavy' < **gʷreh$_2$-*. IEW assumes an extended form **gʷerh$_2$-u-*, whence Latv. *grũts* 'heavy', Lat. *brūtus* 'heavy, inert' (a Sabellian loanword) < **gʷr̥uH-to-*.[105] This would suggest OIr. *bruth* < **gʷr̥Hu-tu-*, but the meaning given by IEW is better understood as a development of the basic meaning of *bruth* to 'glowing mass, lump; charge of metal' (DIL B-216–217), and *bruth* should be derived from the root **bʰeru̯-* (cf. Lat. *feruō* 'boil up, burn, glow'; Schrijver 1991a: 253–256; LIV 81; Irslinger 2002: 88–89). Consequently, *bruth* does not provide evidence for **CHIC-* clusters.

3. MIr. *tlus* (m. *u*-stem) 'cattle, property', MW. *tlws* (m.) 'jewel, precious stone; treasure' < **tlŭstu-* come, according to LEIA (T-80), from the same root as MIr. *teol* 'theft' and MIr. *tlenaid* 'takes away, steals', i.e. **telh$_2$-* 'lift, take on' (LIV 622–623; see MIr. *tláith* p. 81). If so, this would imply **tl̥h$_2$-u-stu-* > **tlustu-*. However, it is probably a late formation, given the suffix *-stu-*, based on the neo-*aniṭ* root of *tlenaid*. For an alternative etymology see Matasović (2009: 381).

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[105] Although we should probably take the Latvian and Latin forms as secondarily derived from the *u*-stem adjective seen in *gurúḥ* rather than as an 'extended' root.

4. MIr. _trost_ ‘noise, report, cry’, MW. _trwst_ (m.) ‘noise, din, clamour, uproar’, MB. _trous_, B. _trouz_ (m.) ‘noise’ < *_trŭsto-_ are derived by LEIA (T-152) from a base *_treu̯-_, itself derived from a root *_ter-_ which LEIA identifies in OIr. _torann_ ‘thunder, loud noise’ (p. 248), OIr. _torm_ ‘sound, noise, tumult; fame’ (p. 246). The root in question is probably *_terh_$_1$_-_ ‘drill, pierce’ (LIV 632–633; see MIr. _tarathar_ p. 167). If this derivation were correct, therefore, _trost_ would be the result of *_tr̥h_$_1$_-u-sto-_, but Irslinger (2002: 307) is rightly sceptical on formal and semantic grounds. MIr. _trost_ is not good evidence.

§ 104. _Conclusion_

As stated in the Introduction, the regular result of *_CIHC-_ is *_CĪC-_ (§ 99; there are too many good examples to list here). Good examples for *_CHIC-_ > *_CĪC-_ are § 100.7 MIr. _sín_ < *_sh_$_2$_i-nV-_, § 100.8 MIr. _sínid_ < *_sh_$_1$_i-nV-_, § 100.9 OIr. _súil_ < *_sh_$_2$_u-li-_. § 100.3 MIr. _fíthe_, § 100.5 OIr. _mín_ are not included because the only evidence for *_CHIC-_ is from Balto-Slavic accentuation (for doubts about which, see below p. 128 ff.).

There are no plausible examples of *_CHIC-_ > *_CĬC-_ (§ 101). The only good example of a laryngeal metathesis in the sequence *_CR̥HIC-_ (where the avoidance of a syllabification *_CR̥HIC-_ is due to paradigmatic analogy) is § 102.1 OIr. _crín_ < *_kr̥h_$_1$_i-nó-_. This seems to suggest that secondary *_CRHIC-_ developed in the same way as *_CHIC-_. If so, _crín_ is important, because it is the only form which we can be certain had final accentuation, and is therefore counter-evidence to Kortlandt and Schrijver’s theory that *_C(R̥)HIC-_ in a pretonic syllable gave *_C(R)ĬC-_. But it could be argued that this is not a real case of phonological metathesis, and that the creation of the sequence *_krih_$_1$_-_ rather *_kr̥h_$_1$_i-_ is entirely due to analogy: in order to keep the relationship with full grade parts of the verbal paradigm obvious, regular *_kr̥h_$_1$_i-no-_ > ^{x}_karino-_ was replaced by *_krih_$_1$_-no-_, ^{x}_krh_$_1$_i-_ being disallowed by the syllabification rules.

If we discount _crín_ on these grounds, there is no direct counter-evidence to the hypothesis that pretonic *_CHIC-_ gave *_CĬC-_. However, an exhaustive search of the data has also found no evidence at all in favour of the hypothesis, and it should therefore not be accepted. The only proof for the regular result of *_CHIC-_ shows *_CĪC-_, no doubt via *_CIHC-_. There is no evidence that the position of the accent played any part in this development.

§ 105. _Excursus: Pretonic *CHIC- Clusters in Greek, Italic and Balto-Slavic_

There is no proof that pretonic *_CHIC-_ gave *_CĬC-_ in Celtic, and there is even one possible piece of counterevidence. However, it would still be possible to maintain that this development occurred, as an alternative explanation for the short vowels in some words such as MIr. _sith-_ < _*sh$_1$i-tV-_, if other languages could be shown convincingly to have different results of pretonic and stressed _*CHIC-_. According to Kortlandt and Schrijver Balto-Slavic, Greek and Italic also show such different results.[106]

Kortlandt (1975: 2–4, 81; 1981: 15; 1986: 90–91; 1988: 302) and Schrijver (1991a: 226–230, 237–249, 512–536) put forward six roots with Indo-European comparanda in which Balto-Slavic failure of Hirt's law (retraction of the accent on to a long vowel resulting from a laryngeal cluster) is alleged to be combined with a zero grade root shape _*CHI-_: _*b^{h}Hu-_ (Russ. _bylá_ 'was', Latv. _bût_ 'to be'), _*g^{w}h$_3$i-_ (Russ. _žilá_ 'lived', Latv. _dzîvs_ 'alive'), _*l̥Hi-_ (Russ. _lilá_ 'poured'), _*m̥Hi-_ (Lith. _mylùs_ 'dear'), _*ph$_3$i-_ (Russ. _pilá_ 'drank'), _*uHi-_ (Russ. _vilá_ 'wound', Latv. _vîte_ 'tendril'). For two of these, there is no evidence apart from the Balto-Slavic accentuation for a root shape _*CHI-_ (_*m̥Hi-_ and _*uHi-_; see OIr. _mín_ p. 119 and MIr. _fíthe_ p. 119). One more (_*g^{w}h$_3$i-_; see OIr. _béu_ p. 121) has cognate forms in Celtic with short vowels, but we have concluded (p. 128) that Celtic forms with short vowels do not prove a root _*CHI-_, so this root cannot be used as evidence.

For the remaining three roots, there is some evidence for a full grade of the shape _*CeHi̯-_. Thus, for _*ph$_3$i-_ we find Skt. _ápāt_ (aor.) 'drank', Gk. Aeol. πῶθι (impv.) 'drink' < _*peh$_3$-_, beside Gk. Att. πῖθι (impv.) 'drink', OCS. _pitъ_ (pret.) 'drank', which can be resolved by assuming a root _*peh$_3$(i̯)-_ (LIV 462–463). For _*l̥Hi-_ the only firm evidence comes from Latv. _leju_ 'pour' < _*lĕi̯-_, which suggests _*lei̯H-_, and OCS. _lějǫ_ 'pour' < _*lēi̯-_, which suggests _*leh$_1$i̯-_. Either we must believe that Slavic preserved the original full grade, which was replaced by a new root shape in Latvian, or we can follow LIV (405–406) which reconstructs an acrostatic present _*lĕ̄i̯H-_, from which Baltic generalised the weak stem and Slavic generalised the strong stem. The second option sounds more likely, given the close relationship between Baltic and Slavic. For _*b^{h}Hu-_ there are short vowel forms in Latin, Greek and Celtic (see OIr. _both_ p. 122), and also the evidence of Skt. _bodhi_ (impv.) 'become', which is argued to be archaic and from _*b^{h}eHu-d^{h}i_. However, Jasanoff (1997: 177 fn. 11) and Jamison (apud Jasanoff, loc. cit.)[107] suggest inner-Indic derivations of _bodhi_, so it is by no means conclusive. It transpires that the good evidence for a correlation between failure of Hirt's law and root shape _*CHI-_ consists only of forms from _*peh$_3$(i̯)-_. It follows that we cannot, on the basis of this alone, assume that whenever a Baltic or Slavic form fails to retract the accent, it is due to a root shape _*CHI-_.[108]

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[106] For objections to their hypothesis see McCone (1991b: 128): "this proposal requires a high degree of coincidence", and Isaac (2007a: 25), who points out that Latv. _plâns_ 'flat, thin', without retraction by Hirt's law, must reflect _*pleh$_2$-nó-_. Cf. also Latv. _grũts_ 'heavy', Lat. _brūtus_ 'heavy, inert' < _*g^{w}ruh$_2$-tó-_ < _*g^{w}r̥h$_2$-u-tó-_ (see OIr. _bruth_ p. 127), where retraction did occur in Latvian, and a long vowel resulted in Italic, despite the _*-HI-_ in a pretonic position.

[107] With reference to Jamison (1997), which was not available to me.

Since a failure of Hirt's law and short vowels in other languages do correlate in the case of the root _*b^{h}Hu-_, it is possible that we could still prove the case for Balto-Slavic, given enough evidence that forms which show short vowels in Greek and Latin come from _*CHI-_ roots. In the case of _*b^{h}Hu-_ itself, it cannot be proved, as noted above, that this is in fact the correct root shape; the only full grades attested are _*b^{h}eu̯H-_ (Skt. _bhávati_ 'becomes, is'), and perhaps _*b^{h}u̯eH-_ (if the Latin imperfect ending _-bā-_ comes from _*b^{h}u̯eh$_2$-_). The short vowel in forms like Gk. φῠτόν 'plant', and φῠτήρ 'plant' (which reliably show oxytonesis), and Lat. _fŭtūrus_ 'about to be' (for which there is no evidence of the original accentuation) is unlikely to be due to a root _*b^{h}Hu-_ in a pretonic syllable: if that were the case, present _*b^{h}Hu-i̯é/ó-_ would have given _*b^{h}ŭi̯e/o-_, instead of Lat. _fī̆ō_ 'become', Gk. φῡ́ομαι 'grow, become' < _*b^{h}ūi̯e/o-_, and the past participle _*b^{h}Hu-tó-_ would have given ^{x}_b^{h}ŭto-_ instead of U. _fito_ 'what has become' < _*b^{h}ūto-_ < _*b^{h}uH-tó-_ (and cf. also Gk. φῡλή 'race, tribe').

The other evidence that _*CHIC-_ clusters ever give _*CĬC-_ in Greek or Latin is limited. Of the Greek forms considered plausible by Schrijver (1991a: 517–520), Gk. ἱμάς 'leather strap or thong' is not good evidence because the quantity of the initial ι- is uncertain: even if the long vowel found in Homer were due to metrical lengthening, καθῑμάω 'let down by a rope' also has a long vowel. The whole question of length is too uncertain to be the basis of any firm conclusion. Gk. λῠτός 'that may be untied, dissolvable' may come from _*l̥h$_2$u-tó-_ if it is cognate with Gk. λαῖον 'part of a plough, sock or blade', but Schrijver (1991a: 517) himself says this is uncertain, and the short vowel could have been carried over from the present stem λῠ́ω 'unbind, unfasten' < _*luH-e/o-_. For ἔλῠμος 'case', on the assumption that it reflects the original accentuation (there is no exact extra-Greek cognate), the situation is made complex by the fact that the root generally seems to be _aniṭ_; e.g. Skt. _vr̥ṇóti_ 'encloses', Gk. εἰλέω 'enclose' < _*u̯el-neu̯-_ (thus LIV 674, 675), beside the forms which might imply a laryngeal: Skt. _ūrṇóti_ 'encloses', ἔλῡμα 'stock of the plough'. By far the best example is Gk. πῦρ, πῠρός (gen. sg.) 'fire' <

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[108] For an analogical explanation of the lack of accent retraction see Rasmussen (1992a [1999]: 473 fn. 5, 483–484).

*_ph$_2$ur-_ (Hitt. _paḫḫur_ ‘fire’; NIL 540–545). However, even here it is possible that some other explanation is necessary, since the same alternation occurs in ON. _fúrr/fýrr_ ‘fire’ < *_pūr-i-_, Goth. gen. sg. _funins_ < *_pŭn-en-s_ (Müller 2007: 257–259), even though Germanic metathesises *_-Hu-_ regardless of the accentual position (Schrijver 1991a: 535).[109]

For Italic, the evidence of _fŭtūrus_ and _fore_ (fut. inf.) ‘be about to be’ < *_b^{h}ŭ-_ needs no further discussion. According to Schrijver, Lat. _pŭtus_ ‘clean’ comes from *_ph$_1$u-tó-_ and is cognate with Lith. _piáuti_, Latv. _pļaũt_ ‘cut’, OHG. _ar-fūrian_, OE. _ā-fȳran_ ‘cut’ (cf. Lat. _pŭtāre_ ‘prune trees’). However, the Baltic forms do not prove *_peh$_1$u-_, since they could equally go back to *_peu̯H-_ (Stang 1966: 73–74), and LIV (481–482) attributes them instead to a root *_pi̯eh$_2$-_ (cf. Gk. παίω ‘strike’, Lat. _pauiō_ ‘strike’), so _pŭtus_ cannot be used as an example of *_CHIC-_.[110] Lat. _cŭtis_ ‘skin’ (cf. Gk. σκῦτος ‘leather, hide, skin’) is derived by Schrijver from *(_s_)_kHu-ti-_ because of the short vowel in Gk. ἔγκῠτί ‘close to the skin’, but as noted above, a short vowel in Greek is not a guarantee of an original *_CHIC-_ cluster (in this case it might be due to loss of laryngeal in composition; Beekes 1969: 243). Even if _cŭtis_ did come from *_kHu-ti-_, there is no proof that the laryngeal was in an unstressed syllable: the accentuation of Germanic *_kūtí-_ (ON. _húđ_ ‘skin’) proves nothing about the accentuation of _cŭtis_. To use the Germanic evidence we would have to assume that Germanic, Italic and Celtic were descended from a single post-Proto-Indo-European proto-language (which is unproven), and that the position of the accent attested for Proto-Germanic was already fixed at that time (which cannot be proven).

Schrijver’s last ‘probable’ example is Lat. _lŭcrum_ ‘gain, profit’, which probably does come from *_l̥h$_2$u-tró-/-tló-_, given Gk. ἀπολαύω ‘profit from, enjoy’. However, since Schrijver (1991a: 235–236) suggests a rule *_-IHTR-_ > *_-ITR-_[111]

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[109] Of course, since Germanic undergoes Dybo’s rule, whereby long vowels in pretonic syllables are shortened, it is possible that the Germanic short vowel can be the result of Dybo’s rule after metathesis has taken place. This means Dybo’s rule, which in Schrijver’s formulation otherwise affects exactly the same environments in Italic, Celtic and Germanic, must have occurred after at least one purely Germanic sound change (as noted by Schrijver 1991a: 356). This awkward fact is, however, due entirely to Schrijver’s belief that *_CHIC-_ in pretonic syllables gave *_CĬC-_ in Italic and Celtic. If this is not the case, all examples of short vowels in pretonic syllables in Italic, Celtic and Germanic can be attributed to Dybo’s rule, which can have happened uniformly in Celtic, Italic and Germanic after the metathesis of *_CHIC-_ to *_CIHC-_ (which was probably a Proto-Indo-European change).

[110] The obvious (_pace_ Schrijver) connection with Lat. _pūrus_ < *_puH-ró-_ or *_ph$_2$u-ró-_ (see MIr. _úr_ p. 120) is particularly problematic, since the same root in an unstressed syllable gives a different result.

[111] I.e the ‘Wetter Regel’, see p. 150 ff.

for Lat. _pŭter_ 'rotten', OIr. _othar_ 'sickness, illness' < _*puH-tr-_, this might also be the explanation for metathesised _*luh$_2$-tlo-_ < _*l̥h$_2$u-tlo-_. Alternatively, since this is the only good example of pretonic _*CHIC-_ in Italic, it might be better to explain _lŭcrum_ < _*luh$_2$-tló-_ < _*l̥h$_2$u-tló-_ as due to Dybo's rule (for which see below). An example unmentioned by Schrijver is U. _pir_ 'fire' < _*pūr_, _pure_ (abl. sg.) < _*pŭr-_, which shows the same variation in vowel length as in Greek and Germanic. However, in this case the short vowel can again be explained by Dybo's rule.

An examination of the supposed evidence for unstressed _*CHIC-_ clusters in Balto-Slavic has shown that some forms do not show the expected retraction of the accent by Hirt's law in Balto-Slavic. One of these forms (Russ. _pilá_) comes from a root for which there is external evidence for a zero grade _*ph$_3$i-_. For none of the others can a root of the shape _*CHI-_ be proved. One of the roots (ostensibly _*b^{h}uH-_) has forms in Latin and Greek which show unexpected _*-ŭ-_ instead of _*-ū-_. In Greek, two of these forms (φῠτόν, φῠτήρ) show possibly old oxytonesis, but oxytonesis is also found in φῡλή. In Latin, none of the forms with _*b^{h}ŭ-_ can be shown to have originally been oxytone.[112] Since the two Italic examples may have other explanations (Dybo's rule, Wetter Regel), only Greek (πῠρός) has a form which might plausibly reflect _*CĬC-_ from unstressed _*CHIC-_.

We can conclude that there is not enough evidence in any single language for unstressed _*CHIC-_ being the cause of the observed behaviour; nor can _*CHIC-_ be proved to give _*CĬC-_ in Celtic. Neither the failure of Hirt's law in Balto-Slavic, nor an unexpected short vowel in Greek, Latin or Celtic, can be used as evidence for an original zero grade root shape _*CHI-_ in Proto-Indo-European.

Dybo's Rule

§ 106. *Introduction*

In the discussion of the result of _*CHIC-_ and _*CIHC-_ above, mention has been made of Dybo's rule as a possible way of explaining short vowels which seem to come from these sequences. According to Dybo (1961), long vowels remained in Proto-Italic, Proto-Celtic and Proto-Germanic when stressed, but were shortened in pretonic syllables in Proto-Italic and Proto-Celtic, and in pretonic syllables in Germanic when the following syllable began with a sonorant.[113] On the basis of this rule and on the evidence from Balto-Slavic accentuation, Dybo argues that these languages best represented the accentual system in Proto-Indo-European, the Greek and Sanskrit accentuation being innovatory. This theory was not accepted, but his explanation for the unexpected short vowels found in Italic, Celtic and Germanic has been the basis for a series of treatments on similar lines.

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[112] Forms such as φῠτόν are probably derived from Gk. Hom. φῠ́ομαι 'grow, wax, spring up' and Gk. φῠ́ω 'bring forth, produce, beget' < _*b^{h}uH-e/o-_. For attempts to explain the short vowel in Latin, see Rix (1983: 100–103) and Meiser (1998: 197–198).

Kortlandt (1981; earlier version in Kortlandt 1975: 76–82) argues that laryngeals following syllabic *-_R̥_- and *-_I_- were lost later than laryngeals following low vowels (*-_e_-, *-_o_-). Dybo's rule, which shortened pretonic long vowels, was completed between these developments. Consequently *-_Ī_- < *-_IH_- and *-_Rā_- < *-_R̥H_- were not affected by Dybo's rule.

Schrijver (1991a: 225–248, 334–357, 512–536) points out the problems of Kortlandt's approach,[114] and puts forward a new hypothesis, that long vowels were shortened in pretonic syllables when before sonorants (and consonantal *-_I̯_-), but not before obstruents. It will be argued below that there is counterevidence to this formulation. It should be noted that apparent examples of short vowels in pretonic syllables before obstruents are attributed by Schrijver to original pretonic *_CHIC_- sequences, which according to him gave *_CĬC_- regularly in Italic and Celtic. It is concluded here (p. 111 ff.) that this is not the case; therefore all cases of short vowels from *_CHIC_- or *_CIHC_- will be taken as evidence for Dybo's rule. The standard view, that zero-grade adjectives formed with the suffix *-_ro_- and *-_no_- were stressed on the suffix, is followed here (see p. 113), so these will also be included as _de facto_ evidence of pretonic *_CIHC_- sequences.

Zair (2006a, 2006b), in an earlier discussion of some of the material collected here, concludes that *-h_1- and *-h_3- were lost in pretonic *_CEHC_- and *_CIHC_-. *-h_2- remained, and was subsequently lost with compensatory lengthening.

Isaac (2007a: 21–59) takes a very different approach to the Dybo's rule phenomena. According to him, short vowel reflexes in Celtic resulting from *_CEHC_-, *_CIHC_- and *_CR̥HC_- clusters are due to purely Celtic rules[115] which can be summed up (with the usual symbols, except that *O* represents a rounded vowel, and *B* represents a labial consonant) as: *-h_1- > ø /I_Ci and /CR̥_Ci (*-h_1- is lost after a syllabic high vowel or sonorant when the following syllable contains *-i-); *-h_2- > ø /u_C and /BR̥_CO (*-h_2- is lost after *-u- and after a syllabic sonorant when the preceding consonant is labial and the following syllable contains a rounded vowel); *-h_3- > ø /I_CO and /CR̥_CO and /o_mO (*-h_3- is lost after a syllabic high vowel or sonorant when the following syllable contains *-u- or *-o-, and when it is preceded by *-o- and followed by *-m- and the next syllable contains *-o- or *-u-).

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[113] He explained the reflexes of 'long' sonorants (i.e. *-_R̥H_-) in Italic and Celtic in the same way, arguing that these resulted in *-_aR_- in pretonic syllable, *-_Rā_- when stressed. However, this explanation is certainly not correct (see. e.g. Schrijver 1995: 168–191; and p. 69 ff.).

[114] Most notably it fails adequately to explain OIr. _fer_ 'man' < *_u̯ĭro_- < *_u̯ih_$_1$-_ro_-, which is perhaps the example _par excellence_ of Dybo's rule.

[115] Which took place after the Celtic sound change *-_ē_- > *-_ī_- (although it should be

Joseph (1980: 306–363) and Ringe (1988: 420, 2006: 79) resist the imposition of any version of Dybo's rule as regular sound change, explaining the short vowel reflexes as due to morphological and analogical processes.

Although discussion of Dybo's rule was couched in terms of vowel-shortening by Dybo himself and by Schrijver, Kortlandt and Isaac's explanations explicitly assume that Dybo's rule is connected with the loss of laryngeals rather than shortening of vowels. Consequently, it is necessary to examine the evidence pertaining to Dybo's rule as part of an attempt to understand the development of the laryngeals in Proto-Celtic.

Since it was concluded above (p. 109 ff., p. 111 ff.) that the regular result of *CEHC- and *CIHC- clusters was *CĒC- and *CĪC- respectively, we will first collect the examples of *CEHC- > *CĔC- and *CIHC- > *CĬC-, before drawing any conclusions. Short vowels resulting from the sequences of the type *CEHCC- and *CIHCC- may be due to the so-called 'Wetter Regel', and are discussed in the section devoted to that problem (see p. 150 ff.). Since the problems with the theories of Dybo and Kortlandt have been adequately addressed in the works above, they will not be explicitly considered below; it will not be difficult to glean the evidence and counterevidence for their views from the forms given here. As the majority of those who have studied Dybo's rule have concluded that it applied to Germanic and Italic as well as Celtic, forms from those languages will also be given where appropriate, but without extensive discussion.

§ 107. *CEHC- > *CĔC-

1. Gaul. *Carus*, *Caro-* (p.n.) < *kăro- and its denominative verb OIr. *caraid* 'loves', MW. *caru* (v.n.) 'love', MB. *caret*, B. *karout* (inf.) 'love' < *kărā- are cognate with Lat. *cārus* 'dear, beloved', Goth. *hors* 'adulterer, fornicator', Latv.

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noted that this is only because Isaac insists on deriving MIr. *sith-* (p. 124) from the formally implausible *seh₁-ti- rather than the more likely *sh₁i-ti-).

kãrs ‘lustful, desirous’ < *_kāro-_. The root was *_keh$_2$-_ (cf. Skt. _kā́maḥ_ ‘desire, wish, love’, Av., OPers. _kāma-_ ‘demand, wish’; IEW 515).[116] The difference in vowel length may reflect two formations: *_kh$_2$-ro-_ in Celtic, *_keh$_2$-ro-_ elsewhere; there are examples of _ro_-adjectives of similar meaning with different vowel grades, e.g. Skt. _dūráḥ_ ‘far, long’, Lat. _dūrāre_ ‘extend’ < *_duh$_2$-ro-_ vs. Gk. δηρός, Arm. _erkar_ ‘long’ < *_du̯eh$_2$-ro-_ (see Vine 2002 for a discussion of this phenomenon). Alternatively, the short vowel in Celtic may be due to Dybo’s rule (Schrijver 1991a: 343–344). However, Latin and Germanic, which also underwent Dybo’s rule, do not show shortening.

2. OIr. _deil_ ‘female pig two years old’, _dela_ (pl.) ‘teat, dug’ are derived by Schrijver (1991a: 344–345) from *_d^{h}eh$_1$-l-_ (to the root *_d^{h}eh$_1$(i̯)-_ ‘suck’; LIV 138–139; see OIr. _dínu_ p. 118). He argues that if the preform were *_d^{h}h$_1$i-l-_, lowering of *_-i-_ to *_-e-_ would be incomprehensible, given the following palatal vowel. However, as Isaac (2007a: 46) points out, it is not possible to be certain of the original formation, and a following *_-i-_ or *_-i̯ā_ (> *_-ii̯ā_) ought to have led to raising in *_del-i-_ to give ^{x}_dil_. Therefore, original preforms *_d^{h}eh$_1$-l-_ or *_d^{h}h$_1$i-leh$_2$_ are equally possible on the basis of the Irish alone, but Gk. θηλή ‘breast, teat’ points to < *_d^{h}eh$_1$-léh$_2$_. OE. _delu_, OHG. _tila_ ‘teat’ can come from *_d^{h}h$_1$i-leh$_2$_ or *_d^{h}eh$_1$-leh$_2$_ (with reintroduction of _-i-_ into _tila_ from OHG. _tili_ ‘teat’ < *_tili̯ā_, according to Schrijver 1991a: 352). Whichever the correct reconstruction, both the Celtic and Germanic forms show shortening. If they are exactly cognate with Gk. θηλή this is evidence of oxytonesis. MIr. _did_ ‘teat’ is attested only twice (DIL D-83); it is possible that it is really _díd_. A connection with *_d^{h}eh$_1$(i̯)-_ ‘suck’, as suggested by LEIA (D-77) is semantically likely, but the formation is unclear. A reconstruction *_d^{h}eh$_1$-d^{h}eh$_2$_, equivalent to Gk. τήθη ‘grandmother’, is possible, but so is the reduplicated formation (*_d^{h}i-d^{h}h$_1$-eh$_2$_) apparently to be found in Gk. τίτθη ‘nurse’ (with ‘expressive’ gemination in Greek?).

3. OIr. _feth_[117] ‘breeze’ < *_u̯etV-_ looks as though it ought to come from the root *_h$_2$u̯eh$_1$-_ ‘blow’ (LIV 287; see MW. _gwint_ p. 174), in which case it reflects

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[116] Hamp (1976a: 5–6) can therefore not be correct in deriving Celtic *_kărV-_ from *_kr̥h$_2$-V-_, with metathesis of the laryngeal in the root as the basis of *_keh$_2$r-o-_ in the other languages. This is very unlikely even without the evidence that the root is *_keh$_2$-_. This also means that Beekes’ (1988b: 88) connection of _caraid_ with Toch. A _krant_, B _krent_ ‘good’ < *_kärent-_ < *_k̂r̥h-ont-_ must be discarded. Watkins (1969a: 185) attributes _caraid_ etc. to “emotive child language”, comparing Lat. _amāre_, but there is no reason not to consider it a regular Proto-Indo-European root (and cf. LIV’s 265–266 ascription of Lat. _amāre_ to a regular Proto-Indo-European root *_h$_2$emh$_3$-_).

[117] Not _féth_, as supposed by DIL (F-102); cf. NIr. _feithan_ ‘stiff breeze’, _feoithne_ ‘breeze’.

*_h$_2$u̯eh$_1$-tV-_ (Joseph 1980: 50–51), with shortening. However, it is possible that there was a root *_h$_2$u̯et-_ of similar meaning (Gk. Hesych. ἀετμόν· τὸ πνεῦμα, Gk. ἄ̆τμος 'smoke, vapour'; IEW 82).

4. OIr. _glan_ (_o_-, _ā_-stem adj.) 'clean, pure, clear, bright', MW., MC., MB. _glan_ (adj.) 'clean, pure, bright', Gaul. _Glanum_ (river name) < *_glăno-_ are more likely to reflect *_ĝ^{h}l̥h$_1$-no-_ rather than *_g^{h}leh$_2$-no-_ with shortening by Dybo's rule, as argued by Schrijver (1995: 173). But the short vowel is problematic: analogy with OIr. _glas_ 'blue, green' or borrowing from ON. _glan_, MHG. (m.) _glan_ 'brightness, glow' might be the explanation (see p. 73).

5. OIr. _ler_ (n. _o_-stem) 'great number, multitude, abundance' is derived by Joseph (1980: 135) from *_pleh$_1$-ro-_, cognate with Lat. _plērus_ 'very many, a large part'. Alternatively, it may be a metaphorical usage of OIr. _ler_ 'sea, ocean' (DIL L-111; p. 140). Consequently, it is not a certain example.

6. MIr. _mer_ (_o_-, _ā_-stem adj.) 'demented, crazy', Gaul. _Mero-_, _-merius_ (p.n. elements) are doubtfully connected by LEIA (M-39–40) to Gk. Att. μῶρος (non-Attic μωρός) 'dull, sluggish, stupid' and Skt. _mūráḥ_ 'dull, stupid, imbecile'. It is possible to connect all three on the assumption of a root *_mu̯eh$_1$-_, if the Greek form shows _o_-grade, and Irish has _e_-grade with shortening by Dybo's rule. More commonly, the Irish form has been ignored, and it has been supposed that Skt. _mūráḥ_ and Gk. μῶρος < *_mu̯ōro-_ both come from *_muh$_3$-ro-_ (Normier 1977: 182 fn. 26; accepted by Olsen 2009: 357). However, Mayrhofer (KEWA 2.664; EWAIA 2.367) is doubtful of this etymology, and such a development in Greek outside final syllables remains somewhat controversial.

LEIA dismisses an alternative connection with OIr. _maraid_ 'lasts, persists, is extant, remains', on the grounds that it is semantically remote. But the connection with Lat. _mora_ 'delay' suggested by Schumacher (2004: 476–477) allows a semantic link: in English, people with learning difficulties have been called 'slow' or 'retarded'. MIr. _mer_ would then reflect *_merH-o-_, and have nothing to do with μῶρος. The etymology of _mer_ is too uncertain to be used as evidence.

7. OIr. _om_ (_o_-, _ā_-stem adj.) 'raw, uncooked', MW. _of_ (adj.) 'crude, untreated, raw, uncooked', Gaul. _Omos_ (p.n.) < *_ŏmo-_ are cognate with Gk. ὠμός 'raw' < *_ōmo-_, Arm. _howm_ 'raw', Skt. _āmáḥ_ 'raw, uncooked' < *_ŏmo-_ or *_ōmo-_. If Skt. _amláḥ_ 'sour, acid', Lat. _ămārus_ 'bitter', Dutch _amper_ 'sharp, bitter' belong here (IEW 777), then we must reconstruct *_h$_2$em-_, *_h$_2$ōm-_ and *_h$_2$om-_ to explain all the forms, but Schrijver's (1991a: 43, 77, 347) semantic distinction between *_ăm-_ 'bitter' and *_ōm-_ 'raw' is convincing. He reconstructs

**HoHmo-* for ὠμός etc. on the grounds that lengthened grade is not expected in *o*-stem adjectives, with Celtic **ŏmo-* showing vowel-shortening by Dybo's rule, but ablaut variation remains a possibility.

§108. **CIHC- > *CĬC-*

1. OIr. *broth* 'beard, ear of corn' < **brŭtE-* or **brotE-* (where *-E-* is **-a-* or **-o-*) is derived by Irslinger (2002: 262) from **b^{h}ruH-tE-* (**b^{h}reu̯H-* 'break open': Lith. *briájuos* 'break in'; LIV 96). The semantics are paralleled by Skt. *bhrūṇám* 'embryo' (EWAIA 2.283); the etymology is plausible but not certain.

2. OIr. *cisse* 'drawn out, twisted' (p.p.) is derived by IEW (538) from the root **kēi-*, i.e. **kei̯h$_2$-* 'set in motion' (Gk. κῑ́νυμαι 'go, move'; LIV 346). This would imply **kĭd$^{(h)}$- < *kih$_2$-d$^{(h)}$-*. However, Schumacher (2004: 391–393) compares Lith. *kìšti* 'to stick in, stretch into' < **kei̯s-*, which is more probable.

3. W. *cre* (f.) 'croak, caw', MW. *dychre* (adj.) 'loud and vehement, screaming', (m.) 'croak, shriek' < **krĭgā* appear to be directly cognate with Gk. κρῑγή 'gnashing of teeth; shrieking; ἡ γλαῦξ (Hesych.)', ON. *hrīka* 'gnash' < **krīgā* (IEW 570). The difference in vowel length may be due to Dybo's rule operating on **kriHgeh$_2$* (note that final accentuation is attested in Greek). However, given the semantics of these words, the possibility of onomatopoeia having an effect on the vowel length cannot be ruled out; independent creation may even be possible.

4. OIr. *cuil* (f.) 'fly', MW. *kylyon*, W. *cylion* (pl.) 'midges, perhaps wasps, gnats', MB. *quelyen*, B. *kelien* (pl.) 'flies', OC. *kelionen* (singul.) gl. *musca* < **kŭli-* are cognate with Lat. *cŭlex* 'gnat'. Although LEIA (C-268) considers that no other cognate is likely, Schrijver (1991a: 527) follows IEW (626) in comparing Skt. *śū́laḥ* 'pike, spit, javelin; piercing pain', *śūka-* 'insect's sting, ear of corn', and Avestan *sūka-* 'needle, pin'. This semantic relationship seems acceptable, which points to a root **k̂uH-*. Schrijver's (1991a: 349, 527) assumption of a root **k̂Hu-* is entirely speculative.

5. MIr. *den* (adj.) 'firm, strong, powerful' is of uncertain declension. Its frequent spelling as *dein* suggests palatal *-n-*, but it cannot reflect an original *i*-stem **deni-* since this ought to have given Irish ^{x}*din* by raising (McCone 1996: 110). Apparent attestations of gen. sg. and nom. pl. *deni* imply a *i̯o*-stem (DIL D-2), but **deni̯o-* ought to have given nom. sg. ^{x}*dine*. Probably the best assumption is that it was originally an *o*-stem, which later went over to the *i*- and/or *i̯o*-stems. LEIA (D-49) suggests a connection with OIr. *dían* 'swift rapid', which would imply a reconstruction **dih$_1$-no-* (**dei̯h$_1$-* 'rush along',

LIV 107; see OIr. *dían* p. 229). However, the alternative connection with Lat. *bonus* 'good' < **du̯eno-* is formally unproblematic and semantically better. Consequently, *den* is not firm evidence for **CIHC-*.

6. OIr. *dron* (*o*-, *ā*-stem adjective) 'solid, firm, substantial' < **drŭno-* or **drŏno-*, is derived by LEIA (D-201) and IEW (214–217) from the same 'root' meaning '(oak-)tree' as MIr. *drúth* (p. 115). An identical formation is to be found in (late) Skt. *druṇam* 'bow, sword' (the length of the *-u-* is not attested, but NPers. *durūna*, Balochi *drīn* 'rainbow' point to **-ū-*). Assuming that the Sanskrit word was substantivised from the adjective found in Irish, we could reconstruct an original **druHno-* > **drŭno-*. However, the semantics are not close, and KEWA (2.78) is doubtful, seeing Skt. *druṇam* as possibly formed within Indic. Consequently, there is no proof of an original laryngeal.

7. OIr. *fer* (m. *o*-stem), OW. *gur*, MW. *gwyr*, *gwr* (m.), MB. *gour* (m.), OC. *gur* gl. *uir*, MC. *gour* (m.) 'man' < **u̯ĭro-* are cognate with Lat. *uĭr*, Goth. *wair* 'man' < **u̯ĭro-*, U. *ueiro* 'manhood, men' < **u̯ĭrā* (Meiser 1986: 45), and Skt. *vīráḥ* 'man, hero', Lith. *výras*, Latv. *vĩrs* 'man', Toch. A *wir* (adj.) 'young' < **u̯īro-* (and perhaps the Homeric name Ἶρος; Bader 1976; Watkins 1995: 36 fn. 13). Consequently, we can reconstruct **u̯ih$_1$-ro-* (further cognate with Lat. *uīs* 'force, power, strength', Gk. ἵεμαι 'send myself, hasten' < **u̯ei̯h$_1$-*; IEW 1123–1124, 1177–1178; LIV 668–669; NIL 726–729).

Bammesberger (1990: 74) explains the short **-ĭ-* by derivation from an original *r*-stem **u̯(e)i̯h$_1$-r̥*, whence, with loss of laryngeal before a vowel, a thematised derivative **u̯ĭr-o-* could be extracted from the strong stem, while the weak stem **u̯ih$_1$r-* would give a thematised **u̯īr-o-*. Objections are raised by Müller (2007: 142), and anything other than a formation **u̯ih$_1$-ro-* seems highly implausible. Casaretto (2004: 419) follows EWAIA (2.569) in assuming laryngeal loss in a compound (cf. Skt. *vira-pśáḥ* 'abundance' < '*men and cattle'), but it seems unlikely that such a common word would have imported the vocalism of the compound. Furthermore, the word is not often found in compounds in Latin, apart from *duumuir* and related words.[118] OIr. *fer* seems to be a good example of **CĬC-* < **CIHC-*.

8. MIr. *gruth* (m. *u*-stem) 'curds, cheese' < **grŭtu-* probably does not belong with OE. *crūdan* 'to crowd' (IEW 406), but comes from **g^{wh}r̥-tu-*, from **g^{wh}er-* 'become warm' (LIV 219–220; Irslinger 2002: 104–105; Stifter 2005: 169–170).[119]

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[118] Possibly old Celtic compounds of **u̯ĭro-* are found in forms like OIr. *óenar* 'a single individual, one alone' < **oi̯no-u̯ĭro-*.

[119] MIr. *grus* 'cheese' (s.v. *grús*, DIL G-168) does not have a real long vowel (Stifter 2005: 170).

9. OIr. *ith* (n. *u*-stem) 'corn, grain', OW. *it*, MW. *yd* (m.) 'corn, grain, cereal', MB. *et*, *eth* B. *ed* (coll.) 'grain, cereal', OC. *yd* gl. *seges* < **pĭtu-* are cognate with Skt. *pitúḥ*, Av. *pitu-* 'food', Gk. πίτῡρον 'husk of corn, bran', Lith. *piẽtūs* (pl.) 'lunch' (Joseph 1980: 358–359; McCone 1991a: 3; Widmer 2004: 17–18), which point to an *aniṭ* root. According to Joseph, the same root is also found in OIr. *íth* 'lard, grease' (p. 116), Skt. *pī́tu-dāruḥ* '(pitch-) pine' < **piH-tu-*, and Gk. πῐ́τυς 'pine' < **pĭtu-*.

If 'corn, grain' is the original meaning of the formations showing a root **pei̯-*, then a derivation from **pei̯H-* 'swell up' is acceptable, but not essential. The connection with Skt. *pī́tu-dāruḥ* '(pitch-) pine', Gk. πῐ́τυς 'pine' is semantically more distant. It may be an illusion, especially if this is a non-Indo-European word (Schrijver 1991a: 231–232), although the alternation of these **-tu-* formations with the **-no-* of Lat. *pīnus* 'pine' looks Indo-European.

If **pei̯-* is derived from **pei̯H-* 'swell up', then the loss of the laryngeal cannot be a Celtic process, since the *aniṭ*-root is also found in Indo-Iranian and Lithuanian. Widmer (2004: 19) suggests that it is due to the 'Wetter-Regel' (see p. 150 ff.) in a stem allomorph **piH-tu̯V-* > **pi-tu̯V-* of a *tu*-stem. Joseph suggests derivation from the verbal stem where the laryngeal was lost regularly before a vowel. The most likely explanation, however, is simply the existence of a (nominal) root **pei̯-* 'corn, grain, food' as well as **pei̯H-* 'swell up'.

10. OW. *iot*, MW. *iwt*, W. *uwd*, *iwd* (m.) 'porridge, pottage', MB. *yot*, B. *yod* (m.) 'gruel', OC. *iot* gl. *puls*, Gaul. *Iutu-*, *Iuto-* (p.n. element) < **i̯ŭtV-*[120] are connected by IEW (507) with Lat. *iūs* 'soup' < **(H)i̯uHs-* (see MIr. *úsc* p. 156). If this is correct the root must be **(H)i̯uH-*, and 'soup' must have been an *s*-stem of the type Gk. κρέας 'flesh'; MW. *iwt* etc. would come from **(H)i̯uH-tV-*, with **CIHC-* > **CĬC-*. Matasović (2009: 438–439) sees these forms as non-Indo-European borrowings precisely because of this development, and because of the semantic difference from 'soup'. However, the change from 'soup' to 'porridge' does not seem very great. Therefore, *iwt* is a possible example of **CIHC-* > **CĬC-*.

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[120] Matasović (2009: 438) suggests that the alternation of **-o-* and **-u-* in the Brittonic forms is due to variant forms such as **i̯uti-* and **i̯uto-* (better **i̯uti-/i̯uto-* vs. **i̯utā* > **i̯otā* by *a*-affection, since **i̯uti-* and **i̯uto-* would give the same result in Brittonic; Schrijver 1995: 255, 265–268). In fact the only sign of such an alternation is OW. *iot*, since **-u-* gives W. *-w-*, B, C. *-o-* regularly (Jackson 1953: 274), and this spelling may not be reliable. OIr. *íth* 'pap, pottage' has an irregular vowel, and is probably due to confusion with *íth* 'lard, grease' (GOI 39).

11. OIr. *lenamain* (f. *ā*-stem) ‘act of adhering to’, OB. *linom* gl. *litturam* < **lĭnomon-* are obviously deverbal from **lina-* > OIr. *lenaid* ‘remains, continues’ (see p. 49), and hence do not reflect **liH-n-*.[121]

12. OIr. *ler* (m. *o*-stem) ‘sea, ocean’, OW. *lir*, *llyr* (m.) ‘sea, ocean’ < **lĭro-* < **liH-ro-* are to be compared with MW. *llin* (m.) ‘flow of blood, discharge, pus’, B. *lin* (m.) ‘pus’, MC. *lyn* (m.) ‘fluid, liquid, serum, blood’ < **līno-* < **liH-no-*, MW. *llif*, *lli* (m.) ‘stream, flow’, MC. *lyf* (m.) ‘flood, deluge’ < **līmo-* < **liH-mo-*, cognate with Lith. *líeti* ‘pour’ (<**lei̯H-*; IEW 664–665; LIV 405–406). If the short vowel of *ler* is due to oxytonesis, it must be assumed that **liH-no-* and **liH-mo-* were barytone at the time of Dybo’s rule, but there is no external proof of this; if all the forms started as substantivised adjectives, they must originally have all been oxytone.

13. MIr. **lon* ‘loin’ probably does not exist, and cannot therefore go back to **luh*$_2$*n-* (Schrijver 1991a: 529; *contra* IEW 681).

14. OIr. *loth* (f. *ā*-stem) ‘mud, mire’, Gaul. *Luto-* (pl.n. element) may be connected with Lat. *lŭtum* ‘mud’, *pollūtum* ‘defiled’, Gk. λῦμα ‘water used in washing, filth; defilement’, λῠ́θρον ‘defilement from blood, gore’ (IEW 681). Given the variation in vowel-length, it is problematic to reconstruct a laryngeal here (Schrijver 1991a: 241; *aniṭ* root according to LIV 414).[122] Furthermore, *loth* could instead be related to W. *llaid* (m). ‘mud, mire’, which may be from **lŏti̯o-* (see OIr. *laith*, p. 60).

15. MIr. *moth* (m.) ‘*membrum virile*; in grammar the masculine gender; man’ could be an original past participle from the root of OIr. *múnigim* ‘piss’ (p. 116), and hence from **m(i̯)uh*$_1$*-to-* (Irslinger 2002: 270), but the etymology is difficult. Lat. *mūtō* ‘penis’, *Mūtūnus* (a priapic divinity) might demonstrate original length. But we also find *muttō* ‘penis’; this is an example of the so-called *lītera*-rule, whereby a word in Latin has two forms, one with long vowel followed by a single consonant, one with short vowel and geminate consonant (Meiser 1998: 77; Sen 2009: 66–170), so we cannot say whether the long vowel or the geminate is original. Connections with Lat. *mŭtilus* ‘maimed, mutilated’, MIr. *mut* (adj.) ‘short’ (Walde & Hoffmann 1938–1956: 2.136–137; LEIA M-56; IEW 753) only serve to confuse the issue. If *moth* did originally have a long vowel, it may have been shortened by contamination

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[121] But not an *aniṭ* root, as supposed by Schrijver (1991a: 529).

[122] Which reconstructs **lu-smn̥* for λῦμα. One might instead connect this with **leu̯h*$_3$- ‘wash’ (LIV 418).

with MIr. *toth* 'the female *pudenda*; in grammar the feminine gender' (cf. Lat. *Tŭtūnus*, also a priapic divinity?), or be due to taboo deformation.

16. MIr. *much* 'smoke, stifling vapour' is attested as such in glossaries, but OIr. *múchaid* 'covers over, presses, suffocates' suggests the vowel is long. On the other hand, MIr. *muich* (f.) 'gloom, dejection, sadness', if it is connected, seems to have short *-u-* (DIL 183). The Brittonic forms certainly have short vowel: MW. *mwc*, W. *mwg* (m.) 'smoke', B. *moug* (m.) 'suffocation', LC. *mooge* (m.) 'smoke, fire, reek' < **mŭko-*. Extra-Celtic forms are equally problematic: OE. *smeocan* 'smoke' comes from **smeu̯(H)g-*, but Gk. σμῡ́χω 'burn in a mouldering fire' suggests **smuHg*^{h}- (or **smuHk*^{h}-, if directly cognate with the Celtic words?). The uncertainty over vowel quantity in Celtic and the final velar in the other languages, makes it impossible to use these forms as evidence.

17. MIr. *ruth* (m., probably *u*-stem, Irslinger 2002: 125) 'the act of overthrowing, casting down, breaking' < **rŭ-tu-* is cognate with Lat. *ruĕre* 'rush down, tumble', but this probably comes from **h*$_3$*reu-* (Schrijver 1991a: 24, 234; see MIr. *rúathar* p. 233) rather than **reu̯H-* (LIV 510).

18. OIr. *scoth* (f. *ā*-stem) 'flower, blossom' and MIr. *scoth* (f. *ā*-stem) 'point, edge' < **skŭtā* or **skŏtā* may be homophonous rather than coming from the same etymon. As noted by Irslinger (2002: 359–360), they are not connected with OHG. *scoz* 'shoot, sprout', ON. *skjóta* 'dart, shove, move' (as LEIA S-51) < **(s)keu̯d-* (cf. Skt. *códāti* 'incites, animates'; LIV 560), since **skŭdā* would give OIr. ^{x}*scod*. According to Irslinger, OIr. *scoth* 'flower' is cognate with Hitt. *iškunant-* 'spot, stain', Skt. *ā-skunoti* 'pierces, marks' < **skeu̯h*$_2$- 'poke, push' (cf. Hitt. *iškunaḫḫis* (3sg. pret.) 'marked'; LIV 561). She attributes the short vowel either to generalisation from the nasal present **sku-n-h*$_2$- (which is, however, not attested in Celtic), or a root shape **skeHu̯-* on the basis of Lith. *skiaurė̃* 'perforated boat used for holding fish' and Goth. *skaurō* 'shovel'. But we have seen that **CHIC-* did not give **CĬC-* in Celtic, neither of these argues for **skeHu-* (Lith. *-iau-* can come from **-ĕu̯-*; Stang 1966: 73–74), and *skiaurė̃* could not come from **skeh*$_2$*u̯-* anyway.

MIr. *scoth* 'point' is probably cognate instead with Lith. *skutù* 'shave, scrape' (for the semantics cf. MIr. *scothaid* 'cuts off, lops, shears'; LIV 561). Although Irslinger rejects this connection for OIr. *scoth* 'flower' and prefers to derive both MIr. and OIr. *scoth* from **skuh*$_2$*-teh*$_2$, as the result of a semantic split from an original word referring to a sharp point poking through the earth, it seems just as likely as a derivation from **skeu̯h*$_2$-. Therefore, neither OIr. *scoth* 'flower' nor MIr. *scoth* 'point' are good evidence for **CIHC-* > **CĬC-*.

19. OIr. _slemon_ (_o_-, _ā_-stem and _i_-stem adj.) ‘smooth, polished, sleek, slippery’, MW. _llyfyn_, W. _llyfn_ (adj.) ‘smooth, level; polished, slippery’, OW. _limnint_ gl. _tondent_, W. _llyffnaf_ ‘make smooth’, OB. _gurlimun_ gl. _dilinti_, MB. _dileffn_ (adj.) ‘unpolished, rough’ < *_slĭmno-_ are connected by IEW (663) with ON. etc _slím_ ‘slime’, Latv. _sliẽnas_ (f. pl.) ‘saliva’, OCS. _sliny_, SCr, _slȉna_ ‘snot’ < *_slei̯H-_ (on the basis of the Balto-Slavic accentuation; Kortlandt 1975: 58). OIr. _slemon_ etc. may belong here (via a base meaning ‘slippery’), but we might prefer a connection with Gk. λεῖος, Lat. _lēuis_ ‘smooth’, Gk. λῑτός ‘smooth, plain’. These also point to a laryngeal, and may even be the same root (but see Schrijver 1991a: 283–284, who reconstructs *_leh$_1$i̯-_). Whether we reconstruct *_slei̯H-_ or *(_s_)_leh$_1$i̯-_, the preform of the Celtic forms will have been *_slih$_{(1)}$mno-_ (< *_sl̥h$_{(1)}$i-mno-_). However, we cannot tell whether this resulted in Proto-Celtic *_slī-_ or *_slĭ-_, because *_-ī-_ would have been shortened by Osthoff’s law.

20. OIr. _suth_ (m. _u_-stem) ‘fruit, produce; offspring, issue, progeny’ < *_sŭtu-_ (Irslinger 2002: 130) is generally connected with a series of words which seem to show a root (or roots) *_seu̯H-_. While Goth. _sunus_, OHG. _son_, ON. _sunr_ ‘son’ < *_sŭ-nu-_, Skt. _sūnúḥ_, Lith. _sūnùs_, OCS. _synъ_ ‘son’ < *_sū-nu-_ are treated separately by NIL (686–690) from forms like Skt. _sū́tuḥ_ (f.) ‘pregnancy’ (NIL 617–618),[123] it is plausible that they reflect the same root. Given the semantic and formal identities with the Sanskrit and Balto-Slavic forms, the short vowel in the Germanic word for ‘son’ is to be attributed to Dybo’s rule. There are also occasional Indo-Iranian forms with short vowels (e.g. late Skt. _sŭtaḥ_ ‘son’, OAv. _sunus_ ‘son’), which lead Schrijver (1991a: 354) to posit a separate _aniṭ_ root which is the basis also for for _suth_. But given the overwhelming evidence for a _seṭ_ root in Indo-Iranian, these are better explained in other ways, such as loss in composition or generalisation of an _aniṭ_ root from (post-Vedic) _savati_ ‘gives birth’ (KEWA 3.481). Despite Ringe (2006: 79), the latter is less likely for Celtic, since no verbal stem is attested outside Indo-Iranian (and perhaps Anatolian; LIV 538, 539), but it is not impossible.

It is possible that _suth_ could come from a root *_seu̯-_ (LIV 537), but this is otherwise found only in Skt. _sunóti_, YAv. _hunaoiti_ ‘presses (Soma/Haoma)’. The semantics are superable, but not plausible, although the root may give MIr. _suth_ ‘milk’, if this is not a secondary semantic development of OIr. _suth_.

OIr. _suth_ most probably comes from *_suH-tu-_, but it is possible that it reflects *_su-tu-_. Germanic *_sŭ-nu-_ certainly reflects *_suH-nu-_ and as such is a good example of _*CIHC-_ > _*CĬC-_; but note that the Germanic accentuation cannot be ascertained on the basis of Skt. _sūnúḥ_, since the position of the accent varied within the paradigm within Proto-Indo-European (Meier-Brügger 2003: 206–207).

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[123] With which _suth_ is formally identical, although with a change of gender.

21. OIr. _sruith_ (_i_-stem adj.) 'old, senior, venerable', (m. _i_-stem) 'elder, ancestor, sage', OW. _strutiu_ gl. _antiquam gentem_ < _*strŭti-_ are cognate with Lith. _strūjus_ 'grandfather, old man', OCS. _stryjъ_ 'paternal uncle' < _*strūi̯u-_. Whether or not this word contained a laryngeal is hard to determine since a short vowel is also found (Lith. _strùjus_, ORuss. _strъi_ 'uncle' < _*strŭi̯u-_; Fraenkel 1962–1965: 2.926). Consequently, no conclusion can be drawn.

22. MIr. _tin_ 'soft, easy' (? DIL T-176) is connected by LEIA (T-67) with MIr. _tinne_ 'salted pig, (flitch of) bacon' (LEIA T-71) < _*tindni̯o-_, _*tindi̯o-_ or _*tisni̯o-_. LEIA rightly doubts a connection with Gk. στέαρ 'stiff fat, tallow, suet' because this root (_*sti̯eH-_ or _*stei̯H-_, LIV 603) shows no signs of having an _s_-mobile (IEW 1010–1011). The etymology remains uncertain.

23. MW. _tyf_ (3sg.) 'grows, develops, matures', OB. _tum_ (3sg.), B. _tiñvañ_ (inf.) 'grow together, increase', MC. _tyf_ (3sg.) 'grows' < _*tŭm-_ (Schumacher 2004: 646–648) come from _*tu̯em-_ 'swell' (Lat. _tumeō_ 'am swollen', Lith. _tumė́ti_ 'become thick'; LIV 654) rather than _*tūm-_ < _*tuh$_2$-m-_, as claimed by IEW (1086), which would be comparable to Skt. _tavīti_ 'is strong', ORuss. _tyju_ 'become fat' from _*teu̯h$_2$-_ (LIV 639–640). MIr. _tuilm_ '_muliebre membrum_' (only in Cormac's glossary) < _*tulmi-_ could be derived from _*teu̯h$_2$-_; if so, we could not tell whether the result was _*tūlmi-_ or _*tŭlmi-_ because the former would have been shortened by Osthoff's law. However, it and OIr. _tuithle_ 'swelling, tumour' (if from _*tu-tu̯el-i̯ā_) could be from a root _*tu̯el-_ as implied by IEW (1080–1081).[124] The derivation of _tuilm_ from _*tul-mi-_ (de Bernardo Stempel 1999: 244–245) is more comprehensible than an unclear cluster of derivational suffixes in _*tuh$_2$-l-mi-_. Consequently, it is more likely that _tuilm_ reflects _*tul-mi-_ than _*tuh$_2$-l-mi-_.

§ 109. _Evidence from Other Languages_

Only forms which provide possible counterevidence to a theory, or which require further discussion, are included:

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[124] A separate root, rather than the 'extended' _*tu̯e-_(_e_)_l-_ envisaged by IEW; many of its examples seem to reflect _*tuh$_2$-l-_, e.g. Skt. _tū́lam_ 'tuft of grass or reeds', OCS _tylъ_ 'neck', but cf. Gk. τῠ́λη 'a callous lump' < _*tŭl-_.

1. Lat. _dūrus_ ‘hard, harsh’ < *_duh$_2$-ró-_ *‘enduring, long-lasting’ (_dūrāre_ ‘extend’ shows the older meaning; Fortson 2007: 87); cf. Skt. _dūráḥ_ ‘far, long’, Gk. Hom. δηρός, Dor. δᾱρός ‘long (of time)’.

2. Lat. _fĕrus_ ‘wild, untamed; wild animal’ < *_g^{h}u̯ĕro-_ (cf. Gk. θήρ ‘animal’, Lith. _žvėrìs_, Latv. _zvȩ̂rs_ ‘animal’) need not reflect *_g^{h}u̯eh$_1$ro-_ (as assumed by Schrijver 1991a: 337), because a Baltio-Slavic acute tone can come from an original long vowel, not just a vowel followed by laryngeal (see p. 12 ff.). In fact, since the accent was not retracted in Lithuanian or Latvian by Hirt’s law, this suggests that a laryngeal was not present. Therefore, Lat. _fĕrus_ is probably derived from an original root noun with a stem *_g^{h}u̯ē̆r-_.

3. Lat. _fūmus_ ‘smoke’ < *_d^{h}uh$_2$-mó-_ (Skt. _dhūmáḥ_ ‘smoke’, Gk. θῡμός ‘spirit’) is explained by Schrijver (1991a: 342) as retaining its long vowel by analogy with _fūlīgō_ ‘soot, carbon’ and Lat. _suffiō_ ‘fumigate’ < *_d^{h}ūi̯e/o-_ < *_d^{h}uh$_2$-i̯e/o-_ (LIV 158). But zero-grade _i̯e/o_-presents were stressed on the suffix (Sihler 1995: 502; LIV 19), so we would expect a short vowel also in _suffiō_, and analogical restoration of _fūmus_ on the basis of the very much rarer _fūlīgō_ seems unlikely.

4. Lat. _inuītus_ ‘unwilling, reluctant’ < *_-u̯ih$_1$-tó-_ cf. Skt. _vītáḥ_ ‘beloved, pleasing’, Lat. _uīs_ (2sg.) ‘want’, Gk. ῑ̔́εμαι ‘send myself, hasten’ (Schrijver 1991a: 231; LIV 668–669).

5. ON _linr_ ‘soft, smooth’ < *_lih$_2$-nó-_ or *_l̥h$_1$i-nó-_ (cf. Skt. _lī́yate_ ‘cowers, clings to’ or Lat. _lēuis_ ‘smooth’; Schrijver 1991a: 354).

6. Lat. _lŭcrum_ ‘gain, profit’ < *_l̥h$_2$u-tró-/-tló-_ (cf. Gk. ἀπολαύω ‘profit from, enjoy’; Schrijver 1991a: 240–241; and see p. 131).

7. Goth. _lun_ (acc. sg.) ‘ransom’ < *_lŭno-_ is derived by Schrijver (1991a: 355) from *_l̥h$_2$u-nó-_ (cf. (post-Vedic) Skt. _lūnáḥ_ ‘cut off’, Gk. λαῖον ‘part of a plough, sock or blade’); but since the connection with λαῖον is not certain (Schrijver 1991a: 517), _lun_ could reflect *_luH-nó-_.

8. Lat. _pŭtus_ ‘clean’ < *_puH-tó-_ (see p. 131).

9. Lat. _sĕrēnus_ ‘clear, dry’, OHG. _serawen_ ‘become dry’ < *_ksĕr-_ are probably not from *_kseh$_1$ró-_ (_pace_ Schrijver 1991a: 338) because of Arm. _č^{c}or_ ‘dry’ < *_k̂sŏro_ (*_-ō-_ > *_-u-_ in Armenian). Therefore Gk. ξηρός reflects a lengthened grade.

10. OSwed. _stūr_, MLG. _stūr_ ‘big, strong’ < *_sth$_2$u-ró-_ (cf. Skt. _sthūráḥ_ ‘big, strong’; Schrijver 1991a: 355).

11. ON. _súrr_ ‘sour’, OE. _sūr_ ‘sour’, OHG. _sūr_ ‘sour, bitter, sharp’ < _*sh$_2$-ur-ó-_ (cf. Lith. _sū́ras_ ‘salty’, ON. _saurr_ ‘damp earth’ < _*seh$_2$-u̯r-o-_, Hitt. _šēḫ̬ur_ ‘urine’; Le Feuvre 2007).

12. OSwed. _þumi_, ON. _þumall_ ‘thumb’ < _*tŭm-_ < _*tuh$_2$-m-_ (Schrijver 1991a: 354; LIV 639–640).

§ 110. *Evaluation: Schrijver’s Theory*

According to Schrijver, long vowels were shortened in pretonic syllables when before sonorants (and consonantal _*-I-_), but not before obstruents in Celtic, Germanic and Italic. Reliable counter-evidence consists of pretonic _*CIHS-_ > _*CĬS-_: § 109.6 Lat. _lŭcrum_ < _*l̥h$_2$u-tró-/-tló-_ (but this may be due to the Wetter Regel, p. 150 ff.), § 109.8 Lat. _pŭtus_ < _*puH-tó-_; pretonic _*CIHR-_ > _*CĪR-_: § 99.2 MW. _blin_ < _*mliH-nó-_,[125] § 100.10 MIr. _úr_ < _*puH-ró-_, § 102.1 OIr. _crín_ < _*kr̥h$_1$i-nó-_, § 109.1 Lat. _dūrus_ < _*duh$_2$-ró-_, § 109.3 Lat. _fūmus_ < _*d^{h}uh$_2$-mó-_, § 109.10 OSwed. _stūr_ < _*sth$_2$u-ró-_, § 109.11 ON _súrr_ < _*suh$_2$-ró-_. Although there is no evidence for the original accentuation, § 101.6 MIr. _sith-_ < _*sh$_1$i-tV-_ also shows shortening before an obstruent, which is presumably to be attributed to Dybo’s rule. On the basis of this evidence, Schrijver’s theory is unlikely to be correct.

§ 111. *Evaluation: Zair’s Theory*

According to my earlier view, _*-h$_1$-_ and _*-h$_3$-_ were lost in pretonic syllables without lengthening a preceding vowel. Reliable counter-evidence consists of pretonic _*CIh$_2$C-_ > _*CĬC-_: § 109.6 Lat. _lŭcrum_ < _*l̥h$_2$u-tló-_ (but this may be due to the Wetter Regel, p. 150 ff.); pretonic _*CEh$_{1/3}$C-_ > _*CĒC-_ and _*CIh$_{1/3}$C-_ > _*CĪC-_: § 96.2 MIr. _snáth_ < _*snoh$_1$-tó-_,[126] § 100.3 MIr. _fíthe_ < _*u̯ih$_1$-tó-_, § 102.1 OIr. _crín_ < _*kr̥h$_1$i-nó-_, § 109.4 Lat. _inuītus_ < _*-u̯ih$_1$-tó-_. Although there is no evidence for the original accentuation, the short vowel in § 109.12 OSwed. _þumi_ < _*tuh$_2$-m-_ requires explanation.

It might be possible to save my formulation: Lat. _lŭcrum_ can be caused by the ‘Wetter Regel’; Dybo’s rule probably only affected high vowels (see below), so MIr. _snáth_ need not be counter-evidence. MIr. _fíthe_, OIr. _crín_, and Lat. _inuītus_ all belong to roots which were preserved as verbs into the attested languages: OIr. _for·fen_ ‘finishes, completes’ < _*u̯i-n-h$_1$-_, W. _gogrynaf_

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[125] This is also counter-evidence if it goes back to _*g^{w}leh$_1$-nó-_, since final accentuation is shown by Skt. _glānáḥ_.

[126] OE. _snōd_ ‘hairband’, with Verner’s law treatment of _*-t-_, points to oxytonesis.

'sift, cleanse, riddle' < *-ḱri-n-h$_1$-, Lat. *uīs* 'want' < *u̯ih$_1$-si. So it is possible that the laryngeal was replaced in these forms from the rest of the paradigm. OSwed. *þumi* is in contrast with OHG. *dūmo* 'thumb', which does suggest laryngeal loss, but a root *tu̯em- 'swell' does exist (LIV 654; see MW. *tyf* p. 143). Alternatively, it is possible that the root did not end in *-h$_2$-: the only evidence is Gk. σάος 'safe and sound' (Peters 1980: 290 fn. 243), which may not belong here and requires the controversial 'reverse of Sievers' law' to be derived from *tu̯au̯o- < *tuu̯au̯o- < *tuh$_2$-eu̯-o-. Yet another possibility is that the etymology which connects *þumi* and *dūmo* as 'the thick one' with *teu̯h$_2$- (IEW 1086) is not correct, and it reflects a different root *tu̯eHm- or is a non-Indo-European word.

It must be admitted that the above seems like special pleading. It also fails to explain the variation seen in § 109.8 Lat. *pŭ̄tus* < *puH-tó- and § 100.10 MIr. *úr* < *puH-ró-. These are not strictly counter-examples, since we do not know which laryngeal was in the root, but if they reflect the same root, as seems likely, the different results are problematic for my theory, as for all the theories. The same unexpected variation can be found in § 108.12. OIr. *ler* < *liH-ro- beside MW. *llin* < *liH-no-. Although there are not many really good pieces of counter-evidence my formulation of the rule is therefore probably incorrect.

§ 112. *Evaluation: Isaac's Theory*[127]

Isaac argues for the following rules: *-h$_1$- > ø /I_Ci and /CR̥_Ci; *-h$_2$- > ø /u_C and /BR̥_CO; *-h$_3$- > ø /I_CO and /CR̥_CO and /o_mO. Reliable counter examples are *Cuh$_2$C- > *CūC-: § 99.13 MIr. *dúil* < *dʰuh$_2$-li-, § 99.14 OIr. *dún* < *dʰuh$_2$-no-, § 100.9 OIr. *súil* < *sh$_2$u-li-. For *CIh$_1$Ci- > *CĪCi- § 99.16 MW. *gwit* < *u̯ih$_1$-tV- is also counter-evidence if it is exactly cognate with Skt. *vītíḥ*, but *u̯ih$_1$-tu- and *u̯ih$_1$-to- are also formally possible.

Since Isaac's rules also cover *CR̥HC- clusters, one counter-example of the type *BR̥HCV- > *BRăCV- (where *V* is not a rounded vowel) is found: § 75.19 OIr. *rann* < *pr̥h$_3$-sneh$_2$. Isaac (2007a: 27) includes *rann* in a list of words not included in his formulation because "the reasons Schrijver gives for excluding them from the discussion of PIE *CR̥HC- in Celtic appear cogent to me". However, Schrijver (1995: 177, 188) does not exclude *rann*, which he rates as a 'probable' example. He does raise the possibility of a reconstruction

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[127] For another discussion of Isaac's theory, which is largely in agreement with the view taken here, see now Stifter (2011a: 9–15).

*_pr̥h$_3$-t(s)neh$_2$_ or *_pr̥h$_3$-d(s)neh$_2$_, both of which are clearly unlikely. Since Isaac's rules include *_-R̥H-_ followed by more than one consonant (Isaac 2007a: 47), they should also cover _rann_.

Isaac's theory clearly has fewer counter-examples than either Schrijver's or Zair's. However, it should be noted that the theory is alleged to apply only to Proto-Celtic, which reduces the number of forms. The rules are furthermore considerably more complex, so any counter-evidence carries weight. Isaac's formulation does not include Germanic and Latin, despite the obvious similarity of the unexpected shortenings seen there, and in particular the remarkable shared form *_u̯ĭros_ 'man' (Isaac's 2007a: 56–59 explanation of the short vowel in Latin, through avoidance of homonymy with Lat. _ūrus_ 'slime' is quite implausible). Therefore it is concluded that the four good pieces of counter-evidence above are enough to make Isaac's formulation incorrect.

§ 113. _Conclusion_

None of the three formulations of Dybo's rule considered have proved to be correct. Perhaps, therefore, the examples of shortening gathered above should be seen as the results of morphological processes. The most obvious of these is "morphological resegmentations or reanalyses which yielded roots without a final laryngeal (or its reflex)" (Ringe 2006: 79), which is one of the three sources of morphological short vowels considered by Joseph (1980: 306–363). Sources of this sort of neo-_aniṭ_ root would be: the 3pl. of athematic verbs of the type *_CIH-enti_ > *_CII̯enti_ (from which a root *_CI-_ could be abstracted, either because the glide *_-I̯-_ was treated as phonetic rather than phonemic, or because it was analysed as part of a suffix); thematic verbs of the type *_CIH-e/o-_ > *_CII̯e/o-_ or *_CeI̯H-e/o-_ > *_CeI̯e/o-_; nasal presents of the type *_CI-n(e)-H-_, where the laryngeal was reanalysed as part of the suffix.

This explanation can never be disproved, since it is always possible that an apparently isolated form was, at some stage of a proto-language, accompanied by a verbal stem which has since been lost, but § 109.8 Lat. _pŭtus_, § 109.6 Lat. _lŭcrum_, § 108.4 OIr. _cuil_, Goth. _sunus_ (see § 108.20 OIr. _suth_), § 101.6 MIr. _sith-_, § 101.1 OIr. _béu_,[128] and especially § 108.7 OIr. _fer_, Lat. _uĭr_, Goth. _wair_ seem particularly isolated, and hence difficult to explain in this way (as noted for the last by Ringe 1988: 420).

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[128] Although the verb is attested in Lat. _uīuere_ 'live'.

Joseph adds two other sources of short vowels: one is the so-called ‘super zero grade’, which acts particularly on roots which showed an invariant zero grade in the proto-language: after _*CIHC-_ gave _*CīC-_ and _*CūC-_, new ‘super zero grades’ _*CĭC-_ and _*CŭC-_ were created in morphological categories in which zero grade was expected, on the analogy of formations of the shape _*Ce_h_2_C-_ > _*CāC-_ : _*C_h_2_C-_ > _*CăC-_. Note that this is a very limited category (according to Joseph, of the roots discussed above, it covers only § 108.7 OIr. _fer_ and § 108.20 OIr. _suth_), because Joseph includes only roots which cannot be shown to have a full grade anywhere in the Indo-European family (i.e. which were exceptionally without full grade in Proto-Indo-European).

Joseph’s remaining source of short vowels is a variation on ‘super zero grades’: when roots of the shape _*CI̯eH-_ lost their full-grades by levelling in ablauting formations, forms like nom. sg. _*_g^w_i̯é_h_3_-tu-_: gen. sg. _*_g^w_i_h_3_-téu̯-_ became _*_g^w_í_h_3_-tu-_: _*_g^w_i_h_3_-téu̯-_ > _*_g^w_ī́tu-_ : _*_g^w_ītú-_. This was then remodelled to _*_g^w_ītu-_ : _*_g^w_ĭtu-_ (> OIr. _bith_) after the productive ablaut pattern. However, such a loss and then recreation of ablaut seems implausible, and Joseph himself is dubious: “it is unlikely that such paradigms could be the basis for _late_ reshapings, especially since paradigms tend to eliminate ablaut rather than restore it, especially in productive categories” (Joseph 1980: 352–353; original italics. More doubts are expressed at 360). This is the least likely morphological source of short vowels.

Since no convincing regular sound law has yet been provided for the Dybo’s rule shortenings,[129] perhaps we must accept that they are a collection resulting from disparate and unrelated morphological processes. Alternatively, perhaps Dybo’s rule is an example of a sound law which did not spread through all the available words: “changes may never complete, but may abort at virtually any stage” (Lass 1997: 140). If this is the case, then the true environment for the rule can never be identified (consequently, the assumption of an uncompleted rule must always be a last resort).

No answer to the environment for Dybo’s rule can be given here, but certain points can be made on the basis of the evidence collected, in the hope that they will be helpful in the future discovery of a regular environment. Dybo’s rule probably only affected _*-i-_ and _*-u-_: almost all of the evidence for shortening of _*-e-_ or _*-o-_ can either be explained equally well from a _*CIHC-_ cluster (§ 107.2 OIr. _deil_, OE. _delu_), or should be explained by ablaut variation (§ 109.2 Lat. _fĕrus_, § 109.9 Lat. _sĕrēnus_, OHG. _serawen_, probably § 25.8 OIr. _uilen_, Lat. _ulna_, Goth. _aleina_). It follows that the short vowel in forms like § 107.1 Gaul. _Carus_ and § 107.7 OIr. _om_ must also be due to ablaut rather than shortening, and that § 107.4 OIr. _glan_, whatever its origin, does not have a short vowel by Dybo's rule. More evidence that Dybo's rule affected only high vowels is presented by § 28.1 OW. _ui_, Lat. _ōuum_ < *_h_2ōu̯i̯ó-_ (cf. Gk. ᾠόν) and by OIr. _dám_ 'company, party, following' < *_dōméh$_2$_, OW. _dauu_, _daum_, gl. _cliens_, W. _daw_, MB. _deuff_ (m.), OC. _dof_ 'son-in-law' < *_dōmó-_, which is a _vr̥ddhi_ derivation from the form seen in Gk. δόμος 'house' (Campanile 1974b). All _vr̥ddhi_ forms may have been originally oxytone; at any rate, where the original form is barytone, in Sanskrit the _vr̥ddhi_ derived form is oxytone (Wackernagel & Debrunner 1954: 133–134). This may suggest that Dybo's rule is a rule of shortening, not laryngeal loss: high vowels are intrinsically shorter than lower vowels (Keating 1985: 118), and thus are more likely to undergo shortening processes.

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[129] And forms like Lat. _pūrus_ vs. _pŭtus_ and OIr. _ler_ vs. MW. _llin_ make the prospect of one particularly difficult.

The conditioning factor is not necessarily lack of stress: the only reliable examples of pretonic short vowels are § 101.1 _béu_ (not necessarily reliable, given Lat. _uīuus_, but there is no other explanation for the short vowel), § 108.7 OIr. _fer_, § 109.5 ON. _linr_, § 109.7 Goth. _lun_ and § 109.8 Lat. _pŭtus_. Since there are also several examples of lack of shortening in an unstressed syllable, and since there are more examples of shortening without proof of the position of the accent, the fact that some of the short vowels are in pretonic syllables may just be coincidence. In the hope of encouraging the discovery of a formulation along these lines, the total list of forms which are considered to be good evidence of *_CHIC-_ and *_CIHC-_ clusters is given below. Those from non-Celtic languages which have not been discussed above are given with page references to Schrijver (1991a).

Pretonic *_CHIC-_ and *_CIHC-_ > *_CĪC-_: § 99.1 OIr. _·bíth_ < *_b^hiH-tó-_, § 99.8 OIr. _·críth_ < *_k^wrih$_2$-tó-_, § 99.12 MIr. _drúth_ <*_druH-tó-_,[130] § 100.3 MIr. _fíthe_ < *_u̯ih$_1$-tó-_, § 100.7 MIr. _sín_ < *_sh$_2$i-nV-_, § 100.10 MIr. _úr_ < *_puH-ró-_, § 102.1 OIr. _crín_ < *_kr̥h$_1$i-nó-_, § 109.1 Lat. _dūrus_ < *_duh$_2$-ró-_, § 109.3 Lat. _fūmus_ < *_d^huh$_2$-mó-_, § 109.4 Lat. _inuītus_ < *_-u̯ih$_1$-tó-_, § 109.10 OSwed. _stūr_ < *_sth$_2$u-ró-_, § 109.11 ON _súrr_ < *_suh$_2$-ró-_, Lat. _rūta_ 'dug up' < *_ruH-téh$_2$_ (Schrijver 1991a: 234).

Pretonic *_CHIC-_ and *_CIHC-_ > *_CĬC-_: § 101.1 OIr. _béu_ < *_g^wih$_3$-u̯ó-_, § 108.7 OIr. _fer_ < *_u̯ih$_1$-ró-_, § 109.5 ON. _linr_ < *_l̥h$_1$i-nó-_, § 109.7 Goth. _lun_ < *_luH-nó-_, § 109.8 Lat. _pŭtus_ < *_puH-tó-_.

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[130] Oxytonesis on the basis of Verner's law in ON. _trūðr_, OE. _trūd_.

*CHIC- and *CIHC- > *CĪC- in which the original accentuation cannot be determined: § 99.13 MIr. _dúil_ < *d^huh_2-li-, § 99.14 OIr. _dún_ < *d^huh_2-no-, § 99.16 MW. _gwit_ < *u̯ih_1-tV-, § 99.17 OIr. _íth_ < *piH-tu-, § 99.19 OIr. _múnigim_ < *mi̯uh_1-nV-, § 99.20 MIr. _níth_ < *niH-tu-, § 99.22 OIr. _rím_ < *$h_2$riH-meh_2, § 100.1 OIr. _cúl_ < *(s)kuH-lV-, § 100.9 OIr. _súil_ < *sh_2u-li-.

*CHIC- and *CIHC- > *CĬC- in which the original accentuation cannot be determined: § 101.6 MIr. _sith-_ < *sh_1i-tV-, § 108.4 OIr. _cuil_ < *k̑uH-li-, § 108.12 OIr. _ler_ < *liH-ro-, perhaps § 108.20 OIr. _suth_, certainly Goth. _sunus_ < *suH-nu-, § 109.12 OSwed. _þumi_ < *tuh_2-m-.

#CEHCC- and #CIHCC-: The 'Wetter Regel'

§ 114. _Introduction_

The idea that laryngeals were lost after a vowel and before a sequence of consonants can be attributed to Schindler. Although he never published on the subject, his idea is reported by others; thus, _apud_ Joseph (1980: 319): "a fruitful avenue of exploration would be a cluster-reduction rule which eliminated a laryngeal in a tautosyllabic sequence _.HCCV-_ but preserved it before a single consonant"; a slightly different conception is provided by Peters (1999, esp. 447), who states that the rule applies to *-V̆HTR/I̯V- clusters, giving *-V̆TR/I̯V- (Peters uses _V_ to cover high and low vowels, here represented by _E_ and _I_ respectively). Schindler called this rule the 'Wetter Regel' (henceforth WR), after its best example: ON. _veđr_, OE. _weder_, OHG. _wetar_, NHG. _Wetter_ 'weather' < *h_2u̯eh_1-tró- (or *h_2u̯eh_1-d^hro-). Another proposed example is Gk. μέτρον 'measure, rule' < *meh_1-tro-;[131] Peters (1999) puts forward other possible Greek examples.

Müller (2007: 134–136) argues against the WR, pointing out that Lith. _vė̃tra_ 'storm', OCS. _vě̆trъ_ 'air, wind' < *h_2u̯eh_1-tro- (which are closer to the semantics of *h_2u̯eh_1- 'blow'; LIV 287) do not show laryngeal loss, and suggesting that the short vowel in _Wetter_ (and in OCS. _vedro_ 'nice weather') is younger and taken from verbal forms where the laryngeal was lost in the context *h_2u̯eh_1-V-.[132] As an example of failure of the WR in Germanic he gives OE. _blǣdre_, OHG. _blāt(a)ra_ 'blister, nodule' < *b^hleh_1-d^hro-.

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[131] But see MW. _medyr_ (p. 154) for alternative derivations.

[132] Of course, one could argue precisely the reverse; that is, _Wetter_ etc. are older forms (hence the divergent semantics), while _vė̃tra_ is a later form, with a root taken from verbal forms of the type *h_2u̯eh_1-C-.

If such a rule existed, it need not have applied in Proto-Indo-European itself (as noted by Peters 1999: 447: “uridg. oder zumindest ureinzelsprachlich”); it is thinkable that this sort of cluster reduction (or shortening of a long vowel) occurred independently in more than one proto-language without occurring in them all. It is also possible that the environment for laryngeal loss was more constrained in some languages than in others.

Testen (1999) suggests that the cluster _*-pḱ-_ (which according to him is the source of _*-kk-_ in words like OIr. _socc_ ‘pig’, p. 158) had a laryngeal-deleting or vowel-shortening effect on the preceding syllable in Proto-Celtic. If correct, it would be possible that this was really a reflection of a change _*CE/IHCC-_ > _*CE/ICC-_ (or _*CĒ/ĪCC-_ > _*CĔ/ĬCC-_), equivalent to Schindler’s earlier conception of the WR.

The WR can be seen as a counterpart to Osthoff’s law, because they could both be argued to affect superheavy syllables. The usual definition of Osthoff’s law (e.g. Sihler 1995: 58, 74, 77; Meiser 1998: 75–76) restricts shortening to vowels before a sonorant followed by another consonant, but McCone (1996: 63–64) implicitly claims the WR as part of Osthoff’s law for Celtic: “vowels were subject to ‘Osthoff’ shortening before certain consonant groups, especially those containing a liquid”. It is clear from his examples (OIr. _Sadb_ < _*su̯ădu̯ā_, p. 155; OIr. _rann_ < _*prăsnā_, p. 76)[133] that McCone’s formulation includes _*CĒ/ĪCR-_ clusters as well as _*CĒ/ĪRC-_. Since Osthoff’s law took place in Proto-Celtic after the changes _*-ē-_ > _*-ī-_ and _*-ō-_ > _*-ā-/-ū-_, it might be possible to tell whether short vowels in WR environments are to be considered as part of a more widely defined Celtic ‘Osthoff’s law-Wetter Regel’, or whether the WR took place earlier (in which case we would expect to find _*-eh_$_1$_-_ > _*-ĕ-_, _*-eh_$_3$_-_ > _*-ŏ-_).

§ 115. _*CEHCR/I̯- > *CĒCR/I̯- and *CIHCR/I̯- > *CĪCR/I̯-_

1. MIr. _áige_ (n. or m. _i̯o_-stem) ‘joint, member, part of the body’ < _*āg(i)i̯o_-is cognate with OHG. _fuoga_ ‘adroitness, dexterity’, Goth. _fagrs_ ‘fitting’ and ON. _fagr_ ‘fair, light, beautiful’ (LEIA A-28), cf. Lat. _pangō_ ‘fasten’, Gk. πήγνυμι ‘make fast’ (LIV 461). If it comes from < _*peh_$_2$_ĝ-i̯o-_[134] it would provide a WR environment, but _*peh_$_2$_ĝ-ii̯o-_ is also likely, either by Sievers’ law (Mayrhofer 1986: 164–167) or with the suffix _*-ii̯o-_, so it cannot be used as evidence.[135] OIr.

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[133] But _rann_ is probably the regular result of _*MR̥HCC-_, rather than Osthoff’s law.

[134] There is no reason to assume lengthened grade, _pace_ de Bernardo Stempel (1999: 208).

[135] Sievers’ law may not have applied in Proto-Celtic (Schrijver 1995: 282–289), but if the law was Indo-European, it may have still been in operation at the time of the ‘Wetter Regel’.

áil ‘desirable, meet, proper’ may be from *_p(e)h$_2$ĝ-l-i-_, if it is not a fossilised usage of OIr. _áil_ ‘request, wish, act of asking’ (de Bernardo Stempel 1999: 385; see MW. _iawl_ p. 49). Since both *_păgli-_ and *_pāgli-_ would give _áil_, this does not give evidence for shortening.

2. OIr. _dlúm_ (f. _ā_-stem) ‘mass, nucleus, aggregation’ cannot come from *_dlūsmā_, as suggested by LEIA (D-109–110): cf. NIr. _dlúimh_, MW. _dylif_ (m., f.) ‘warp, woof, weft, texture; arrangement, design, pattern, image’ (*_-sm-_ > *_-mm-_ did not undergo lenition; McCone 1996: 45–46). No extra-Celtic etymology is available anyway.

3. W. _hidl_, MB. _sizl_, B. _sil_ (m., f.) ‘sieve, filter’ < *_sītlā_ are probably not borrowed from Latin _sĭtula_ ‘jar for water’ because of the different semantics and because of formal problems: _sĭtula_ has a short vowel in the first syllable, the second syllable should not have been lost (syncope would not occur in an originally tri-syllabic word; Schrijver 1995: 461–462), and Latin loan-words into Welsh usually kept initial _s_- (although there are exceptions: Schrijver 1995: 377–378). OIr. _síthal_ (f. _ā_-stem) ‘vessel for drawing water, bucket’ seems to be the result of contamination between this inherited Celtic *_sītlā_ (which ought to have given OIr. ^{x}_síl_) and Lat. _sĭtula_ (LEIA S-121–122). On the basis of ON. _sáld_ ‘sieve’ < *_seh$_1$-tlo-_, the Celtic forms are probably derived from *_seh$_1$-tlo-_ (*_sih$_1$-tleh$_2$_ is also possible because the root is *_seh$_1$(i̯)-_ ‘sieve’, cf. Lith. _síetas_, SCr. _sȉto_ ‘sieve’; LIV 519).

4. OIr. _láthar_ (n. _o_-stem) ‘arrangement, disposition’ (see p. 80) must come from *_pleh$_2$-tro-_, since it was concluded above (see p. 69 ff.) that *_pl̥h$_2$-tro-_ would have given ^{x}_lathar_.

5. MIr. _mothar_ (m. _o_-stem; perhaps originally n.: DIL M-176) ‘thicket, jungle, wilderness; a dense, rough or tangled mass; obscurity’ < *_mŏtro-_ or *_mŭtro-_ looks very similar to Skt. _mū́tram_ ‘urine’ < *_m(i̯)uh$_1$-tro-_ (cf. OIr. _múnigim_ ‘piss’, p. 116; LIV 445–446), but should instead be connected with MLG. _modder_ ‘mud’ and (regional) NE. _mother_ ‘dregs, sediment, scum, mould’ < *_mŭtro-_, which are cognate with Arm. _mut_^{c} ‘dark’, MLG. _mudde_ ‘thick mud’, NE. _mud_ and probably OIr. _moth_ (m. _o_-stem) ‘amazement, stupor’ < *_mŭto-_ (Irslinger 2002: 299).

6. OIr. _nár_ (_o_-, _ā_-stem adj.) ‘noble, magnanimous, honourable; diffident’ is difficult to reconstruct (LEIA N-3). MW. _nar_ (m., f.?) ‘lord, chief, leader’ is unlikely to be connected, on account of its short vowel (Schrijver 1995: 445–446; but note 446 fn. 1). If _nár_ reflects *_neh$_2$sro-_ (cf. Hitt. _naḫšariya-_ ‘fear’) it belongs here, but *_neh$_2$-ro-_ is also possible (cf. Hitt. _nāḫi_ ‘is

frightened'; Schrijver loc. cit.; LIV 449). A connection with Gk. νήφω 'drink no wine; am sober, dispassionate' seems unlikely (see Weiss 1994 for an alternative derivation of the Greek). IEW's (765) reconstruction _*nōro-_ 'manly, strong', derived from _*$h_2$ner-_ 'man', is quite plausible (although IEW distinguishes this meaning of _nár_ from 'diffident' < _*nāsro-_, IEW 754); a lengthened _ō_-grade is also found in Gk. Hesych. νωρεῖ· ἐνεργεῖ, in which the initial laryngeal would have been lost by the 'reverse' of the Saussure effect (Nussbaum 1997: 181–182).[136] The form is too uncertain to be used as evidence.

7. OIr. _sál_ (f. _ā_-stem) 'heel', MW. _saudel_, W. _sawdl_ (m., f.) 'heel', MB. _seuzl_, B. _seul_ (m.) 'heel' < _*stātlo-_, are generally connected with the root _*steh_2-_ 'stand' (Gk. ἵστημι 'stand, set up'; LIV 590–592).[137]

8. OIr. _síl_ (n. _o_-stem) 'seed' does not come from _*seh_1(i̯)-tlom_ (_pace_ Olsen 1988: 14); cf. MW. _hil_ (f., m.) 'seed, offspring', B. _hil_ (m.) 'race, offspring, posterity' < _*sīlo-_ (p. 109).

§ 116. _*CEHCR/I̯- > *CĔCR/I̯- and *CIHCR/I̯- > *CĬCR/I̯-_

1. OIr. _brón_ (m. _o_-stem) 'sorrow, grief, grieving, lamentation; distress, burden', MW. _brwyn_ (m.) 'sorrow, grief, sadness' < _*brŭgno-_ are generally compared with βρῡ́χω 'eat with much noise', Lith. _gráužiu_ 'gnaw', OCS. _gryzǫ_ 'gnaw' < _*g^wreu̯Hg^h-_ (IEW 465–466; LEIA B-96; Matasović 2009: 81). The short vowel in _*brŭgno-_ < _*g^wruHg^h-no-_ may be due to the WR. However, the Celtic forms are semantically different, so perhaps they do not belong to this root at all.

2. MIr. _déol_[138] (m. _o_-stem) 'the act of sucking' is derived by LEIA (D-52) from _*dĕtlo-_,[139] with irregular _-o-_ by analogy with OIr. _céol_ 'musical instrument; music' (< _*kiu̯olo-_, according to GOI 68, but see LEIA C-69) and MIr. _teol_ 'theft' (< _*tetlu-_; see p. 258). If this reconstruction is correct, _déol_ could come from _*dĕtlo-_ < _*d^heh_1-tlo-_ or _*dĭtlo-_ < _*$d^h$$h_1$i-tlo-_ (root _*$d^heh_1$(i̯)-_ 'suck', LIV 138–139; and see OIr. _dínu_ p. 118). However, this would not be good evidence for the WR, because _déol_ could have generalised short _*-i-_ from OIr. _denait_ (3pl.) 'suck', to which it is the verbal noun, or _*$d^h$$h_1$i-tlo-_ > _*dĭtlo-_ could be due to Dybo's rule (see p. 132 ff.). Alternatively, Joseph (1980: 84–85)

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[136] But Lith. _nóras_ 'will' ought to come from _*nār-_, _contra_ IEW (765).

[137] Schrijver (1995: 421) doubts this, but does not provide an alternative etymology.

[138] The writing of length in diphthongs was not consistent in Old and Middle Irish; both _déol_ and _deól_ are found. The former may be more correct (GOI 20), but it is immaterial for our purposes.

[139] As a parallel, de Bernardo Stempel (1999: 302 fn. 121) reconstructs OIr. _éol_ (m.) 'direction, guidance; lore, history', remodelled from _*i-tlo-_ from _*$h_1$ei̯-_ 'go' (LIV 232–233).

reconstructs *_diu̯olo-_, which would give _déol_ regularly ("although there is no trace of a _u-_ or _wo-_stem in any other language"). The form is too uncertain to be used as evidence.

3. MW. _medyr_, W. _medr_ (m.) 'measure, rule, authority; skill, proficiency, ability, capability' < *_mĕtro-_ is cognate with Gk. μέτρον 'measure' (IEW 703). If it is also cognate with Skt. _mā́trā_ 'measurement' we can reconstruct *_meh_$_1$_-tro-_ for Proto-Celtic (cf. Lat. _mētior_ 'measure', Skt. _mímīte_ 'measures, divides' < *_meh_$_1$_-_; LIV 424–425). However, Schindler suggests (_apud_ Mayrhofer 1986: 111–112; Peters 1999: 447) that μέτρον may come from *_med-tro-_, with a development *_medt.ro-_ > *_metro-_ (cf. OHG. _sedal_ 'seat' < *_setlo-_ < *_sed-tlo-_), so _medyr_ is not certain evidence.

4. OIr. _óol_ (m. _o-_ and _u-_stem) 'the act of drinking; draught of liquor' and OIr. _ól_ (m. and n. _o-_stem) 'measure of capacity for liquids' are probably the same word (DIL O-131–132). _Pace_ Ó Flaithearta (2006: 230–231), the disyllabic forms are probably original on the following grounds: the spelling of the dat. sg. _óul_ in the Old Irish glosses;[140] disyllabic _óol_ in the "conservative Old Irish" _IDB_ (Carey 2002, esp. 72); although usually monosyllabic in Scots Gaelic (probably by analogy with inflected verbal forms, where loss of hiatus would be expected), a disyllabic pronunciation of _òl_ is found (Ó Dochartaigh 1994–1997: 4.118–119).[141] A possible connection with Lat. _pōc_(_u_)_lum_ 'drinking cup', Skt. _pā́tram_ 'receptacle, vessel' (LEIA O-19; EWAIA 2.119) < *_peh_$_3$_-tlo-_ is therefore unlikely, although the second _-o-_ could be a relatively late (analogical?) development, since the addition of _-o-_ before _-l-_ may also have occurred in MIr. _déol_ 'sucking' if from *_d_^{h}_eh_$_1$_-tlo-_ or *_d_^{h}_h_$_1$_i-tlo-_ (see above) and OIr. _éol_ 'knowledge, lore' (< *_h_$_1$_i-tlo-_?). A reconstruction *_peh_$_3$_-tlo-_ > *_pŏtlo-_ is therefore possible. However, there are alternative possibilities: LEIA (O-19) compares Breton infinitives in _-el_. Rasmussen (1983 [1999]: 75) follows IEW (840) in reconstructing *_poi̯h_$_3$_-lo-_, with the same _o-_grade formation as in Gk. ὅπλον 'tool' (although this might have given ^{x}_óel_, if the laryngeal was lost by the Saussure effect p. 243 ff.). Joseph (1980: 143) reconstructs *_poi̯h_$_3$_-olo-_, with the same suffix as e.g. Lat. _figulus_ 'potter', admitting, however, that this normally has agentive rather than abstract value. The origin of _óol_ is very uncertain.

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[140] Words with long _-ō-_ do not show _u-_quality in Old Irish (GOI 57).

[141] I am grateful to Graham Isaac, Mícheál Ó Flaithearta, Roibeard Ó Maolalaigh, and David Stifter for information and discussion on this word.

5. OIr. _othar_ (m. _o_-stem) ‘sickness, illness’; (_o_-, _ā_-stem adj.) ‘sick, ill’ < *_pŭtro-_ < *_puH-tro-_ is cognate with Lat. _pŭter_ ‘rotten’ (cf. Skt. _pū́yati_ ‘is rotten’, Gk. πῡ́θομαι ‘rot’; LIV 480–481). The origin of the *_puH-tr-_ thematised in Irish and made into an _i_-adjective in Latin is not clear.[142] This could be an example of the WR (thus Schrijver 1991a: 235–236), but Dybo’s rule is also a possible explanation.

6. OIr. _Sadb_ (p.n., f.) < *_su̯ădu̯ā_, Gaul. _Suadu-_ (p.n. element) may be cognate with Skt. _svādúḥ_, Lat. _suāuis_, OE. _swēte_ ‘sweet’ < *_su̯eh$_2$d-u-_. Schrijver (1991a: 348) correctly observes that “as a name, it does not have a lexical meaning, which means that the formal comparison cannot be checked”, but its formal similarity to the words for ‘sweet’, and the semantic plausibility of this as a name make it a possible piece of evidence.

7. NIr. _sethar_ (_o_-, _ā_-stem adj.) ‘strong’, MW. _hydyr_, W. _hydr_ (adj.) ‘brave, courageous’, OB. _hitr_, _hedr_, _hidr_ ‘bold’, MB. _hezr_, B. _her_ (adj.) ‘bold, audacious, adventurous’ < *_sĭtro-_ < *_sh$_1$i-tro-_ or *_seh$_1$-tro-_ are cognate with MIr. _sith-_ (p. 124) < *_seh$_1$(i̯)-_ (LIV 518). However the short vowel may be due to Dybo’s rule or be analogical on _sith-_.

8. MIr. _tón_ (f. _ā_-stem) ‘hindquarters, podex, bottom’ < *_tŭknā_, MW. _tin_ (m., f.) ‘arse, buttocks, bottom’ < *_tūnV-_ are explained by Matasović (2009: 393) by reconstructing *_tŭknā_ > *_tūna_ in British by compensatory lengthening, before the change *_-ū-_ > *_-ī-_. He connects OE. _þeoh_ ‘thigh’, Lith. _táukas_ ‘fat’ < *_teu̯Hk-_ (perhaps based on *_teu̯h$_2$-_ ‘swell’, LIV 639–640). But British *_-kn-_ was not lost with compensatory lengthening, but became *_-gn-_ > *_-i̯n-_ (cf. MW. _dwyn_ (v.n.) ‘bring, lead, carry’ < *_duk-no-_; Schrijver 1995: 355–356); we would therefore expect MW. ^{x}_twyn_ < *_tŭknV-_. These forms are not good evidence.

9. OIr. _tonn_ (f. _ā_-stem) ‘wave, outpouring’, OW. _tonnou_ (pl.) gl. _aequora_, MW. _tonn_, W. _ton_ (f.) ‘wave, the sea’, B. _tonn_ (f.) ‘wave, tear’, LC. _tonn_ (f.) ‘wave’ < *_tŭsnā_ or *_tŏsnā_ have several different etymologies (LEIA T-109). One possibility is *_tuh$_2$-sneh$_2$_ (*_teu̯h$_2$-_ ‘swell, be strong’; LIV 639–640; see MW. _tyf_ p. 143), but shortening could be caused by Dybo’s rule rather than the WR. Alternatively, a connection with Lith. _tvãnas_ ‘flood’ < *_tu̯ono-_ might be possible, although it does not explain the geminate *_-nn-_ in Celtic. OIr. _tonn_ cannot be used as evidence.

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[142] De Bernardo Stempel (1999: 134), comparing MIr. _othan_ ‘stone, burial chamber, grave’, suggests that these words could be the result of an old _r/n_-stem, which seems unlikely.

§ 117. _*CEHCP- > *CĒCP- and *CIHCP- > *CĪCP-_

1. MIr. _mát_, _máta_ (f.) ‘pig’ < _*mādd-_ is derived by Testen (1999: 163) from _*mānt-_, but this would have given _*mănt-_ (by Osthoff’s law) > MIr. ^{x}_mét-_ (McCone 1996: 106–107). A reconstruction _*meh$_2$sd-_ is phonetically more probable, which Schrijver (1991a: 143) connects with Lat. _māiālis_ ‘gelded boar, barrow hog’ < _*māsdi-āli-_ and possibly OE. _mæst_, OHG. _mast_ ‘fodder, esp. for pigs’ < _*mh$_2$sd-o-_. This etymology seems plausible, in which case _mát_ is evidence against shortening before a cluster _*-CP-_. But the assumed Latin sound change _*-sdi-_ > _*-i̯i̯-_ is unparalleled; the usual development of _*-sd-_ is seen in Lat. _nīdus_ ‘nest’ < _*nisdo-_.

2. OIr. _rúsc_ (m. _o_-stem) ‘bark’, MW. _risc_, _riscyl_, W. _rhisgl_ (m.) ‘bark, rind of fruit, husk of grain’, MB. _rusquenn_ (singul.), B. _rusk_ (coll.) ‘bark’, OC. _rusc_ gl. _cortex_, MC. _rusken_ (singul.) ‘bark, rind, peel’ differ in their vocalism: OIr. _rúsc_ comes from _*rūsk-_, while the British forms ostensibly reflect _*rou̯sk-_. In principle, we could set up ablaut variants _*ruh$_{1/3}$-sko-_ and _*reh$_{1/3}$u-sko-_, but the Brittonic forms are probably borrowed from Mediaeval Latin _rusca_ > French _ruche_ ‘beehive’, itself borrowed from Gaulish _*rūskā_ (LEIA R-54; Matasović 2009: 317; for a parallel see Driessen & Aan de Wiel 2003: 17–24). According to Matasović, Celtic _*rū-sko-_ ‘that which is plucked, scratched, sheared’ comes from the root _*(H)reu̯H-_ ‘dig, rip’ (see MIr. _rúathar_ p. 233). Borrowing from a non-Indo-European substrate, as suggested by Campanile (1976: 135–136), is less likely.

3. OIr. _sás_ (m. _o_-stem) ‘snare, trap, implement, means’ < _*sāsto-_ < _*seh$_2$-sto-_ is rightly disconnected on semantic grounds by LEIA (S-26–27) from OIr. _sáth_ ‘sufficiency’ (cf. Lith. _sótis_ ‘satisfaction’, Lat. _satis_ ‘enough’; LIV 520–521; suggested by DIL S-62). Irslinger (2002: 424), following LEIA, derives it from _*sh$_2$ei̯-_ ‘bind’ (Hitt. _išḫ̬iyanzi_ (3pl.) ‘bind’; LIV 544). Since the semantics of _sás_ fit the root well, _sás_ probably reflects a form _*seh$_2$-sto-_ with _schwebeablaut_. However, the origin of the suffix _*-sto-_ is not certain, so it is possible that this is a late formation.

4. OIr. _sásaid_ ‘satisfies, feeds; assuages, soothes’ is denominative to a noun _*sás_ (LEIA S-27) < _*seh$_2$-sto-_ (OIr. _sáth_ ‘sufficiency’; LIV 521–522). However, this may be a late formation.

5. MIr. _úsc_ ‘lard, fat’, _úsca_ ‘lard, grease’ < _*i̯ūskV-_, _*i̯ūski̯V-_, MW. _isgell_ (m.) ‘stock, broth, soup’, OC. _iskel_ gl. _ius_ < _*iūskello-_ (?) are cognate with Skt. _yūḥ_ ‘broth’, Lat. _iūs_ ‘broth’, Lith. _jū́šė_ ‘fish soup’, and perhaps Gk. ζύμη ‘leaven, beer-yeast’, which would suggest _*(H)i̯uHs-_. Jackson (1953: 345) supposes

that the Welsh (and presumably also the Cornish) form is a loan-word from Latin. In favour of this is the fact that inherited *_-sk-_ did not give Welsh _-sg-_, Cornish _-sk-_ (Jackson 1953: 534; Schrijver 1995: 375). However, Latin _-ū-_ was usually borrowed into Welsh as _-u-_ [ʉ] rather than _-i-_ (Driessen & Aan de Wiel 2003: 22), and Matasović (2009: 438) objects that no *_iūscellum_ is attested (only _iusculum_). The origin of the Brittonic forms is unclear, and the Irish forms are poorly attested, so they cannot be used as evidence.

§ 118. _*CEHCP- > *CĔCP- and *CIHCP- > *CĬCP-_

1. OIr. _bres_ (f. _ā_-stem) 'fight, blow' < *_brĕstā_ or *_brĭstā_, OW. _-bresel_ (p.n. element), MB. _bresel_, B. _brezel_ (m.) 'war', MC. _bresel_, _bresyl_, _bresul_ (m.) 'war, strife, struggle' < *_brestilā_ or *_brĭstilā_ are connected by IEW (166) with Skt. _bhrīṇánti_ 'hurts' < *_b_^{h}_rei̯H-_ (LIV 92–93; see OIr. _bríathar_ p. 226). If this were correct it would suggest *_b_^{h}_riH-sto-_ > *_brĭsto-_. However, these words can instead be plausibly connected with OHG. _brestan_ 'burst' (LEIA B-86; Matasović 2009: 76–77). In this case, Gaul. _Bristas_ (p.n., gen. sg.) must be disassociated.

2. MIr. _des_ 'arrangement, order', W. _des_ (m.) 'system' (hapax) < *_dĕsto-_, W. _destl_ (f.) 'order, rule', (adj.) 'fine, delicate, pretty' are derived by LEIA (D-60) from the root *_d_^{h}_eh_$_1$_-_ 'put' (Gk. τίθημι 'set, put, place'; LIV 136–138). If correct, this would imply loss of laryngeal in *_d_^{h}_eh_$_1$_-sto-_ (or early shortening of *_d_^{h}_ēsto-_). However, LEIA raises the possibility that MIr. _des_, which is poorly attested, could be a usage of OIr. _dess_ 'right; convenient, well-arranged' (< *_deks-_; LEIA D-61–62), and GPC (934) also derives _destl_ from *_deks-tlo-_. The connection with *_d_^{h}_eh_$_1$_-_ is not certain enough for these words to be used as evidence.

3. OIr. _mucc_ (f. _ā_-stem) 'pig, sow', MW. _moch_ (coll.), MB. _moch_, B. _moc'h_ (coll.) and MC. _mogh_ (coll.) 'pigs' < *_mokku̯ā_, perhaps Gaul. _Moccus_ (theonym; GOI 48) < *_mokku-_ are derived by Testen (1999: 163) from *_mō-pḱu-_, the first part being cognate either with MIr. _mát_ 'pig' or OIr. _már_ 'great' < *_moh_$_1$_-ro-_ (p. 110). The former probably reflects *_meh_$_2$_sd-_ (see p. 156) so cannot be connected. The connection with _már_ is only an etymological guess. OIr. _mucc_ cannot be used as evidence.

4. MIr. _recht_ (m. _u_-stem) 'paroxysm, outburst (of anger, passion etc.)' probably does not reflect *_reh_$_1$_p-tu-_ (p. 51).

5. MIr. _rosal_ 'judgement' (hapax, in a glossary), perhaps from *_rod-tlo-_, is connected by LEIA (R-44) with OIr. _ráidid_ 'speaks, says, tells' < *_roh_$_1$_d_^{h}_-ei̯e-_ (cf.

Goth. *rodjan* 'speak, talk, converse', *-redan* 'look ahead' < *_reh$_1$d^h-_; LIV 499). If this is correct, *rosal* would have to be a relatively late secondary creation from *_roh$_1$d^h-ei̯e-_, since *o*-grade is morphologically justified in an original causative, but not in a *_-tlo-_ instrument noun (Olsen 1988: 3–4). However, the regular result of *_-dtl-_ in Irish is *-ll-* (cf. OIr. *gíall* (m. *o*-stem) 'hostage' < *_g^{h}ei̯d-tlo-_). The different reflexes could be due to the difference in length of preceding vocalic nucleus (de Bernardo Stempel 1999: 301–302), or be regular from secondary *_-dtl-_. Alternatively, it may be that the word is not connected with *ráidid* at all. MIr. *rosal* is a possible case of the WR, but is not strong evidence.

6. OIr. *socc* (m. *o*-stem) 'pig (*socc sáil* 'sea-pig'); ploughshare, snout (of a pig)', OW. *huch*, MW. *hwch* (m., f.), MB. *houch*, B. *hoc'h* (m.), OC. *hoch* gl. *porcus* 'pig', Gaul. *Succus* (p.n.) < *_sŭkko-_ are cognate with Lat. *sūs* 'pig', Gk. ὗς and σῦς 'pig', Skt. *sūkaráḥ* 'boar, pig'. According to Testen (1999) the preform was *_suH-pk̂u-_, with laryngeal loss or vowel shortening. However, short vowels are also found in Lat. *sŭcula* 'small pig', OE. *sugu* 'sow', Gk. σῠβώτης 'swine-herd', probably due to generalisation of the short vowel in a root noun *_suH-s_, gen.sg. *_suH-es_ (Schrijver 1991a: 533), so *socc* is not a good example of the WR.

7. OIr. *trosc* 'name of a disease; leper', *truscae* (f. *i̯ā*-stem) 'name of a disease, leprosy', OB. *trusci* gl. *scabiem*, MB. *trousq*, B. *trousk* (coll.) 'crust on a wound', W. *trwsgl* (adj.) 'awkward, rough, crude; gross, thick', pl. 'rash' < *_trudskV-_ are compared by IEW (1096–1097) to Goth. *þrūts-fill*, OE. *đrūstfell* 'leprosy' and Gk. τρῡ́ω 'rub down, wear out' < *_truH-i̯e/o-_ (LIV 652–653). If this is the case, then Celtic *_trŭdsk-_ comes from *_truH-d-sk-_, but the connection to the Indo-European root is just a guess, and it is difficult to explain the presence of *_-d-_. Probably we are dealing with a purely Celtic-Germanic lexeme; the comparison with long *_-ū-_ in Germanic may suggest shortening in Celtic, but without a certain etymology this is not reliable evidence.

§ 119. *Conclusion*

The good evidence against the WR consists of § 115.3 W. *hidl* < *_seh$_1$-tlo-_, § 115.4 OIr. *láthar* < *_pleh$_2$-tro-_, § 115.7 OIr. *sál* < *_steh$_2$-tleh$_2$_, and § 117.2 OIr. *rúsc* < *_(H)ruH-sko-_. The only really plausible evidence for *_CEHCR/I̯-_ > *_CĔCR/I̯-_ and *_CIHCR/I̯-_ > *_CĬCR/I̯-_ is § 116.5 OIr. *othar* < *_puH-tro-_; § 116.6 OIr. *Sadb* < *_su̯eh$_2$d-u̯eh$_2$_ is a possibility. For *_CEHCP-_ > *_CĔCP-_ and *_CIHCP-_ > *_CĬCP-_ § 118.5 MIr. *rosal* might reflect *_roh$_1$d^h-tlo-_.

The WR can be seen as a way of avoiding superheavy syllables.[143] If *othar* is a real example of the WR, it could therefore imply a syllabification **puHt.ro-*, which goes against the assumptions about Proto-Indo-European syllable boundaries adopted earlier (see p. 7 ff.). But if the WR took place after the loss of laryngeals with compensatory lengthening of the preceding vowel (i.e. at a post-Proto-Indo-European stage), it might well be due to phonologisation of the common phenomenon that vowels are phonetically shorter in closed syllables (Maddieson 1985). In this case, shortening in *othar* might reflect division of the remaining double consonant sequence across the syllable boundary after the loss of a laryngeal: thus **CIH.CR/I̯-* > **CĪC.R/I̯-*. If this were correct, the failure of the WR to affect forms like **seh*$_1$*-tlo-* could be explained by the further tendency of high vowels to be shorter than non-high vowels (as already noted on p. 149); the WR would then have to have occurred prior to the Celtic change of **-ē-* > **-ī-*.

However, this explanation does not fit OIr. *rúsc* < **(H)ruH-sko-*, and the possibility remains that the short vowel in *othar* is due to Dybo's rule (p. 132 ff.) rather than the WR. In that case, it might still be possible to explain *Sadb* if it really does reflect **su̯eh*$_2$*d-u̯eh*$_2$. Other evidence, notably **CR̥HC(C)-* sequences (p. 69 ff.), but possibly also **HR̥HC-* (p. 38 ff.) and **CR̥Hu̯-* (p. 89 ff.) sequences, suggests that intervocalic **-CR-* was treated as tautosyllabic, and assigned to the onset of the syllable whose vowel followed. If this were the case, and this syllabification rule still applied after the loss of laryngeals with compensatory lengthening of a preceding vowel, the failure of the WR to affect forms like W. *hidl* < **seh*$_1$*-tlo-*, OIr. *láthar* < **pleh*$_2$*-tro-*, and OIr. *sál* < **steh*$_2$*-tleh*$_2$ is unsurprising, because, after loss of laryngeals they were syllabified as **sē.tlo-*, **plā.tro-* and **stā.tlā* respectively. In the case of OIr. *Sadb* < **su̯eh*$_2$*d-u̯eh*$_2$ and MIr. *rosal* < **roh*$_1$*d*^{h}*-tlo-*, however, the intermediate stages were **su̯ād.u̯ā* and **rōd.tlo-* (or **rōs.tlo-*); shortening took place to avoid a superheavy syllable. Note that this would imply **-Cu̯-* was treated differently from **-CR-*. In order to explain OIr. *rúsc* < **(H)ruH-sko-* rather than ^{x}*rusc*, it would have to be assumed that a sequence **-sC-* was syllabified like **-CR-* rather than like other **-CC-*, i.e. that we have **rū.sko-*. Given that **-s-* seems to have been extrasyllabic in Proto-Indo-European, this may not be particularly problematic.[144]

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[143] Schindler's proposal of an syllabification **-V.HCCV-*, implicitly compared to **-VH.CV-*, is quite implausible.

[144] An alternative explanation would be to say that syllabification in WR forms was governed by morphological boundaries (hence e.g. **sē.tlo-* but **su̯ād.u̯ā*). According to

Overall, the Celtic evidence speaks strongly against the WR in the environment **CEH.CR/I̯*- and **CIH.CR/I̯*- (W. *hidl*, OIr. *láthar*, *sál*, *rúsc*). If the WR did exist in Celtic it might have been restricted only to original superheavy syllables (OIr. *Sadb*, MIr. *rosal*), where the long vowel resulting from loss of the laryngeal remained in a super-heavy syllable. In this case it must have occurred before the Proto-Celtic change *-*ō*- > *-*ā*-. But the evidence is not strong enough to claim that the WR definitely did take place in Celtic in some form.

-*CHCC*-[145]

§ 120. *Introduction*

Across the Indo-European languages it is quite common for laryngeals to have been lost without reflex such as an epenthetic vowel when preceded and followed by a consonant (or consonants) and not in the syllable onset (i.e. not in *#*CHC*(*C*)*V*- sequences), that is to say in the sequence *-*CHC*(*C*)-. The Indo-European languages show a surprisingly idiosyncratic array of reflexes for this type of sequence. Thus, for example, Germanic lost all laryngeals in this position (Müller 2007: 74), as did Balto-Slavic, but only after they had caused an acute tone in *-*VRC*- < *-*VRHC*- sequences (see p. 12 f.). In Armenian, different suggestions have been made for the environment in which laryngeal loss took place. According to Beekes (1988b: 77), laryngeals were retained (> *-*a*-) in *-*CHCC*- sequences, but lost before a single consonant. Olsen (1999: 767–769) proposes that laryngeals were retained (> *-*ə*-), with the prop vowel being subsequently lost unless it formed a diphthong with a following -*w*-. In Anatolian, the results are different according to the laryngeal involved: *-h_1- and *-h_3- were lost between consonants, *-h_2- between an obstruent and a consonant (Melchert 1994: 65, 69–70, 73). In Iranian, laryngeals were lost in at least some cases in word-internal *-*CHC*(*C*)-sequences, but not in word-final sequences (Beekes 1988b: 67–68; Mayrhofer 1986: 137, 2005: 119–123). In Italic, Sanskrit, Greek and Tocharian, interconsonantal laryngeals usually resulted in an epenthetic vowel (although with differing results: Sanskrit -*ī̆*-, Italic and Tocharian *-*ă*-, Greek -ε- < *-h_1-, -α- <

Byrd (2010a: 157–158, 2010 b: 63–64), onset maximisation occurred within a morpheme in Proto-Indo-European.

[145] An earlier version of the discussion here and in the following section can be found in Zair (2012a). Although the overall conclusion remains the same, I now see some aspects of the question rather differently.

*-_h$_2$_-, -o- < *-_h$_3$_-). It is clear that in general laryngeals between consonants developed at a post-Proto-Indo-European stage, within individual proto-languages (or even at a later stage).

However, even in languages where laryngeals are expected to have been retained, or to give epenthetic vowels, there are some forms in which the laryngeal appears to have been lost. The classic example is the word for ‘daughter’: Skt. _duhitā́_, OAv. _dugədar-_, YAv. _duγδar_, Gk. θυγατήρ, and Toch A _ckācar_, B _tkācer_ attest to _*d^{h}ugh$_2$ter-_,[146] but MPers. _duxt_, NPers. _duxtar_, Osc. **futír** show unexpected loss of the laryngeal (without aspiration in the case of Persian, and without epenthetic vowel in the case of Oscan). Of course, Goth. _dauhtar_, Lith. _duktė̃_, Lyc. _kbatrã_ (acc. sg.), Arm. _dowstr_ provide no evidence, because the laryngeal would expect to be lost here by language-specific rules. As we shall see, Celtic shares with Iranian the distinction of having preserved both forms which show a reflex of the laryngeal (Celtib. _tuateros_, _tuateres_) and those which do not (Gaul. _duxtir_).

Work on this type of laryngeal loss has focussed on _*-CHCC-_ clusters as the locus of the loss of the laryngeal in Proto-Indo-European itself. Hackstein (2002a, with earlier literature) provides evidence for the loss of laryngeals in the environment _*-CH.CC-_ in unstressed medial syllables in Proto-Indo-European. According to him, in the word for ‘daughter’ laryngeal loss would be expected in the weak cases such as gen. sg. _*d^{h}ugh$_2$tr-os_ > _*d^{h}ugtr-os_, while the strong cases such as nom. sg. _*d^{h}ugh$_2$tēr_ would have preserved the laryngeal. Each language (-family) then generalised one stem or the other; this occurred fairly late in the case of Iranian and Celtic.

As Hackstein (2002a: 19) acknowledges, some sequences (e.g. _*k̂erh$_2$sro-_ > Lat. _cerebrum_ ‘brain’), did not seem to trigger this rule. Byrd (2010a: 39–115, 2012) provides more examples of the failure of the rule in _*-RH.CC-_ clusters, and concludes that Hackstein’s rule should be more precisely defined as _*-SH.CC-_ (where the laryngeal cannot be syllabified due to its violation of the sonority sequencing principle).[147] This rule does not in fact cover all of Hackstein’s examples, such as Gk. Dor. γέννᾱ < _*ĝen-mn-eh$_2$_ < _*ĝenh$_1$-mn-eh$_2$_. According to Byrd, the loss of the syllable-final laryngeal after a sonorant is the result of the same law which gave PIE _*u̯edōr_ < _*u̯edor-h$_2$_ 'water' (Szemerényi's law). Exceptions such as _*k̂erh$_2$sro-_ > Lat. _cerebrum_ reflect a re-ranking of constraints at a late stage of Proto-Indo-European such that retention of the laryngeal (i.e. faithfulness to the input form with regard to preservation of laryngeals) was preferred to avoidance of superheavy syllables. This seems to me to be a weak spot in Byrd's argument, since, if such a re-ranking had occurred, it ought to have affected e.g. Gk. Dor. γέννᾱ < _*ĝenh$_1$-mn-eh$_2$_ just as much as e.g. Gk. γένεθλον 'relative' < _*ĝenh$_1$-d^{h}lo-_. Further discussion of this point will take place below (p. 167 ff.).

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[146] In the Avestan forms there is no prop vowel, as expected, but the earlier presence of the laryngeal is attested by evidence that it caused aspiration since medial _*-gd-_ must have come from _*-gd^h-_ < _*-g^{h}t-_ by Bartholomae’s law. On the development of the Indo-Iranian forms of this word see Werba (2005).

[147] In fact, Byrd presents this environment as _*-PH.CC-_, but according to his view of the sonority sequencing principle, laryngeals ought to be as sonorous or less sonorous as _*-s-_, so loss would occur also after _*-s-_.

Celtic forms which reflect an original _*-CHCC-_ sequence are discussed in the following order: §121 _*-CHCC-_ > _*-CCC-_, §122 _*-CHCC-_ > _*-CaCC-_.

§121. _*-CHCC-_ > _*-CCC-_

1. OIr. _anacul_ (n. _o_-stem) 'protecting, shielding; protection', Gaul. _Anextlo-_ (p.n. element) are derived by Schumacher (2004: 199)[148] from _*an-ek-tlo-_ 'non-neglect', from an _*h$_1$egH-e/o-_ which is otherwise unattested in Celtic (cf. Toch. B _yäknāstär_ 'is negligent', Lat. _egeō_ 'want, need'; LIV 231). If this is correct, then _*ek-tlo-_ might directly reflect _*h$_1$egH-tlo-_, with loss of laryngeal. However, it could also be a secondary derivation from the proposed _*ege/o-_ < _*h$_1$eg^{h}H-e/o-_, and therefore cannot be used as evidence.

2. MW. _berth_ (adj.) 'fair, beautiful, fine, rich, valuable', (m.) 'wealth, riches', B. _berzh_ (m.) 'prosperity' < _*bergto-_, MIr. _-bertach_ (p.n. element) < _*bergtāko-_ are cognate with Goth. _bairhts_, OE. _beorht_ 'bright, shining, clear' (Heidermanns 1993: 123–124). According to IEW (139), these words are to be compared to Skt. _bhrā́jate_ 'shines, beams, sparkles', Lith. _brė́kšti_ 'break (of day)' < _*b^{h}reh$_1$ĝ-_ (LIV 92). Assuming this is correct, it points to _*b^{h}erh$_1$ĝ-to-_ as the origin of the Celtic and Germanic forms, with loss of the laryngeal in Celtic (otherwise _*b^{h}erh$_1$ĝ-to-_ > MW. ^{x}_baraeth_).

This etymology, which is formally and semantically plausible, requires a morphological explanation. The same _schwebeablaut_ _*b^{h}reh$_1$ĝ-_ → _*b^{h}erh$_1$ĝ-_ is also found in Balto-Slavic (Lith. _béržas_, Russ. _berëza_), where it is probably to be explained as _vr̥ddhi_ substantivisation from an original adjective _*br̥h$_1$ĝ-o-_ 'shining, white' of the type OHG. _kind_ 'child' < _*ĝenh$_1$-to-_ ← _*gn̥h$_1$-to-_ 'born' (thus Schindler _apud_ EWAIA 2.270); compare Skt. _bhūrjáḥ_ 'type of birch' with zero grade. MW. _berth_ could then be seen as a denominal possessive adjective *_b^{h}erh$_1$ĝ-to-_ 'having a shining thing' (cf. Lat. _modestus_ 'restrained' < * _modes-to-_ 'having measure'), but this type of adjective is usually based on the collective stem, rather than replacing the thematic vowel (Hajnal 1993), so we should expect *_b^{h}erh$_1$ĝ-eh$_2$-to-_, rather than *_b^{h}erh$_1$ĝ-to-_. A more likely alternative is that *_b^{h}erh$_1$ĝ-to-_ is derived by _vr̥ddhi_ from an original past participle *_b^{h}r̥h$_1$ĝ-to-_.

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[148] Replacing an unlikely etymology by Klingenschmitt (_apud_ Joseph 1982: 40 fn. 10), who derives them from _*n̥H-eĝ-_, cf. Skt. _nāthám_ 'refuge, protection' < _*neH-th$_2$-o-_.

3. OIr. _·ceird_ (_fo·ceird_ 'throws'), MW. _kerdaf_, W. _kerddaf_ 'walk, journey, travel, go', MB. _querzaff_ 'go, walk', MC. _kerthaff_ 'go' < *_kerd-e/o-_ are all attributed by Hackstein (2002a: 14; followed by Schumacher 2004: 403) to the root *_kerH-_ 'scatter, pour out' (cf. Skt. _kiráti_ 'scatters, pours out' < *_kr̥H-e/o-_, aor. subj. _kā́riṣat_; LIV 353–354). LIV's (556) connection of the Brittonic forms to a root *(_s_)_ker-_ 'leap, swing oneself' (< *_ker-i̯e/o-_) on semantic grounds is possible, but Schumacher argues that the semantic change required from *_kerH-_ has parallels in British Celtic. OIr. _·ceird_ can only come from *_ker-d$^{(h)}$-_.

According to Hackstein, Celtic *_kerd-e/o-_ derives from *_ker-d^h-e/o-_, in which the *_-d^h-_ formant is grammaticalised from original nominal compounds formed with *_-d^{h}h$_1$-o-_ (cf. originally phrasal OIr. _creitid_ 'believes' < *_kred d^{h}eh$_1$-ti_), with loss of laryngeal in the context *_-CHCC-_. Therefore, _·ceird_ comes from original *_kerH-d^{h}h$_1$-o-_. Such an analysis is very plausible, if not completely certain.[149]

4. Gaul. _duxtir_ 'daughter' < *_dugtīr_, Celtib. _tuateros_ (gen. sg.), _tuateres_ (nom. pl.) 'daughter' < *_dugater-_ (Delamarre 2003: 159; MLH V.1: 414–417), perhaps MIr. _Der-_, _Dar-_, _Ter-_ (female p.n. element) < *_dugter-_[150] < *_d^{h}ugh$_2$ter-_ are, as already mentioned, cognate with Skt. _duhitā́_, Gk. θυγατήρ, and Toch A _ckācar_, B _tkācer_.[151] The evidence in Celtic of this etymon is divergent, Gaulish and perhaps Irish implying laryngeal loss, Celtiberian suggesting retention. Although Celtiberian at least seems to have generalised the suffix *_-ter-_ in this word, it is usually assumed that the variation in laryngeal reflexes is due to the original variation between strong *_-ter-_, weak *_-tr-_.

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[149] On *_-d^{h}h$_1$-e/o-_ in synthetic compounds see now Balles (2010).

[150] With loss of the first syllable due to lack of stress in proclisis, and proclitic voicing of _Ter-_ > _Der-_ (O'Brien 1956: 178–179). If this is correct, then _Der-_ cannot reflect *_dugater-_, since this would have undergone lenition to give *_duγaϑer-_, whence ^{x}_Ther-_.

[151] It must be admitted that the unexpected loss of intervocalic *_-g-_ in Celtiberian is problematic, and Lambert (1997: 250–251) consequently reconstructs instead *_tu̯anter-_ 'ally, brother-, sister-in-law'. But the context is strongly in favour of a meaning 'daughter', and Lambert's derivation is extremely implausible. He assumes an agent noun derived from the root *_teu̯-_ 'swell' plus a suffix *_-en-_ (note that the root is *_teu̯h$_2$-_, which makes *_tu̯anter-_ < *_tu̯n̥ter-_ < *_tuh$_2$-n̥-ter-_ very difficult; for the root see LIV 639–640).

5. MW. _eneint_, W. _ennaint_ (m., f.) ‘bath, washing place; unguent, oil’ may show loss of a laryngeal if it is related to OIr. _ind·aim_ ‘washes’, and comes from *_and-anti̯o-_ < *_-$h_2$emH-ti̯o-_ (Schumacher 2004: 195). However, the evidence for a root final laryngeal in the verb consists only in the existence of a nasal present in Armenian (Arm. _amanam_ ‘fill up, throw in, carry up’),[152] and even if there was a laryngeal there, _eneint_ was probably based on the Proto-Celtic verb *_am-(i̯)e/o-_. There is also an alternative etymology, from *_ande-nig-ant-i̯o-_ (GPC 1218) or *_ande-nig-īnā_ (Schrijver 2005: 59, with possible Gaulish cognate), to the root *_neig^w-_ ‘wash’ (OIr. _nigid_ ‘washes’; LIV 450).

6. MIr. _fáiscid_ ‘pushes, squeezes’ < *_u̯āske/o-_, MW. _gwascu_ (v.n.), W. _gwascaf_ ‘press, squeeze, crush’, OB. (_dem_)_guescim_ ‘opposition, conflict’, MB. _goascaff_, B. _gwaskañ_ (inf.) ‘press, squeeze’, MC. _gwyskel_, _guyskel_ (v.n.) ‘strike, beat, knock’ < *_u̯aske/o-_ are connected by IEW (1115) with Skt. _ávadhīt_ (aor.) ‘struck, slew’, Gk. ὠθέω ‘thrust, push, shove’ < *_u̯ed^hh_1-_ (LIV 660; see OIr. _fodb_ p. 213). In principle, therefore, _fáiscid_ and _gwasgaf_ could come from *_u̯ōd^hh_1-sk̂e/o-_ and *_u̯od^hh_1-sk̂e/o-_[153] respectively. However, *_sk̂e/o_-presents should not show _o_-grade (LIV 19), so these forms are probably secondary. Anyway, since *_-a-_ would be lost by syncope in both Irish and British in *_u̯ā̆daske/o-_, there is no way of telling whether the laryngeal was lost or not.

7. OIr. _greimm_ (n. _n_-stem) ‘grasp, authority; seizure, hold’ < *_grebsmen_ belongs with Skt. _gr̥bhṇā́ti_ ‘siezes, takes, grasps’, _ágrabhīt_ (aor.), Lith. _grė̃biu_ ‘snatch’ (Matasović 2009: 167). Since the long vowel of Lithuanian is best explained by Winter’s law, Skt. _-bh-_ implies *_grebh_2-_ (LIV 201). However, Proto-Indo-European *_-b-_ is rare, so perhaps the Lithuanian vowel length is secondary. At any rate, _greimm_ is clearly originally a verbal noun, so the absence of a laryngeal reflex may be due to loss in prevocalic contexts in an original verb, now lost (cf. e.g. OIr. _béimm_ p. 226).

8. MW. _gwehynnu_ (v.n.) ‘draw, drain, empty’ < *_u̯o-semde/o-_, OB. _douohinuom_ (for *_douohinnom_) gl. _austum_ (for _haustum_) ‘draw’ < *_tu-u̯o-semde/o-_ reflect a $d^{(h)}$-present to the root *_semH-_ ‘draw’ (Lith. _sémti_ ‘draw, scoop’, Gk. ἄμη, ἄμη ‘water-pail’; LIV 531).[154] If all d^h-presents are originally denominal to compounds in *_-d^hh_1-o-_, we can reconstruct *_semH-d^hh_1e/o-_, with laryngeal loss (a vocalic reflex of the laryngeal would have given something

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[152] Gk. ἀμάομαι ‘draw milk’, quoted by Matasović (2009: 31) is probably an expanded usage of ἀμάομαι ‘gather together, collect’ < *_$h_2$meh_1-_ (LIV 279).

[153] For *_u̯o-_ > *_u̯a-_ in British, see Schrijver (1995: 116–130).

[154] The _seṭ_-root is doubted by Fortson (2008: 61 fn. 26), who presumably attributes Gk. ἄμη to Lindeman’s law.

like _*-semade/o-_ > _*saμađe/o-_ > W. ^{x}_gwehafddaf_). However, a root without _d_-extension is also attested in OIr. _do·essim_ 'sheds, pours' < _*to-eks-seme/o-_ < _*-semH-e/o-_, so it is possible that the _d_-present was formed secondarily on the basis of the neo-_aniṭ_ root _*sem-_.

9. MW. _kysgaf_, W. _cysgaf_ 'sleep', MB. _cousqet_, B. _kousket_ (inf.) 'sleep', MC. _cosk_ (3sg.) 'sleeps' < _*kub-ske/o-_ is cognate with Lat. _cubāre_, _cubuī_ (perf.) 'lie down, recline', South Picene _qupat_ 'lies' (LIV 357–358). The Italic forms may reflect _*k̂eu̯bh_$_2$- (Rix 1999: 520–521), but some other _ā_-verbs in Latin form perfects in _-uī_ beside expected _-āuī_, where a laryngeal is clearly not involved, e.g. _fricuī_ beside _fricāuī_ 'rubbed', _plicuī_ 'folded' beside _plicāuī_, _necuit_ beside _necāuī_ 'killed' (de Vaan 2008: 243–244, 407–408, 471–472; Weiss 2009: 438). It is more likely than not that the root ended in a laryngeal, in which case we can reconstruct _*kubh_$_2$_-sk̂e/o-_ for the Celtic forms, but this is not completely certain. Consequently, not much weight can be put on the Latin form, especially since the root is not found in any other languages.

10. MIr. _teilm_, _tailm_ (f? _i_-stem) 'sling', W. _telm_ (f.) 'snare, trap, springe' < _*telsmi-_,[155] MB. _talm_ 'sling', OB. _talmorion_ gl. _funditoribus_ < _*talsmi-_ are connected by IEW (1061) with Gk. τελαμών 'strap for bearing anything' < _*telh_$_2$- 'lift, take up' (LIV 622–623),[156] which would imply _*telh_$_2$_-smi-_ > _*tel-smi-_. But this is doubted by LEIA (T-10), and the Breton _-a-_ is problematic: Pedersen's (1909–1913: 1.39) reconstruction of a zero grade ought to produce ^{x}_tlāsmi-_ < _*tl̥h_$_2$_-smi-_. Matasović's (2009: 377) connection with _*telk-_ 'hit, beat' (OCS. _tlъkǫ_ 'hit, strike'; LIV 623) is to be preferred, although this also does not solve the difficulty of the Breton vocalism.

11. MIr. _seisc_ (f. _i_-stem) 'sedge, rushes; a sedgy or rushy place' < _*seski-_, MW. _hescenn_ (singul.), W. _hesg_ (pl.) 'sedges, flags, rushes', MB. _hesq_, B. _hesk_ (m.) 'sedge', OC. _heschen_ gl. _canna l. arundo_ < _*seskV-_ are cognate with OE. _secg_, MLG. _segge_ 'sedge'. According to LEIA (S-75–76; following IEW 895) they come from the root _*sekH-_ 'cut'; if the preform was _*sekH-sk-i-_ this might imply laryngeal loss. However, de Bernardo Stempel (1999: 68) reconstructs a reduplicated formation _*se-skH-i-_ (cf. OIr. _nenaid_ 'nettle' p. 197), and the presence of a laryngeal in this root is uncertain (see MIr. _seiche_ p. 205).

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[155] If _tailm_ has secondary _-a-_ before a palatal consonant (GOI 54). But this probably only applied before palatal _*-g-_ (Schrijver 1995: 134–141; McCone 1996: 111).

[156] The shared derivation between the Greek and Celtic forms implied by IEW is not correct, since the Celtic suffix is _*-smi-_.

§ 122. _*-CHCC-_ > _*-CaCC-_

1. MIr. _anál_ (f. _ā_-stem) ‘breath, breathing’, MW. _anadyl_, W. _anadl_ (f., m.) ‘breath, respiration; life’, MB. _alazn_, _azlan_, B. _alan_, _anal_ ‘breath, breath of wind’ (f.) < _*anatlā_ may come regularly from _*h$_2$enh$_1$-tleh$_2$_ (_*h$_2$enh$_1$-_ ‘breathe’; LIV 267–268; see OIr. _anaid_ p. 41). But there are many forms derived from this root in Celtic, including OIr. _anaid_ ‘remains, stays’ < _*ana-_ < _*h$_2$enh$_1$-_, so _anál_ may have had its second _*-a-_ restored from the verbal stem. The same goes for MW. _eneid_, W. _enaid_ (m., f.) ‘soul, spirit; life’, OBrit. _Anate-_ (p.n. element) < _*anati̯o-_.

2. MIr. _arathar_ (n. _o_-stem), MW. _aradyr_, W. _aradr_, MB. _arazr_, _ararz_, B. _arar_, _alar_ (m.) ‘plough’, OC. _aradar_ gl. _aratrum_ < _*aratro-_ < _*h$_2$erh$_3$-tro-_ are cognate with MIr. _airid_ (LIV 272–273; p. 202). It is unlikely that the second _*-a-_ was restored from the verb, because _airid_ < _*ari̯e/o-_ < _*h$_2$erh$_3$-i̯e/o-_ had lost _*-h$_3$-_ regularly before _*-i̯-_.

3. MW. _gwaladyr_, W. _gwaladr_ (m.) ‘lord, prince, leader’, OB. _-gualatr_, _-uualatr_ (p.n. element) < _*u̯alatro-_ < _*u̯elH-tro-_ are cognate with Lat. _ualeō_ ‘be strong’ (LIV 676–677; Joseph 1982: 41–42; Schrijver 1995: 80–81). However, the root is otherwise attested in Celtic (OIr. _follnaithir_ ‘rules’; Schumacher 2004: 655–656), so it is possible that the laryngeal could have been replaced on the basis of the verb.

4. MB. _malazn_, B. _malan_ (m.) ‘wreath’, LC. _manal_ (f.) ‘sheaf’ < _*manatlo-_ could go back to _*menH-tlo-_ or _*monH-tlo-_, if related to Lat. _manus_ ‘hand’. However, the semantic connection is not particularly close, and there is no other evidence for a laryngeal in the root (Schrijver 1995: 95).

5. W. _mathraf_ ‘trample, tread’, B. _mantrañ_ (inf.) ‘grieve, weaken, burden, dismay’ go back to _*mantrā-_. This is problematic because, if they are cognate with Lith. _mìnti_ ‘tread, break flax’ (LIV 438), they ought to come from _*m̥nH-tro-_ (MW. _sathyr_ ‘trampling’, W. _sathru_, MIr. _saltraid_ ‘tramples’ < _*sal-tro-_ show the same derivational process), which should have given ^{x}_mnătro-_ (see p. 69 ff.). Perhaps this was shifted to _*mantro-_ to avoid an initial sequence _*mna-_? Alternatively, if _*-ntr-_ sequences from syncope gave the same reflex, perhaps _mathraf_ reflects _*manatrā-_ < _*menH-treh$_2$_, but Gaul. _Mantala_, _mantalum_ ‘path, way, route’ are problematic for this reconstruction.[157] These forms are too uncertain to be used as evidence.

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[157] Is it possible that they are due to metathesis of _*manatlo-_? Gaulish seems to have had a tendency to produce an anaptyctic _*-a-_ in _*-PRo-_ clusters when the preceding syllable

6. MW. _paladyr_, W. _paladr_ (m., f.) 'spear shaft, spear' < *_palatro-_ may reflect *_k^welh_1-tro-_ (*_k^welh_1-_ 'turn'; LIV 386–388; see MIr. _caile_ p. 91), but the etymology is very uncertain (Schrijver 1995: 82–84).

7. MIr. _tarathar_ (_o_-stem) 'auger', OW. _tarater_, MW. _taradyr_ (m.), W. _taradr_ 'auger, drill', MB. _tarazr_, _talazr_, B. _talar_ (m.) 'drill', MC. _tardar_ (m.) 'auger, gimlet', and (Latinised) Gaul. _taratrum_ 'auger, drill' < *_taratro-_ < *_$terh_1$-tro-_ are directly cognate with Gk. τέρετρον 'borer, gimlet', and, with a different instrument suffix, Lat. _terebra_ 'gimlet, borer' (cf. Gk. τρητός 'bored through'; LIV 632–633). Another derivative of this root exists in Celtic (MW. _taraw_ < *_$terh_1$-u̯o-_, p. 213), but no primary verb from this root is attested in Celtic, so it is plausible that _tarathar_ reflects an original formation.

§123. _Conclusion_

The best examples of *_-CHCC-_ > *_-CaCC-_ are §122.2 MIr. _arathar_ < *_h_2erh_3-tro-_, §122.7 MIr. _tarathar_ < *_$terh_1$-tro-_. §122.1 MIr. _anál_ < *_h_2enh_1-tleh$_2$_ and §122.3 MW. _gwaladyr_ < *_u̯elH-tro-_ are also plausible examples, but were not synchronically isolated, and therefore could in principle have had a lost laryngeal restored by analogy.

All of these agree with Byrd's restriction of the laryngeal loss rule to *_-SH.CC-_ (_arathar_ and _tarathar_ were already included among his counterexamples to Hackstein's formulation).

The most plausible examples of loss of laryngeals in the sequence *_-CHCC-_ are §121.2 MW. _berth_ < *_b^herh_1g-to-_, §121.3 OIr. _·ceird_ < *_$kerh_2$-d^hh_1-e/o-_, §121.4 Gaul. _duxtir_ < *_d^hugh_2-tr-_, and §121.9 MW. _kysgaf_ < *_$kubh_2$-sk̂e/o-_. Of these, _duxtir_ and _kysgaf_ conform to Byrd's formulation *_-SH.CC-_ > *_-SCC-_; however, the loss in _berth_ and _·ceird_ are also expected, since according to Byrd both retention and loss of the laryngeal are possible results in the sequence *_-RH.CC-_.

The evidence of Celtic does not actually contradict Byrd's optimality-theoretical account of the environments in which the laryngeal is retained or lost in a sequence *_-CHCC-_. However, his treatment of the sequence *_-RHCC-_ seems to me to be problematic, because I do not see why the re-ranking of constraints which he invokes to explain forms like Gk. Dor. γέννᾱ < *_$\hat{g}enh_1$-mn-eh_2_ beside Gk. γένεθλον 'relative' < *_$\hat{g}enh_1$-d^hlo-_ should have affected one form but not the other.

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contained *_-a-_ (_Magalos_ < _Maglo-_, _cantalon_ < _cantlon_, _Gabalum_, Lat. _gabalus_ < *_gablo-_, cf. OB. _gabl_), which might explain a misanalysis of *_manatlo-_ as *_mantalo-_. But note the retention of _taratrum_, Sp. _taladro_, not ^{x}_tartaro-_.

On the basis solely of the Celtic evidence collected here, we are entitled to suppose that laryngeals were lost in all _*-CHCC-_ sequences except _*-RHSR-_. In fact, however, the only example of loss in the sequence _*-SHSR-_ is § 121.4 Gaul. _duxtir_ < _*d^hugh$_2$-tr-_, where the loss of the laryngeal in Celtic may in fact have taken place in the strong cases with stem _*d^hugh$_2$-ter-_ according to the rule whereby a laryngeal was lost before tautosyllabic plosive (see p. 180 ff.). The evidence for loss of the laryngeal in this lexeme therefore rests only on the Iranian and Oscan forms, and in neither case is it certain that the reason for the loss was an Indo-European rule affecting the sequence _*d^hugh$_2$-tr-_ rather than language-specific rules affecting _*d^hugh$_2$-ter-_. So it is possible that the Indo-European rule was that laryngeals were lost in the sequence _*-CHCC-_ except in _*-CHSR-_.

This rule would cover all the examples of retention or loss of the laryngeal in _*-CHCC-_ sequences collected by Byrd (2010a: 42–44, 47–48), including forms like Toch B _plätk-_ ‘step forward’ < _*pl̥th$_2$-sk̂e/o-_, Gk. Dor. γέννᾱ < _*ĝenh$_1$-mn-eh$_2$_, and Skt. _jantúḥ_ ‘person’, on the assumption that laryngeal loss in this form was generalised from the oblique stem _*ĝenh$_1$-tu̯-_ (in this case the sequence _*-CHSi̯-_ is not treated the same as _*-CHSR-_). The consistency of the evidence, along with the weakness of Byrd’s re-ranking theory, leads to the conclusion that the correct formulation of the laryngeal loss rule may be that laryngeals were lost in the sequence in _*-CHCC-_, except when followed by the sequence _*-SR-_. This is almost the opposite of Byrd’s theory, in which the conditioning environment was the preceding consonant. Unlike in Byrd’s account, it is not clear whether this rule has anything to do with Proto-Indo-European syllabification, since e.g. _*k̂erh$_2$.d^hh$_1$-e/o-_ and _*terh$_1$.tro-_, and _*ĝenh$_1$.mneh$_2$_ and _*ĝenh$_1$.d^hlo-_ give different results.[158]

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[158] The loss of laryngeals in the sequence _*-CHCC-_ may explain the curious fact that in Celtic original _s_-aorists to _seṭ_-roots never show any reflex of the laryngeal (e.g. OIr. _milt_ ‘ground’ < _*mēlst_ < _*mēlh$_2$-s-t_). This feature is explained by McCone (1991b: 106–107) as analogical on the present stem (OIr. _melid_), with _*-a-_ < _*-H-_ only being preserved when _*-a-_ also appeared in the present stem, e.g. OIr. _anais_ (pret.) < _*anast_ < _*h$_2$enh$_1$-s-t_ beside _anaid_ ‘stays’ (see p. 41). But it could also be supposed that loss of the laryngeal was regular in the 3sg. before the sequence _*-s-t_, whence were generalised the Celtic _t_- and _ss_-preterites, and the analogical restoration of _*-a-_ took place only in the very small group of verbs with present stems in _*-ă-_.

CHAPTER FOUR

LARYNGEALS IN A NON-INITIAL SYLLABLE

#CEHE-

§ 124. *Material*

1. OIr. *á* ‘cart, war-chariot’ probably comes from **i̯eh*$_2$*-es-*, from **i̯eh*$_2$*-* ‘go, drive’ (Watkins 1978: 161; LIV 309–310; see OIr. *áth* p. 109).

#CR̥HE- and #CR̥HI-

§ 125. *Introduction*

Proto-Celtic, like the majority of Indo-European languages,[1] shows a reflex of **CR̥HE-* and **CR̥HI-* equivalent to **CR̥E/I-*. Some representative examples are given below (for the secondary development of **CR̥HIC-* to **CRIHC-* see p. 111 ff.).

§ 126. *Material*

1. MB. *caffou* (pl.), B. *kañvoù* (pl.) ‘grief, sorrow’ (sg. *kañv* is back-formed from the plural) < **kamu-* < **ḱm̥h*$_2$*-u-* is the basis for the derived form MIr. *cuma* (f. *t*-stem) ‘grief, sorrow’, and perhaps OIr. *cumal* (f. *ā*-stem) ‘female slave, bondwoman’, MIr. *cumall* ‘champion’, Gaul. *Camulus* (p.n.) via ‘person who takes pains’ (Delamarre 2003: 101). It is cognate with Skt. *śamnīte* ‘labours, toils’, Gk. κάμνω ‘work, labour; be weary; be sick or ill’ (with καμ- replaced after the aorist ἔκαμον), Gk. ἀκάμας ‘untiring, unresting’ (IEW 557, LIV 323–324).

2. MW. *malaf* ‘grind, crush, whet’, MB. *malaff*, B. *malañ* (inf.) ‘grind’ < **male/o-* < **ml̥h*$_2$*-e/o-* are cognate with CLuv. *mālhūta* (pret.) ‘broke’, Lith. *málti* ‘grind’ < **melh*$_2$*-* (LIV 432–433). OIr. *melid* ‘grinds, crushes’, if not wholly

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[1] Although e.g. Latin shows a result **CL̥HV-* > **CaLV-*, while the regular result of **-L̥-* is **-oL-* (Schrijver 1991a: 203–221).

secondary (Schumacher 2004: 470–472), comes from _*melh_$_2$_-e/o-_, with secondary replacement of _*-e-_ from _*-a-_ in the thematic vowel.

3. OIr. _sain_ (_i_-stem adj.) ‘different, distinct’, OW. _han_ gl. _alium_, (prep.) ‘of, from’, W. _han_ (m.) ‘separation, divorce’, OB. _han_ ‘except, different from’ < _*sani-_ < _*sn̥H-i-_ are cognate with Gk. ἄνευ ‘far from, without’, Lat. _sine_ ‘without’, Skt. _sanutáḥ_ ‘away, aside’.

4. OIr. _tar_, _dar_ (prep.) ‘over, across’ < _*tarV-_ is probably identical to Skt. _tiráḥ_ ‘across, over, apart’ < _*tr̥h_$_2$_-es_ (de Bernardo Stempel 1987: 148; Matasović 2009: 370). For the root see LIV (633–634) and OIr. _tráth_ p. 82.

#CIHE-

§ 127. _Introduction_

As in the other Indo-European languages, the regular result of _*CIHE-_ in Celtic was _*CIi̯E-_. Some examples are given below.

§ 128. _Material_

1. Gaul. _biietutu_ (3sg. impv.) ‘let him strike’, Celtib. _bionti_ (3pl. subj.) ‘would strike’ < _*bii̯e/o-_ come from _*b_^{h}_iH-e/o-_ (_*b_^{h}_eiH-_; LIV 72; Schumacher 2004: 226–232; see OIr. _·bíth_ p. 113).

2. MIr. _cró_ (m. _o-stem_) ‘enclosure’ (earlier _crau_ is found in O’Mulc 212),[2] MW. _creu_, W. _crau_ (m.) ‘sty, hovel, pigsty’, OB. _crou_ gl. _hara .i. stabulum porcorum_, MB. _crou_, B. _kraou_ (m.) ‘stable, crib’, LC. _crow_ (m.) ‘shed, hut, sty, hovel, cot’ have proved difficult to reconstruct. Matasović’s (2009: 221) reconstruction _*kroh_$_1$_-po-_, cognate with ON. _hróf_ ‘boat-shed’, OE. _hróf_ ‘roof’ is impossible: _*kroh_$_1$_-po-_ ought to have given Proto-Celtic _*krāpo-_ > _*krāö-_ > OIr. ^{x}_crá_, MW. ^{x}_kraw_. All the forms can go back to _*kreu̯o-_ or _*kruu̯o-_, and have been connected with OCS. _kryti_ ‘cover, hide’, Lith. _kráuti_ ‘pile up, store’ < _*kreu̯H-_ by LEIA (C-40–241), IEW (616) and LIV (371).[3] J. Pinault (1961: 599–606), in an investigation of the semantics of the words, finds a basic meaning ‘anything

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[2] OIr. _cróa_ ‘hoof’, given as the nom. sg. by DIL s.v. _cró_$_1$ (C-536–538) does not belong here (Greene 1983: 1–3).

[3] But the preform _*krău̯o-_ put forward by these works is impossible, since it would give MW. ^{x}_kraw_, B. ^{x}_krav_, MC. ^{x}_krau_ (Jackson 1953: 369–371; Schrijver 1995: 325–333). Attested early Modern Welsh _craw_ is just a variant spelling for _crau_.

circular', and consequently rejects the connection with the Balto-Slavic forms. But his reconstruction *_krāu̯o-_ has no etymological justification, and it would anyway give MW. ^{x}_cro_ (Schrijver 2011a: 26), so a reconstruction *_kreu̯(H)-o-_ or *_kruH-o-_ is necessary, even if the connection with the words meaning 'cover' is rejected.

3. MW. _kyw_, W. _cyw_ (m.) 'young bird, chick; young animal' < *_kuu̯ī̆-_ (Schrijver 1995: 338–340) < *_k̑uh$_1$-ī̆-_ is cognate with Gk. _κύος_ 'foetus', Lat. _incīens_ 'pregnant', Skt. _śávīraḥ_ 'powerful' (*_k̑u̯eh$_1$-_; LIV 339).

4. MW. _ryd_, _rydd_, W. _rhydd_ (adj.), OB. _rid_ 'free', perhaps OC. _rid_ (_benenrid_ gl. _femina_), perhaps Gaul. _Rio-_ (p.n. element) < *_rii̯o-_ < *_priH-o-_ are directly cognate with Skt. _priyáḥ_ 'beloved, dear to', Goth. _freis_, OHG. _frī_ 'free', and cognate with OCS. _prijati_ 'be appealing to', Skt. _prīṇā́ti_ 'pleases, gladdens, delights' (LIV 490).

5. OIr. _soid_ 'turns, turns around', MW. _amheuaf_ 'disagree, doubt, hesitate' < *_-suu̯e/o-_ < *_suh$_1$-e/o-_ are cognate with Skt. _suváti_ 'sets in motion, urges, impels', _asāviṣur_ (aor. 3pl.) 'set in motion', Hitt. _šuwezzi_ 'pushes, banishes' < *_seu̯h$_1$-_ (Schrijver 1995: 328–329; LIV 538–539; Schumacher 2004: 605–607).

#CEHI-

§ 129. _Introduction_

The development of *_CEHI-_ is uncontroversial (colouring of *_-E-_ when it is *_-e-_ and loss of laryngeal), so only some representative examples are given.

§ 130. _Material_

1. OIr. _cáech_ (_o-_, _ā_-stem adj.) 'one-eyed', MW. _coeg_ (adj.) 'blind, one-eyed; vain, empty', OC. _cuic_ gl. _luscus l. monoptalmus_ < *_kai̯ko-_ are cognate with Lat. _caecus_ 'blind', Goth. _haihs_ 'one-eyed'. Assuming a Proto-Indo-European origin for this word, it can reflect *_kh$_2$ei̯-_ or *_keh$_2$i-_. Skt. _kekaraḥ_ 'squinting' probably does not belong here (KEWA 1.264). If the link with Skt. _kévalaḥ_ 'one's own, alone, whole', Lat. _caelebs_ 'bachelor' (< *_kai̯lo-lib^h-s_ *'living alone'; IEW 518, 519; Schrijver 1991a: 266–267) is correct, then the root must be *_keh$_2$i̯-_, because *_kh$_2$ei̯-_ would have given Skt. ^{x}_khévala-_ (Mayrhofer 2005: 110–114).

2. OIr. _cúal_ (f. _ā_-stem) 'faggot, bundle of sticks; heap' < *_kau̯lā_ is cognate with Lat. _caulis_ 'stalk of a plant', Gk. _καυλός_ 'shaft, stalk', Lith. _káulas_ 'bone', Latv.

kaũls 'stem, bone' (Schrijver 1991a: 268–269). On the basis of the Baltic acute accentuation this reflects _*keh$_2$u-lV-_ rather than _*kh$_2$eu̯-lV-_.

3. MIr. _dúas_ (f. _ā_-stem) 'gift, reward, esp. a recompense given to poets' < _*dou̯stā_ < _*deh$_3$u-steh$_2$_[4] is cognate with Lat. _duim_ (subj.) 'would give', Faliscan _douiad_ (3sg. pres. subj.) 'would give', Lith. _dãvė_ (pret.) 'gave' (Corthals 1979; LIV 107).

#CVHR̥- and #VHR̥-

§ 131. _Introduction_

According to the Proto-Indo-European syllabification rules (see p. 4 ff.) the sequence _*CVHRC-_ would be syllabified as _*CV.HR̥C-_. The expected development in the non-Anatolian languages would be loss of a laryngeal between vowels (thus Lindeman 1997a: 455), but the subsequent development of the resulting sequences seems to have varied between languages. For example, in Indo-Iranian the sequence _*CE.R̥-_, with two vowels in hiatus, lasted long enough before contraction for metrical evidence to show a disyllabic treatment of the first vowel of e.g. Skt. _vā́taḥ_ 'wind' < _*u̯a.ata-_ < _*u̯e.n̥to-_ < _*h$_2$u̯eh$_1$-n̥t-o-_ (Mayrhofer 1986: 124; Schrijver 1991a: 159). In other languages, it is possible that the sequence _*CE.R̥-_ was resyllabified to _*CER-_, e.g. Goth. _winds_ 'wind' < _*u̯ento-_ < _*u̯e.n̥to-_ < _*h$_2$u̯eh$_1$-n̥t-o-_ (Müller 2007: 85–86). However, the treatment of sequences of the type _*CI.HR̥-_ was probably the same in all languages, with creation of a hiatus-filling glide after the loss of the laryngeal to give a sequence _*CI.I̯R̥-_ (e.g. Skt. _yuvaśáḥ_ 'young', Lat. _iuuencus_ 'young; young man; young bull' < _*i̯uu̯n̥ko-_ < _*h$_2$i̯u-h$_{(3)}$n̥-ḱo-_; on this reconstruction see below p. 176).[5] The possibility of distinguishing between these two developments in Celtic will be kept in mind in the following discussion.

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[4] It is not clear why de Bernardo Stempel (1999: 563) considers this phonetically problematic.

[5] In principle, it is possible that in Germanic the development of _*CI.R̥-_ was to _*CIR-_, parallel to the treatment of _*CE.R̥-_ > _*CER-_ (as supposed by Lindeman 1997a: 456–457 also for Italic and Celtic). The key evidence is Goth. _juggs_ 'young' < _*i̯unko-_ < _*h$_2$i̯u- h$_{(3)}$n̥-ḱo-_, but this can also be explained as the result of _*i̯uu̯unko-_ > _*i̯ūnko-_ by contraction > _*i̯unko-_ by Osthoff's law. While the change _*CE.R̥-_ to _*CER-_ after loss of hiatus is what we would expect according to the Proto-Indo-European syllabification rules, this is not the case for the parallel _*CI.R̥-_ > _*CIR-_, which would be expected to be syllabified as _*CI̯R̥-_ in Proto-Indo-European (Müller 2007: 86–87, 271–272).

An alternative view to the developments just outlined is that, at least in some languages, sequences of the type *_CEHR̥-_ and *_CIHR̥-_ developed to *_CĒR-_ and *_CĪR-_ respectively (thus Hilmarsson 1987: 61, 65–75; Beekes 1988b: 60, 87, 92, 98; Schrijver 1991a: 159–160, 263; McCone 1991b: 49–50; Jasanoff 1997: 179 fn. 16). This view is held particularly, but not exclusively, by those associated with the 'Leiden School'.[6] Outside Celtic the evidence for this development is, however, very meagre: *_meh$_1$n̥s-_ > Gk. Aeol. μῆνν- 'month' is unreliable, see OIr. _mí_ below (p. 174), and Lat. _sint_ (3pl. subj.) 'may be' < *_sih$_1$-n̥ti_ could be analogically remodelled from *_sient_, despite the doubts of Schrijver (loc. cit.). The best evidence for a development *_CE.HR̥-_ to *_CĒR-_ probably consists of Toch. A _want_, B _yente_ 'wind' < *_u̯ēnto-_. The idea that this is a _vr̥ddhi_ derivative *_h$_2$u̯ēh$_1$-n̥t-o-_ of *_h$_2$u̯eh$_1$-n̥t-o-_, already derived by _vr̥ddhi_ from the participle *_h$_2$uh$_1$-n̥t-_ (Ringe 1996: 13; Lipp 2009: 143 fn. 42), is implausible, given the identical semantics. Ringe's (2006: 77) later suggestion, also put forward by Lindeman (1997a: 456), that the long *_-ē-_ is taken over from the verb, where *_h$_2$u̯eh$_1$-C-_ gave *_u̯ē-C-_, is better (although the verb is not attested in Tocharian). For another possible case of *_-eh$_1$n̥C-_ > *_-ēnC-_ in Tocharian see OIr. _sét_ below.[7]

Since there is very little evidence for the developments *_CEHR̥-_ > *_CĒR-_ and *_CIHR̥-_ > *_CĪR-_, and since they are unexpected on the basis of the Proto-Indo-European syllabification rules (requiring a change *_CE/IHR̥-_ > *_CE/IHR-_), they seem unlikely to be correct without the addition of very strong evidence from Celtic.[8] The development of the sequence *_CR̥.HR̥-_, for which there is only a single piece of evidence, will be discussed last.

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[6] In the case of the 'Leiden School', it is in fact assumed that the sonorant was syllabified only in the individual Indo-European daughter languages, in some cases after loss of laryngeal with compensatory lengthening of the preceding vowel; for this view see most explicitly de Vaan (2011: 10).

[7] To my knowledge, no-one has suggested that Tocharian *_u̯ēnto-_ is the result of contraction of *_u̯e.änto-_ < *_u̯en̥to-_ < *_h$_2$u̯eh$_1$-n̥t-o-_, but it seems to me to be worth considering. It would obviously have to have taken place before *_-e-_ (and *_-i-_ and *_-u-_) > *_-ä-_ in Proto-Tocharian. Other evidence for *_-eä-_ in hiatus is hard to find: since the only source of *_-ä-_ prior to its development from *_-e-_, *_-i-_ and *_-u-_ was syllabic sonorants, such a sequence can only have arisen from *_-eh$_1$R̥-_. The only other early case of hiatus I know of involving *_-e-_, is the arguable source of Proto-Tocharian *_-ō̆-_ (which actually fell together in most environments with *_-ē-_) in *_-ae-_ (or *_-ao-_) from *_-ai̯e/o-_ < *_-h$_1$-i̯e/o-_ suggested by Ringe (1996: 56–58).

[8] As noted in the Introduction above, Beekes and Schrijver do not accept the Indo-European syllabification rules used here. Hilmarsson (1987: 65 fn. 15) compares Stang's law (whereby *_-eh$_2$m̥_ becomes *_-eh$_2$m_), although ends up dismissing the connection.

§ 132. *_CEHR̥-_

1. MW. _gwint_ , W. _gwynt_ (m.) ‘wind’, MB. _guent_ ‘odour’, B. _gwent_ (m.) ‘wind’, OC. _guins_ gl. _uentus_, MC. _gwyns_, _guyns_ (m.) ‘wind’ < *_u̯ĕnto-_ or *_u̯ĭnto-_ are cognate with Skt. _vā́taḥ_, Av. _vāta-_, Lat. _uentus_, Toch. A _want_, B _yente_, Goth. _winds_ ‘wind’ < *_h_2u̯eh_1-n̥t-o-_ (LIV 287; see MW. _awel_ p. 28). These come from a _vr̥ddhi_ derivation of the participle found in Hitt. _ḫuwant-_ ‘wind’. According to McCone (1991b: 49–50), OIr. _fet_ (f. _ā_-stem) ‘a whistling, hissing’ comes from *_u̯ēntā_ with a different reflex of *_u̯ĭntā-_ (by Osthoff’s law) < *_u̯īntā-_ < *_u̯ēntā_ from inherited *_-ĭnt-_ or *_-ĕnt-_ > *_-ɪnt-_ > OIr. _-ét-_ (cf. *_kentu-_ > OIr. _cét-_ ‘first’, *_link^w-e/o-_ > OIr. _léicid_ ‘leaves’; McCone 1996: 106–107).[9] This would seem to prove *_u̯ēntā_ as the reflex of *_h_2u̯eh_1-n̥to-_; but since the semantics are not the same as the Brittonic forms, the etymology is not certain. The traditional etymology compares OIr. _séitid_ ‘blows’ < *_su̯eisd-_, OW. _Vith_, W. _chwyth_ (m.) ‘breath, a blowing’, MB. _huez_, B. _c’hwezh_ (f.) ‘breath’, MC. _whethe_, _whythe_ (v.n.) ‘blow’ < *_su̯isd-_ (IEW 1040–1041), which is quite plausible, except that it requires the lenited initial of the Irish word to have been generalised in _fet_ < *_su̯isd-eh_2_.

2. OIr. _mí_ (m. _s_-stem), MW. _mis_ (m.), OB., MB. _mis_, B. _miz_ (m.), OC., MC. _mys_ (m.) ‘month’, probably Gaul. _mid_ (for _miđ_? Lambert 1994a: 45) reflect a Celtic preform *_mī̆ns_ > Irish *_mīs_, British *_mīss_.[10] They are cognate with Gk. μείς, Att. μήν (by back-formation from gen. sg. μηνός), Lesb. μηννος (gen. sg.), Skt. _mā́s-_ and Av. _mā̊_, Lat. _mēnsis_ (gen. pl. _mēnsum_), Lith. _mḗnuo_, _mḗnesio_ (gen. sg.) ‘month’, all of which point to a stem *_mēns-_. On the very plausible assumption that these belong to the root *_meh_1-_ ‘measure’ (LIV 424–425), these can be attributed to an original holodynamic animate _s_-stem with nom. sg. *_meh_1-nōs_, gen. sg. *_m̥h_1-ns-es_ (cf. Gk. ἠώς ‘dawn’ < *_$h_2$eu̯s-ōs_, Skt. gen. sg. _uṣas_ < *_$h_2$us-s-es_) which has generalised full grade in the root and zero grade in the suffix to give nom. sg. *_meh_1-n̥s-s_, gen. sg. *_meh_1-n̥s-es_ (Meissner 2006: 147–150). Starting from this preform, however, requires us to assume a development *_CE.HR̥C-_ > *_CEHR-_ > *_CĒR-_ to have taken place in Greek and Baltic. There are two possible ways of avoiding this. One is analogy from the original nom. sg. *_meh_1-nōs_ > *_mēnōs_, which is probably the

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[9] But note that there is no other evidence for the different reflex of *_-īnC-_; the only other form which shows it is McCone’s (1991b: 48–52) etymology of OIr. _·icc_ from *_h_2ēnk-_, which is probably not correct (see p. 251).

[10] Long *_-ī-_ would have been shortened to short *_-ĭ-_ by Osthoff’s law before the change *_-Vns_ > *_-V̄s(s)_, which occurred independently in Irish, British and Gaulish (Griffith 2005).

basis of the analogical or derived forms Goth. _mena_ ‘moon’ < *_meh$_1$-non-_, _menoþs_ ‘moon’ < *_meh$_1$-nō-t-_, and Lith. _mĕ́nuo_ < *_meh$_1$-non-/meh$_1$-nō-t-_ (or possibly regular from *_méh-nōs_). This is more or less the scenario imagined by Meissner.[11] The other is to reconstruct an originally acrostatic paradigm nom. sg. *_mēh$_1$-n̥s_, gen. sg. *_mĕh$_1$-n̥s-es_, as Ringe (2006: 45, 47–48) does. Presumably his reconstruction is based on Schindler’s (1975a: 267) suggestion of such a type as the basis of doublets like Gk. μήδεα/μέδεα ‘genitals’, which would make *_mēh$_1$-n̥s_ very archaic indeed. But Schindler’s examples are all neuter rather than animate _s_-stems, and Meissner (2006: 72–86) casts doubt on the existence of such a class at all.

If either of these explanations are correct, then the Celtic forms will reflect either an analogically remodelled *_mēns-_ rather than *_meh$_1$-n̥s-_ directly, or at least part of the paradigm would always have had a long *_-ē-_ in it, which could then have been generalised.

3. OIr. _sét_ (m. _u_-stem) ‘path, way’, MW. _hynt_ (m., f.?) ‘way, path, course’, MB. _hent_ (m.) ‘route, way’, OC. _hins_ ‘path, road’,[12] OBrit. _-sentum_ (pl.n. element) <*_sĕntu-_[13] are compared by Hilmarsson (1986: 23–27) with Toch. A _ṣon_ ‘road’, Skt. _sā́tuḥ_ ‘vagina?’[14] and OHG. _sind_ ‘path’. This connection is semantically plausible, and Skt. _sā́tuḥ_ would then be explained as reflecting *_seHn̥-tu-_. According to Hilmarsson, Toch A _ṣon_ would come from *_sēntu-_, with _-o-_ < *_-ē-_ with _u_-umlaut (a similar change is assumed by Van Windekens 1962: 187 for Toch. A _ñom_ ‘name’, by analogy with adjectival _-ñomum_ in the second member of compounds). Ringe (1996: 98, 132) considers that

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[11] Although Meissner posits the generalisation of the full grade of the root at a time when laryngeals still existed to give *_meh$_1$ns-_, this ought still to have given *_meh$_1$-n̥s-_. If we want to avoid positing a development *_CEHR̥-_ > *_CĒR-_, it is necessary for the generalisation to have occurred after *_meh$_1$-nōs_ had already become *_mēnōs_. Whether this is a problem is unclear: the loss of laryngeals after low vowels with compensatory lengthening before consonants may have been a Late Proto-Indo-European development (the discussions of Dybo’s rule (p. 132) and the ‘Wetter Regel’ (p. 150) here do not provide certain evidence for the existence of laryngeals in this sequence in Proto-Celtic, although they must still have existed in the sequences *_CR̥HC-_ and *_CIHC-_ into the individual proto-languages). According to Meissner, the reason for the generalisaton of the zero-grade suffix is due to the frequency of the gen. sg. in expressions of time, and can have occurred in the individual language families.

[12] In _camhinsic_ gl. _iniuriosus_, _eunhinsic_ gl. _iustus_.

[13] Although *_sĭnto-_ would be a possible preform for both the Brittonic and Irish forms, OBrit. _-sentum_ shows that the original vowel was *_-ĕ-_ prior to raising of *_-e-_ > *_-i-_ before *_-nC-_ in British. Although Schrijver (1995: 29 fn. 1) supposes shortening of *_sēntu-_ to *_sĕntu-_, Osthoff’s law occurred after *_-ē-_ had become *_-ī-_ (McCone 1996: 63–64). Elsewhere Schrijver (1995: 61 fn. 1, 421–422) accepts this order, as Sims-Williams (2007: 12 fn. 62) notes.

[14] But the word is considered of uncertain interpretation by EWAIA (2.722).

_u_-umlaut applies only to _*-ë-_ < _*-o-_, and would presumably explain the rounding in _ñom_ < Proto-Tocharian _*ñémä_ < _*h$_{(1/3)}$nēh$_{(3)}$mn̥_ by proximity to a labial (cf. Toch. A _cmol_ 'birth' < Proto-Tocharian _*cämél_). This can clearly not be the case with _ṣon_, and the palatalisation in _ṣon_ does suggest a front vowel, which could not be _*-ĕ-_ (> Toch. A _-ä-_), so perhaps _*sēntu-_ is the correct reconstruction.[15] If so, it is striking that _*seh$_1$n̥-tu-_ gave _*sēntu-_ in Tocharian, just as _*h$_2$u̯eh$_1$-n̥t-o-_ appears to have given _*u̯ēnto-_ > Toch. A _want_, B _yente_ 'wind' (but see p. 173 fn.7).

The alternative etymology of _sét_ etc., which connects it to Lat. _sentīre_ 'sense, feel', Lith. _sintḗti_ 'think', OCS. _sę̌štъ_ 'sensible, wise' (LEIA S-98–99; LIV 533; Matasović 2009: 330), is definitely less appealing semantically; the only possible point of crossover is Goth. _sandjan_ 'send' < _*sont-ei̯e-_.

§ 133. _*CIHR̥-_

1. OIr. _baile_ (m. _i̯o_-stem) 'place, piece of land, homestead, farm, town, city' < _*bali̯o-_ is reconstructed by IEW (148; followed by LEIA B-137 and, remarkably, de Bernardo Stempel 1999: 227) as _*b^{h}u̯ə-l-i̯o-_, to the root _*b^{h}uH-_ 'be, become' (LIV 98–101; see OIr. _biid_ p. 103). It is possible, if it is an old formation, that _baile_ comes from _*b^{h}u̯ali̯o-_ < _*b^{h}uHl̥i̯o-_, but we might expect this to give ^{x}_buu̯ali̯o-_ (cf. _*CIHE-_ > _*CII̯E-_, p. 170 ff.). Therefore, the alternative connection, with Gk. φωλεός 'hole, den', Norse _ból_ 'hole, den' < _*b^{h}ōl-_, seems possible (whatever the ultimate etymology of these forms; according to LIV and Rix 2003: 365 they also go back to the root _*b^{h}uH-_ via _*b^{h}oh$_2$-lV-_). If Sievers' law (Mayrhofer 1986: 164–167) did not apply in Celtic (Schrijver 1995: 282–289), or if original _*b^{h}ōlV-_ was secondarily transferred to _*b^{h}ōli̯o-_ in Celtic after Sievers' ceased to work, OIr. _baile_ could come from _*bāli̯o-_ < _*b^{h}ōli̯o-_ by Osthoff's law.

2. OIr. _·icc_ (_do·icc_ 'comes') has been derived from _*h$_2$i-h$_2$n̥k̂-_ (cf. Skt. _nákṣati_ 'reaches' < _*h$_2$nek̂-s-e/o-_) via _*īnk-_ > _*ĭnk-_ by e.g. Jasanoff (1997: 179 fn. 16) and LIV (282–284). If this were correct, it would also be possible that the development was _*h$_2$i-h$_2$n̥k̂-_ > _*i.n̥k-_ > _*ink-_. But it is more likely that _·icc_ reflects _*h$_2$n̥-n-k-e/o-_ (see p. 251); therefore it cannot be used as evidence.

3. OIr. _óac_ (_o-_, _ā_-stem adj.) 'young', MW. _ieuanc_ (adj.) 'young', MB. _youanc_, B. _yaouank_ (adj.), OC. _iouenc_ (in _gur iouenc_ gl. _adolescens_), _youonc_ gl. _iuuenis_, MC. _yowynk_, _yonk_ 'young', Gaul. _Iouincus_ (p.n.) reflect _*i̯uu̯anko-_ < _*i̯uu̯n̥ko-_,

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[15] Don Ringe (p.c.) tells me that he does not rule out rounding of _*-ē-_, if a watertight example could be found.

on the basis of Skt. _yuvaśáḥ_ ‘young’, Lat. _iuuencus_ ‘young; young man; young bull’, Goth. _juggs_ ‘young’ (Schrijver 1995: 344–345). This is normally reconstructed as *_h$_2$i̯u-h$_{(3)}$n̥-k̂o-_, a derivation from the _u_-stem *_h$_2$o/ei̯-u-_ ‘life, force’ seen in Skt. _ā́yu_ ‘life, duration of life’, Gk. αἰών ‘lifespan, time period’, with the addition of the possessive ‘Hoffmann suffix’ *_-h$_{(3)}$on-_,[16] and a subsequent suffix *_-k̂o-_ (Hoffmann 1955; for discussions of the root and derivatives see Weiss 1994 [1995]: 133 fn. 6, and Southern 2002 [2006], especially 183–184).

It is widely suggested (following IEW 510) that although the Celtic forms go back ultimately to *_i̯uu̯n̥ko-_, they were remodelled to *_i̯eu̯n̥ko-_ after the comparative and superlative, which had full grade in the root. However, only Welsh distinguishes between *_-uu̯V-_ and *_-ou̯V-_ in this environment (Zair in 2012b), and neither *_-uu̯V-_ nor *_-ou̯V-_ would be expected to give the sequence _-eu-_ found in MW. _ieuanc_ (which may be due to the initial *_i̯-_; Schrijver 1995: 344–345). There is therefore no reason on these grounds not to reconstruct *_i̯uu̯n̥ko-_ directly.

Lindeman (1997a) argues that remodelling must have occurred because *_(h$_2$)i̯uh$_{(3)}$n̥-k̂o-_[17] would have given *_i̯ŭnko-_ in Celtic, akin to Goth. _juggs_ < *_i̯ŭnko-_ < *_i̯un̥ko-_ < *_(h$_2$)i̯uh$_{(3)}$n̥-k̂o-_. However, his only evidence for such a development in Celtic is MW. _gwint_, W. _gwynt_ < *_u̯ĕnto-_ < *_u̯en̥to-_ < *_h$_2$u̯eh$_1$-n̥t-o-_. As we have seen, this may not necessarily be the correct sequence of events. Even if it is, it is not necessarily the case that *_CIHR̥-_ and *_CEHR̥-_ developed in the same way; indeed there seems to be no certain evidence for the development *_CIHR̥-_ > *_CIR-_ in any language. Jasanoff (1997: 179 fn. 16) also maintains that *_h$_2$i̯u-h$_{(3)}$n̥-k̂o-_ must have given *_iŭnko-_, although via *_i̯ūnko-_ with shortening by Osthoff’s law; but his only other evidence for this development is OIr. _do·icc_ < *_ĭnk-_ < *_īnk-_ < *_h$_2$i-h$_2$n̥k̂-_, which is also extremely uncertain (see above).

Since there is no reason to suppose that the Celtic forms are remodelled, Occam’s razor suggests that we reconstruct Proto-Celtic *_i̯uu̯anko-_ < *_i̯uu̯n̥k̂o-_ directly from *_h$_2$i̯u-h$_{(3)}$n̥-k̂o-_ (or *_i̯uH-n̥-k̂o-_).

§ 134. *_CR̥HR̥-_ and *_R̥HR̥-_

1. OIr. _méit_ (f. _ī_-stem: GOI 186) ‘greatness, magnitude (of size, number, quantity, extent)’, OW., MW. _meint_, W. _maint_ (m., f.) ‘size, dimension, magnitude;

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[16] Schrijver (1991a: 321–322) reconstructs *_-h$_1$-_. *_-h$_3$-_ is reconstructed on account of MW. _afon_ < *_abonā_, supposedly from *_h$_2$ep-h$_3$on-_ (see p. 215).

[17] Lindeman derives _óac_ etc. from *_i̯uH-n-k̂o-_, from an _n_-stem *_i̯uH-e/on-_, to a root *_i̯eu̯H-_ unrelated to *_h$_2$ei̯-u-_. Since the environment would be the same, this makes no difference for our purposes.

amount, quantity', OB. _ment_, _mint_ 'quantity, measure, size', MB. _ment_ (f.) 'dimension, size', MC. _myns_, _mens_ (m.) 'size, amount, number' < *_mănti_[18] < *_m̥h_1-n̥t-ih_2_ (Joseph 1982: 54)[19] is an old participle from *_meh_1-_ 'measure' (LIV 424–425; see MW. _medyr_ p. 154).

2. OIr. _námae_ (m. _t_-stem) 'enemy', Gaul. _Namanto-_ (p.n. element) is quite convincingly traced back by Hamp (1976a: 6–7; following Ó Briain 1923: 321–322) to *_n̥-h_2m̥h_3-n̥t-_, i.e. a negativised participle of the verb found in Lat. _amāre_ 'love', Gk. ὄμνῡμι 'swear' (*_$h_2$emh_3-_; LIV 265–266).[20] An alternative etymology is proposed by Kümmel (2011), who suggests connecting _námae_ with Ved. _ánamam_ (1sg. impf.) 'struck (with a weapon)', itself a slang derivation from *_nemh_1-_ 'distribute' (Gk. νέμεσις 'retribution'; cf. LIV 453). However, this would require a reconstruction *_nōmh_1-n̥t-_; while this might be possible as the participle of a *_su̯ōp-i̯e/o-_ type iterative (LIV 23, 612–613), Ved. _ánamayat_, participle _namáyant-_ shows that this type of iterative was not formed to this verb root. Moreover, the word for 'friend' is also originally a participle from a verb meaning 'love' (OIr. _carae_ < *_kar-ānt-_; see Gaul. _Carus_ p. 134; Schumacher 2007: 178–179), which makes the derivation from *_$h_2$emh_3-_ particularly likely.

However, it is difficult to see how *_n̥-h_2m̥h_3-n̥t-_ could give *_nāmant-_, since loss of intervocalic laryngeals ought to have given *_n̥m̥n̥t-_, which we would expect to be resyllabified as *_n̥mn̥t-_ > ^{x}_anmant_ according to the Proto-Indo-European syllabification rules (see p. 4ff.), and which seem still to have been in operation in Proto-Celtic, going by OIr. _méit_ (above) and _trá_ (below). One way to get out of this problem would be to suppose a stage *_n̥-h_2m̥-n̥t-_, with loss of *_-h_3-_ prior to *_-h_2-_ between vowels, which would lead to a syllabification *_n̥-h_2m-n̥t-_ > *_nāmant-_. However, this is profoundly _ad hoc_, given how sparse our evidence is for *_R̥HR̥C-_ sequences. A more likely alternative is that this word should be considered a compound, and as such subject to the νεογνός rule (cf. Skt. _á-bhvaḥ_ 'monstrous' < *_n̥-b^{h}uH-o-_), by which *_n̥-h_2m̥h_3-n̥t-_ > *_n̥-h_2m-n̥t-_ > *_nāmant-_ (see p. 255ff.).

A final possibility is that _námae_ in fact reflects both full grade of the verb, and of the negative particle, coming from a preform *_ne-$h_2$emh_3-n̥t-_, which would have given _*nāmant-_. OIr. _noídiu_ ‘infant, young child’ < _*ne-u̯(e)id-_ (GOI 212) suggests that _*ne-_ existed in Proto-Celtic, although it is not as common as _*n̥-_.

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[18] The Irish, Breton and Cornish forms could also come from *_mĕntī_, but MW. _meint_ can only come from *_mantī_; _i_-affection of *_mentī_ would have given MW., W. ^{x}_mynt_ (Schrijver 1995: 258).

[19] LEIA's (M-31–32) preferred connection with OIr. _meinicc_ 'frequent, recurring, often' < *_meneggi-_ is quite unlikely.

[20] With a rather wide semantic range (although an enemy could also be someone who does not 'swear' a truce).

3. OIr. _trá_ (adv. and conjunction) ‘then, therefore’, OW., MW. _tra_, OB. _tra_ (prep.) ‘beyond, over, across’, MW. _traws_ (adj.) ‘strong, powerful, cross; cross, oblique’, OB. _tros_ (adj.) ‘violent’, MB. _treuz_ (adj.) ‘crooked, aslant’, (m.) ‘breadth, thickness, strength’ < _*trā̆nts_ are directly cognate with Lat. _trāns_ ‘over, across’, U. _traf_ ‘across’ (LEIA T-120; IEW 1076). For the phonological and semantic developments see Griffith (2005: 48–49); Schumacher (forthcoming). OIr. _trá_ and Lat. _trāns_ reflect an old participle to the root _*terh$_2$-_ ‘cross’ (LIV 633–634; see OIr. _tráth_ p. 82). Since this root does not have a full grade II, _trá_ must reflect _*tr̥h$_2$-n̥t-s_. This might be expected to give _*tarants_ by comparison with the development of other _*-R̥HV-_ sequences, and a possible explanation would be analogy on the basis of a verbal root _*trā-_ < _*tr̥h$_2$-_, in e.g. the root aorist. But no actual verb stem of this type is attested in Celtic (where only isolated forms of this root are found: see OIr. _tráth_ p. 82, MW. _tardu_ p. 93, OIr. _tar_ p. 170). Lat. _intrāre_ ‘enter’ < _*en-trā-i̯e/o-_ may be built on such a stem (LIV 633–634), but according to Klingenschmitt (1982: 97–98) _intrāre_ is derived from _intrā_ ‘inside’. Consequently, an explanation in terms of regular phonological development is to be preferred.

§ 135. _Conclusion_

There are only three pieces of evidence which pertain to the development of _*CEHR̥-_ sequences in Celtic. Of these § 132.2 OIr. _mí_ < _*meh$_1$-n̥s-_ is only compatible with a preform _*mēns_ > _*mīns_ > _*mĭns_ > _*mīs_, since _*mĕns_ would have given ˣ_mé_. § 132.1 MW. _gwint_ < _*h$_2$u̯eh$_1$-n̥t-o-_ is compatible with either _*u̯ēnto-_ > _*u̯īnto-_ > _*u̯ĭnto-_ or _*u̯ĕnto-_ > _*u̯into-_ (since the evidence of OIr. _fet_ for _*u̯ĭntā_ < _*u̯īntā_ < _*u̯ēntā_ is not reliable). § 132.3 OIr. _sét_ is only compatible with _*sĕntu-_. Since the long vowel in OIr. _mí_ can probably be explained analogically or as reflecting an original lenthened grade, it should not be considered good evidence. Consequently, the combination of MW. _gwint_ and OIr. _sét_ suggests that the Celtic development of the sequence _*CEHR̥-_ > _*CER̥-_ was to _*CER-_, as in Germanic.

If OIr. _sét_ should in fact be reconstructed _*sent-u-_, despite the less plausible semantics, the way is open to explain MW. _gwint_ by supposing that after _*CEHR̥-_ gave _*CER̥-_, the sonorant did not lose its syllabification: thus _*h$_2$u̯eh$_1$-n̥t-o-_ > _*u̯en̥to-_ > _*u̯e.anto-_, which might then have contracted to _*u̯ēnto-_, which would develop to _*u̯īnto-_ and then to _*u̯ĭnto-_ by Osthoff’s law. As far as I know, there is no evidence for or against the supposition of a contraction *_-e.a-_ > *_-ē-_ prior to the change *_-ē-_ > *_-ī-_ (and hence prior to Osthoff's law). The development *_-epe-_ > *_-e.e-_ > *_-ē-_ occurred after *_-ē-_ > *_-ī-_ (cf. *_tepes-mo-_ > MW. _twym_ 'warm'; Schumacher 2004: 509–510),[21] but the loss of *_-p-_ is relatively late, and *_-ei̯e-_ gave *_-ī-_ in Proto-Celtic (McCone 1996: 49).

The only way to distinguish between the two possible developments outlined here would be to find a piece of evidence for the sequence *_CEHR̥-_ in which _R_ was *_-l-_ or *_-r-_ followed by a plosive, since in this environment *_-l̥-_ and *_-r̥-_ would probably have given *_-il-_ and *_-ir-_, presumably creating a diphthong with the preceding vowel. In the absence of this evidence, OIr. _sét_ < *_seh$_1$n̥-tu-_ makes *_CEHR̥-_ > *_CER-_ more likely, but this is not completely certain. It should be noted that a development *_CEHR̥-_ to *_CĒR-_ would be compatible with the evidence of MW. _gwint_ (but not OIr. _sét_), but there is no positive evidence in its favour. In light of what we know about Indo-European syllabification, it seems unlikely.

For *_CIHR̥-_, the only reliable evidence is § 133.3 OIr. _óac_ < *_h$_2$i̯u-h$_{(3)}$n̥-k̂o-_, which suggests that the regular development was to *_CIi̯R̥-_.

For *_#R̥HR̥-_ § 134.1 OIr. _méit_ < *_m̥h$_1$-n̥t-ih$_2$_ and for *_CR̥HR̥-_ § 134.3 OIr. _trá_ < *_tr̥h$_2$-n̥t-s_ suggest the same development: probably the laryngeal was lost between syllabic segments to give a sequence *_(#/C)R̥R̥-_, with the first syllabic sonorant being desyllabified according to the Indo-European syllabification rules. Since *_#R̥HC-_ sequences gave *_RaC-_ in Celtic (p. 58 ff.), it is possible that _méit_ might reflect a similar development of *_m̥h$_1$-n̥t-ih$_2$_ > *_mantī_ directly, but it is also consistent with the reliable evidence provided by *_tr̥h$_2$-n̥t-_ > *_tr̥n̥t-_ > *_trn̥t-_ > *_trant-_. This demonstration of the continued existence of the Proto-Indo-European rules after loss of laryngeals between syllabics provides slightly more support for the development *_h$_2$u̯eh$_1$-n̥t-o-_ > *_u̯ento-_ > § 132.1 MW. _gwint_, which is in keeping with these rules, rather than *_h$_2$u̯eh$_1$-n̥t-o-_ > *_u̯e.n̥to-_ > *_u̯e.anto-_ > *_u̯ēnto-_.

-CHC- and -CHC#

§ 136. _Introduction_

For Celtic, the _communis opinio_ seems always to have been that "all laryngeals give the same result between consonants in Celtic, where they all come out as _a_" (Joseph 1980: 9; cf. e.g. Schumacher 2004: 135–136). However, it has already been seen (p. 160 ff.) that laryngeals were lost, probably already in Proto-Indo-European, in **-CHCC-* sequences other than **-CHSR-* in which the laryngeal was not in the syllabic onset (i.e. **-VCHCC-*, not **#CHCC-*). Furthermore, the reflexes of interconsonantal laryngeals in the individual languages are very variable, and often reflect language-specific rules for dealing with these sequences; in particular, interconsonantal laryngeals are often treated differently in initial and medial syllables. It should therefore not come as a surprise if the reflexes of non-syllable onset laryngeals between single consonants in Celtic are complex or unique.

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[21] Isaac's (2007a: 15) objections to this sound change are refuted by Stifter (2011a: 4–5).

In considering the results of laryngeals between single consonants a key point of Celtic historical phonology which must be kept in mind is that **-eRa-* gave **-aRa-* in Proto-Celtic ('Joseph's law': Joseph 1982: 41–42; Schrijver 1995: 87). The evidence for laryngeals between single consonants is extremely numerous. Possible examples where laryngeals may have been lost without reflex will be considered first (§ 137 **-CHC-* > **-CC-*), followed by examples where an epenthetic vowel may have resulted (§ 138 **-CHC-* > **-CaC-*). It will be concluded that an important factor in the development of a prop vowel beside the laryngeal or loss of the laryngeal without reflex is the following consonant. Consequently, some formations from the same root are included separately in the following collections of evidence (which are presented in alphabetical order).

It has been suggested that the sequence **-CHi̯V-* shows a different reflex from other **-CHCV-* sequences. Consequently, this sequence is discussed separately elsewhere (see p. 201 ff.).

§ 137. **-CHC-* > **-CC-*

1. OIr. *airecht* (f.) 'gathering, assembly', MW. *areith*, W. *araith* (m., f.) 'language, speech, oration', MC. *areth* (f.) 'declaration, oration' < **-rek-tV-* (with uncertain prefix) are connected by LEIA (A-43) with OCS *rekǫ* 'say', Toch. A *rake*, B *reki* 'word', and (post-Vedic) Skt. *racáyati* 'produces, fashions, forms' < **rekH-* (LIV 506). However, the final laryngeal rests only on the lack of lengthening by Brugmann's law in *racáyati*, so *airecht* is not a certain example.

2. OIr. *allas* 'sweat, perspiration' goes back in the first instance to **allesto-*, which could come from **al(a)-Ces-to-*, where *C* is **-n-* or **-d-*.[22] However,

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[22] Or **-s-*, if there was no preceding vowel (otherwise **-VsV-* > **-VhV-* > **-VV-* prior to syncope).

MIr. _aillsech_ 'perspiring, sweaty' must come from*_al-Ces-t-iko-_ rather than *_ala-Ces-t-iko-_, because *_alaCestiko-_ would have resulted in ^{x}_allasach_ after apocope and syncope. OIr. _allas_ might be cognate with Gk. ἀλέα 'warmth, heat' and/or Hitt. _allaniyezzi_ 'sweats' (LEIA A-62; Berman & Hamp 1982; Matasović 2009: 29), which could be derived from a root *_$h_1$alh_1-_. But according to Frisk (1960–1972: 1.65–66), ἀλέα belongs with OE. _swelan_ 'burn for a long time', Lith. _svìlti_ 'singe', with psilosis. The existence of an interconsonantal laryngeal in _allas_ is very uncertain.

3. MIr. _aus_, _us_, _ús_ 'adventures, story, tidings' has lost the second laryngeal if it comes from *_$h_2$udH-tV-_, but this etymology is unlikely (see p. 26).

4. OIr. _berg_ (f. _ā_-stem) 'robbery, plunder, plundering; robber, plunderer' < *_bergā_ may be from *_b^herH-geh$_2$_, if it is connected with Lat. _feriō_ 'strike', _forō_, 'bore, pierce', ON. _berja_ 'strike', Lith. _bárti_ 'reproach', which is semantically plausible (LEIA B-41; LIV 80). The Lithuanian acute suggests a laryngeal, but the lengthening by Brugmann's law in YAv. _tiži.bāra-_ 'with sharp cutting' implies an _aniṭ_ root; perhaps also the lack of sonorant gemination in ON _berja_ if from putative *_b^herH-ei̯e-_ (but see p. 11f.). Alternatively, Matasović (2009: 62) suggests that the root may simply be *_b^her-_ 'carry' (LIV 76–77; cf. Lat. _fūr_ 'thief'). OIr. _berg_ is not reliable evidence.

5. MIr. _bern_ (f. _ā_-stem) 'gap, breach; pass, defile' < *_bernā_, perhaps OW. _Berneich_ (pl.n.) < *_bernăkki̯ā_ are probably cognate with Lat. _feriō_ 'strike', _forō_, 'bore, pierce', Lith. _bárti_ 'reproach' (LEIA B-41; Jackson 1953: 705), which might imply *_b^herH-neh$_2$_. However, it is not clear that this root had a laryngeal (see OIr. _berg_ above).

6. OIr. _caill_ (f.) 'wood, forest', MW. _celli_ (f.) 'grove, copse', OC. _kelli_ gl. _nemus_ are problematic. The only combinations which would certainly give _-ll-_ in both the Irish and Brittonic words would be *_-ln-_ and *_-sl-_.[23] In principle, therefore, one could start from *_kelnī_ < *_kelh_2-nih_2_ (Lith. _kálti_ 'strike', Gk. ἀποκλᾶς 'breaking off'; LEIA C-13; LIV 350). This would require failure of raising in Irish (otherwise to OIr. ^{x}_cill_), which indeed often did not occur across a group of consonants (McCone 1996: 110–111), and an Irish rule of *_-e-_ > _-a-_ before a palatal consonant (GOI 53–54), which however was

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[23] Probably not *_-ld-_ (LEIA C-13; Joseph 1982: 53). Matasović's (2009: 185) suggestion that the forms could be the result of subsequent derivation of Insular Celtic *_kallo-_ < *_kali̯o-_ is impossible, because *_-li̯-_ did not give _-ll-_ in either Irish or British: OIr. _aile_, MW. _eil_ 'other' < *_ali̯o-_.

probably restricted to before _*-g-_ (Schrijver 1995: 134–141; McCone 1996: 111). Dilts' (_apud_ Joseph 1982: 53) suggestion of derivation from an unattested nasal present _*kl̥-n-h_$_2$- may be correct.

7. MIr. _cellach_ (_o_-stem) 'strife, contention' < _*kel_(_a_)_dāko-_, _*kel_(_a_)_nāko-_, or _*kelsāko-_ comes from _*kelh_$_2$- 'strike' (LIV 350; see OIr. _claidid_ p. 71); it is impossible to tell whether the laryngeal left a vocalic reflex, because it would have been lost by syncope. Gaul. _Sucellos_ (theonym) could come from _*-kelno-_, in which case it would demonstrate laryngeal loss, but probably comes from _*-kelh_$_2$_-i̯o-_ (see p. 204).

8. OIr. _·cer_ (_do·cer_ (pret.) 'fell', suppletive to OIr. _do·tuit_) is cognate with Skt. _aśarīt_ (aor.) 'broke', Gk. κεραΐζω 'ravage, destroy, plunder' < _*ḱerh_$_2$- (GOI 437; LEIA T-180; IEW 578; Schumacher 2004: 399–401). However _*kerat_ < _*ḱerh_$_2$_-t_ ought to have given _*karat_ by Joseph's law. The problem is avoided by positing _*ḱerh_$_2$_-t_ > _*kert_ which would give _*kerd_ > _*ker_ (with neutralisation of voicing in final dentals, and Celtic loss of final _*-d_. For further discussion see Zair 2012a: 618–619).[24]

9. MIr. _cerb_ (adj.) 'keen, sharp, cutting', (m. _o_-stem) 'cutting, a cutting stroke' < _*kerbo-_ is cognate with OE. _sceorfan_ 'knaw, bite', Toch. B _kärpye_ 'rough', Latv. _šķir̃ba_ 'cleft, fissure', _skar̂bs_ 'sharp, rough' (LIV 557–558; Matasović 2009: 202; IEW 943, combining more than one root). The Latvian forms suggest _*_(_s_)_kerHb_^{h}-, but Lith. _skir̃bti_ 'become sour' with circumflex tone implies an _aniṭ_ root. This could perhaps be analogical, since some verbs with _sta_-presents had acquired circumflex tones by _métatonie douce_ in Lithuanian (Derksen 1996: 166–168). It is also possible that the Baltic root was _*skerb-_ (although _*-b-_ was of course rare in Proto-Indo-European): OE. _scearp_, OHG. _scarf_ 'sharp, rough' reflect _*skorb-_ (but see Matasović 2009: 202, who explains the Germanic forms as due to Kluge's law). In that case the Latvian acute tone could be due to Winter's law rather than a laryngeal. Although it is possible that _cerb_ comes from _*_(_s_)_kerHb_^{h}_-o-_, it is by no means certain.

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[24] Strictly speaking, _·cer_ does not belong in this chapter, since in the sequence _*ḱerh_$_2$_t_ the laryngeal is in the first syllable (except arguably in _sandhi_ sequences before a word beginning with _*-i̯-_, _*-u̯-_ or a syllabic sonorant). However, as discussed in the Conclusion below, the loss of the laryngeal in this sequence can be seen as part of the same process as affected laryngeals in non-initial syllables in _*-CHP-_ sequences. Consequently, this form is discussed here, for convenience.

10. OIr. _cét-_ 'first-', MW. _kynt_, W. _cynt_ (adj., adv.) 'earlier, sooner; former, previous, before', MB. _quent_, B. _kent_ (adv., prep.) 'before, beforehand', MC. _kens_, _kyns_ (prep., conj., adv.) 'ere, before; formerly, sooner', Gaul. _Cintu-_ (p.n. element) < _*kentV-_ are cognate with OCS. _čьnǫ_ 'begin' < _*kn̥h_$_{(1)}$_-e/o-_ (see OIr. _cain_ p. 91); we could reconstruct _*kenh_$_{(1)}$_-tV-_, but these forms could also have been derived secondarily from _*kenh_$_{(1)}$_-i̯e/o-_ > _*keni̯e/o-_ > OIr. _cinid_ 'is born, descends from'.

11. W. _chwerfan_ (f.) 'wharve, whorl; pulley' < _*su̯erb-_ is cognate with ON. _sverfa_, OE. _sweorfan_ 'file', OHG. _suuerban_ 'wipe off', MHG. _swerben_ 'gyrate', Latv. _svar̃pst_ 'drill', according to IEW (1050–1051). The Latvian accentuation implies a laryngeal, so _chwerfan_ might reflect _*su̯erHb_^{h}-, but the semantic connection between the words seems rather loose. Gk. συρφετός 'sweepings, refuse' seems to go well at least with the Germanic words, and does not allow a laryngeal. According to GPC (849) _chwerfan_ is a loan-word from OE. _hweorfa_ 'the whorl of a spindle'. It cannot be used as evidence.

12. MIr. _deidmea_ (f. gen. sg.) 'law, usage', MW. _dedyf_, W. _deddf_ (f.) 'law', OB. _dedm_ (in _annedmolion_) < _*dedmi-_ are generally compared to Gk. θεσμός, Dor. τεθμός 'law, custom' < _*t_^{h}_et_^{h}_mo-_ (LEIA D-41; and see Sihler 1995: 208) < _*d_^{h}_eh_$_1$- (Gk. τίθημι 'put'; LIV 136–138). If θεσμός comes from _*d_^{h}_h_$_1$_-d_^{h}_mo-_, the Celtic forms would have to come from full-grade _*d_^{h}_eh_$_1$_-d_^{h}_mi-_. This should have given _*dēdmi-_ (in which shortening is not likely by either Dybo's rule p. 132 ff. or the 'Wetter Regel' p. 150 ff.). Also, a suffix _*-d_^{h}_mo-_ is not otherwise found outside Greek (de Bernardo Stempel 1999: 501–502). A reduplicated form _*d_^{h}_e-d_^{h}_h_$_1$_-mi-_,[25] as suggested by Thurneysen (1923: 57), is therefore more likely. This may be an example of loss of a laryngeal in the sequence _*-CHC-_, but it may also be due to laryngeal loss in a reduplicated form (p. 255 ff.).

13. Gaul. _delgu_ 'hold', OIr. _coindelg_ (n. _o_-stem) 'contract, covenant, counsel' < _*delg-_ are not from _*delHg_^{h}-, as implied by IEW (197), which compares Skt. _dīrgháḥ_ 'long'. This can be asserted both on the grounds of semantic difference and because MW. _daly_, _dale_, _deli_ (v.n.), W. _daliaf_, _dalaf_ 'capture, seize; restrain, hold; contain', MB. _dalchaff_, B. _derc'hel_ (inf.) 'hold, restrain, contain', MC. _dalhen_ (3sg.) 'holds, grasps, seizes' < _*dalgV-_ ← _*dalke/o-_ < _*dalske/o-_ < _*dl̥ske/o-_ < _*d_^{h}_l̥ĝ_^{h}_-ske/o-_ (Schrijver 1995: 142–143, Schumacher 2004: 271–273) show that the root was _aniṭ_. The forms belong with Skt. _dŕ̥ṁhati_ 'makes fast' < _*delĝ_^{h}- (LIV 113).

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[25] Laryngeal added.

14. OIr. *elc* ‘mischievous, bad?’ < _*elkV-_ apparently comes from _*h$_1$elHk-o-_ (ON. *illr* ‘bad, evil’ < _*elkelo-_, Lith. *álkti*, Latv. *al̂kti*, SCr. *álkati* ‘hunger’ < _*h$_1$olHk-_; IEW 307). The Balto-Slavic words might not be related, since there is a semantic difference. Alternatively, Rasmussen (1986a [1999]: 199) argues that the Baltic and Slavic words reflect an old perfect _*h$_1$e-h$_1$olk-_ >_*ā́lk-_. The simplest reconstruction is _*h$_1$elHk-_, but it is not certain.

15. MIr. *emon* (m. *o*-stem) ‘pair, triplet’ < _*emno-_ is cognate with Skt. *yamáḥ* ‘twin’ (EWAIA 2.400) < _*i̯em-o-_, Latv. *jùmis* ‘pair’ and perhaps the Old Norse god *Ymir* < _*i̯m̥i̯o-_, if this means ‘twin’ (Güntert 1923: 333–339; Meid 1991: 20–21); Lat. *geminus* ‘twin’, if from _*i̯emH-no-_, with the initial *g-* introduced analogically from *genus* ‘offspring’ (de Vaan 2008: 258) suggests a laryngeal. However, an alternative etymology of *geminus* connects it with Gk. γαμέω ‘marry’ < _*gm̥h$_1$-_ (Schrijver 1991a: 94).

16. OIr. *én* (m. *o*-stem), MW. *edyn*, W. *edn* (m., f.), MB. *ezn*, B. *evn* (m.) ‘bird’, OC. *hethen* gl. *auis l. uolatile*, Gaul. *Etnosus* (theonym) < _*et-no-_ may come from original _*peth$_2$-no-_; a *seṭ*-root is reconstructed by LIV (479), with a final laryngeal on the basis of Gk. ποτάομαι ‘fly about’ < _*poth$_2$-ei̯e-_, Arm. *ən-t^{c}ac^{c}aw* < _*-pth$_2$-_. It is possible that the Celtic forms are late formations, derived from the neo-*aniṭ* verbal root seen in MW. *ehet* ‘flies’ < _*eks-pet-e/o-_, but Lat. *penna* ‘feather’ < _*pet-neh$_2$_ suggests the root is *aniṭ*.[26] For this reason Hackstein (2002b: 140–143) argues that the Greek *a*-vocalism is due to a somewhat productive transferral of the verb into an alpha-thematic type, and that the root did not have a laryngeal at all.[27] No conclusions can be drawn on the basis of *én*.

17. MIr. *étid* (imperative 2. pl.) ‘clothe, cover’ is connected by IEW (988; denominative from _*pn̥-tV-_) to Gk. πένομαι ‘work, toil’, Gk. Hom. πονέεσθαι, Arm. *henown* ‘weave’, Goth. *spinnan* ‘spin’, Lith. *pinù* ‘plait’ < _*(s)penh$_1$-_ (LIV 578–579). The semantic connection is at least possible. However,

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[26] Although *annus* ‘year’ also belongs to a root which might have ended in a laryngeal (Skt. *átithiḥ* ‘guest’ < _*h$_2$etH-ti-_; LIV 273). Could the loss of the laryngeal here be a characteristic Latin development?

[27] OW. *hataned* (pl.) gl. *opus*, MW. *hadein*, W. *adain* (f.) ‘wing’ < _*atanī_, OB. *atanocion* (pl.) gl. *aligeris* < _*atano-_ < _*ptano-_, OW. *atar*, MW. *adar* (pl.) ‘birds’ < _*atarV-_ < _*ptarV-_ do not provide evidence for a laryngeal. They probably reflect an old *r/n*-stem heteroclite (cf. Hitt. *pattar* ‘wing, feather’, (post-Vedic) Skt. *pátra-* ‘wing, feather’, Gk. πτερόν ‘feather’, Lat. *penna* ‘feather’; Joseph 1982: 56; Matasović 2009: 126) nom. sg. _*poth$_2$-r̥_, gen. sg. _*peth$_2$-n̥-s_ (Schindler 1975b) > Proto-Celtic _*potar_, _*petans_, into which the zero-grade root has been introduced. For anaptyctic _*-a-_ in consonant clusters see Isaac (2007a: 62, 66, 68, 71–72).

*_pn̥h$_1$-tV-_ could not give *_ant-_ > _ét-_. Consequently, if _étid_ does belong here, it rather points to *_pen-tV-_ < *_penh$_1$-tV-_, with loss of the laryngeal. Elsewhere in IEW (322), _étid_ is connected with Gk. Att. ἄττομαι 'set the warp in the loom', Alb. _end_ 'weaves', and Skt. _átkaḥ_ 'garment, mantle' all of which can come from *_n̥t-_.[28] Since *_n̥t-_ would give Irish _ét-_, it cannot be proved that _étid_ comes from *(_s_)_penh$_1$-tV-_.

18. MIr. _fell_ (m. _o_-stem and f. _ā_-stem) 'deceit, treachery' < *_u̯elno-_, *_u̯eldo-_ or *_u̯elso-_ is connected by IEW (1140) to Lith. _vìlti_, Latv. _vil̂t_ 'betray', Lith. _véltas_ 'useless'. The Baltic acute tone suggests the presence of a laryngeal. In principle, it would be possible to derive _fell_ from a nasal present *_u̯el-n-H-_, like Lat. _Gallus_ 'Gaul' from *_gal-na-_ (Schumacher 2004: 325), but no such verb is actually attested. Furthermore, it may not be possible to reconstruct full grade nasal-infix presents for Proto-Celtic (Schumacher 2004: 43–45).

19. MIr. _ferb_ (f. _ā_-stem) 'blister' < *_u̯erbā_[29] may be cognate with Lat. _uarus_ 'pimple', Lith. _vìras_ 'pimple in pork' < *_u̯r̥H-o-_, OHG. _warza_ 'wart' < *_u̯or_(_H_)-_deh$_2$_ (IEW 1151), in which case it goes back to *_u̯erH-b^{h}eh$_2$_. However, it could also be connected with Lat. _uerrūca_ 'steep place, height; wart', which probably goes back to *_u̯ers-u-_ (cf. Skt. _várṣman-_ 'height, top'; de Vaan 2008: 666), in which case *_u̯ers-b^{h}eh$_2$_ would also give _ferb_.

20. OIr. _ferc_ (f. _ā_-stem) 'anger, wrath' < *_u̯ergā_ < *_u̯erHĝ-eh$_2$_ is traditionally connected with Gk. ὀργή 'temper, temperament, disposition; anger' < *_u̯orHg-eh$_2$_, Skt. _ū́rj-_, _ū́rjā_ 'strength, sustenance', YAv. _varəz-_ 'strength' < *_u̯r̥Hĝ-eh$_2$_ (IEW 1169; Frisk 1960–1972: 2. 411; Chantraine 1968–1980: 815–816; EWAIA 1.242–243). Hitt. _warkanza_ (adj.) 'fat' may also belong here (Kloekhorst 2008: 963–964).[30] Szemerényi (1964: 219–229) argues against connecting the Sankrit and Greek forms, but his arguments are not convincing (see Zair 2012a: 615–616).

Van Beek (2011: 150) argues against the presence of a laryngeal in Gk. ὀργή precisely with reference to OIr. _ferc_. He argues that ὀργή can come from the root *_u̯erĝ-_ 'work' (cf. Gk. ἔργον 'work'; LIV 686–687) on the basis of the same semantic shift seen in W. *gwery* 'lively, spirited, vigorous', OB. *guerg* gl. *efficax* beside *ferc* 'anger', all of which he derives from **u̯erĝ-*. But it is better to link OIr. *ferc* and Gk. ὀργή to Skt. *ū́rj-*, with a range of semantics seen also in Gk. μένος 'might, force, strength; rage, passion; intent, purpose; life'. The formal similarity of OIr. *ferc* and W. *gwery* is simply coincidental. Matasović (2009: 414) argues against reconstructing a laryngeal in the root, on the basis of Av. *vərəzi.cašman-* 'with strong eyes'. However, *vərəzi-* belongs instead with the Avestan root *varz-* 'to work' < **u̯erĝ-* (LIV 686–687; de Vaan 2003: 506 fn. 648).[31] The original root noun is still preserved in Skt. *ū́rj-*, which also attests to the laryngeal. The laryngeal is lost regularly in Gk. ὀργή by the Saussure effect (p. 243 ff.); the laryngeal must also have somehow been lost in *ferc*.

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[28] According to LIV (269) the root is *_h$_2$ent-_; this is only possible if *_Hn̥C-_ gave Gk. ἀC-, as claimed by Nikolaev (2007: 164–165) against Rix (1970: 89–92), who claims *_h$_2$n̥C-_ > ἀνC-.

[29] Not *_u̯eru̯ā_, since it is spelled _ferb_ even in texts in which lenited stops are written with -_h_-.

[30] It is not clear why EWAIA and Kloekhorst reconstruct *_u̯erh$_1$ĝ-_; *-_h$_3$-_ would also be lost in this position in Hittite (Melchert 1994: 73), and anyway the loss of laryngeal in _u̯arkanza_ is probably due to the Saussure effect. Note that this root structure is not particularly unusual; cf. *_u̯elh$_1$b^h-_ (LIV 678), *_h$_2$ei̯sd-_ (LIV 260–261) etc.

21. OIr. *fern* (f. *ā*-stem) 'alder-tree', MW. *guern*, W. *gwern* (m., f., coll.) 'alder-tree(s), mast', OB. *guaern*, MB. *guernn*, B. *gwern* (coll.) 'alders', (f.) 'mast', OC. *guern* gl. *malus*, *guernen* gl. *alnus*, MC. *gvern* (f.) 'mast', LC. *guern* (coll.) 'alder trees, alder swamp, marsh', Gaul. *Verno-* (in pl.n.s) < **u̯ernV-* are cognate with Arm. *geran* 'beam', Alb. *verrë* 'rhamnus carniolica, rhamnus alpina' (IEW 1169). Whether there is evidence for a laryngeal in the root is unclear. Arm. *geran* might suggest **u̯erH-neh*$_2$, but only if laryngeals between single consonants in Armenian resulted in *-a-* (which is denied by both Beekes 1988b: 77 and Olsen 1999: 767–769).

According to Olsen (1999: 297) Arm. *geran* comes from **u̯er-n̥nā-*, with a variant of a suffix **-m̥nā-* derived from *men*-stems which appears in roots containing a labial. This is doubly unlikely: firstly, because **-C.NNV-* clusters were reduced to **-C.NV-* in Indo-European (cf. Skt. gen. sg. *ásnaḥ* 'stone' < **h*$_2$*ek̂-mn-os*; Mayrhofer 1986: 159). Secondly, because Celtic **u̯erneh*$_2$ points to a suffix **-neh*$_2$, and it is better to assume the same formation than to posit separate **u̯er-neh*$_2$ and **u̯er-men-* → **u̯er-m̥n-eh*$_2$. So a laryngeal remains a possibility, but is not certain on the basis of Armenian.

Albanian would lose a laryngeal regularly (Beekes 1988b: 103) in a sequence **u̯erH-neh*$_2$. However, Demiraj (1997: 414–415) observes that **u̯ernā* ought to have given Alb. ˣ*vjerrë*, and takes *verre* as a secondary derivation of *verr* 'alder'. One of the possible preforms of *verr* is **u̯ari-* < **u̯r̥H-i-*, so this might still point to a root-final laryngeal, but other reconstructions are possible. Altogether, there is not enough evidence to guarantee *fern* < **u̯erH-neh*$_2$.

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[31] Besides, in some still uncertain contexts, Avestan sometimes fails to show the reflex of a laryngeal in **CR̥HC-* sequences; cf. Av. *pərənā* 'handful' beside Skt. *pūrṇáḥ* 'full' < **pl̥h*$_1$*-no-* (Joseph 1982: 50–51; de Vaan loc. cit).

22. MW. _gell_ (adj.) ‘bay, brown’, B. _gell_ (adj.) ‘brown’ can come from *_gelno-_, *_geldo-_ or *_gelso-_ (Jackson 1953: 471). Gallo-Latin _giluus_ ‘pale yellow’ comes from *_gelu̯o-_ (if this loan-word into Latin is Gaulish; Delamarre 2003: 178–179). Whether or not the root in question was _seṭ_ is unclear (see OIr. _glan_ p. 73).

23. MIr. _gerb_ (f. _ā_-stem) ‘scab, itching sore, mange’ < *_gerbā_ is connected by IEW (387) with Lith. _gárbana_ ‘lock of hair’, Russ. _gorb_ ‘hump, protuberance’ (= SCr. _gȑba_; Kortlandt 1975: 59) and Arm. _karth_ ‘fish-hook; knee-bend’. Arm. _karth_ cannot come from *_gr̥Hb-ti-_, since *_CR̥HC-_ gives _CaRaC-_ or _CaRawC-_ in Armenian (Olsen 1999: 775–778), and should not be connected, but _gárbana_ points to *_gorHb_^{h}_-_ and the Serbo-Croatian form to *_gr̥Hb_^{h}_-_. Balto-Slavic acute tone would also be expected before *_-b-_ by Winter’s law, but *_-b-_ is rare in Proto-Indo-European. The semantic connection between these words and _gerb_ is not certain, however. It is possible, but not certain that _gerb_ reflects *_gerHb_^{h}_eh_$_{2}$.

24. OW. _guell_, MW. _gwell_ (adj.), MB. _guell_, B. _gwell_, MC. _gwel_, _guel_ (adj.) ‘better’ < *_u̯elno-_, *_u̯elso-_ or *_u̯eldo-_ probably comes from *_u̯elh_$_{1}$_-Co-_ (cf. Skt. _vr̥ṇīté_ ‘chooses’, Lat. _uolō_ ‘want’, Lith. _vélti_ ‘wish’, Gk. Dor. λέω ‘want, wish’; IEW 1137; LIV 677–678; Matasović 2009: 411). As a nasal present is found in Indo-Iranian, it is just possible that Proto-Celtic *_u̯elno-_ was derived secondarily from the verb (if full grade nasal presents existed in Proto-Celtic; Schumacher 2004: 43–45). But laryngeal loss is more likely.

25. OW. _gwel_, MW. _guellt_, W. _gwellt_ (m., coll., pl.) ‘grass, herbage’, OB. _guelt-_ (in _gueltiocion_ gl. _fenosa_), MB. _gueautenn_ (singul.), B. _geot_ (coll), MC. _gwels_ (coll.) ‘grass’ are derived from *_u̯eltV-_[32] by IEW (1139–1140), comparing OHG., OS. _wald_ ‘wood’ < *_u̯olto-_, Lith. _váltis_ ‘oat-spelt’, SCr. _vlât_ ‘ear (of corn)’. If this were correct, the Baltic acute tone would imply a laryngeal, but the Brittonic words all probably come from *_g_^{wh}_el-_, with the same root as OIr. _gelt_ (f. _ā_-stem) ‘grazing, feeding’, _gelid_ ‘grazes, consumes’ (Schumacher 2004: 371–372). MW. _gwyllt_ (adj.) ‘wild, uncultivated, untamed’, OB. _gueld-_ (in _gueldenes_ gl. _insula indomita_), MC. _gwyls_, _gwylls_ (adj.) ‘wild, savage, fierce’ no doubt also come from *_g_^{wh}_el-ti̯o-_ on the grounds of MIr. _geilt_ (f.) ‘madman’

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[32] B. _geot_ is connected by IEW (363) with OIr. _glenaid_ ‘adheres’. This is incorrect, both because of the semantics and because _glenaid_ comes from a root *_glei̯H-_ (see MIr. _gláed_ p. 247). It belongs with the other words here, as noted by Jackson (1967: 239–240) and Fleuriot & Evans (1985: 1.187).

(there is no reason to suppose that this is a Brittonic loan-word, as does IEW), and are therefore cognate only with Goth. *wilþeis* ‘wild’ < **g^{wh}eltii̯o-* (Schrijver 1995: 60).

OIr. *folt* (m. *o*-stem) ‘hair’, MW. *gwallt* (m.) ‘hair’, OB. *guolt* ‘hair’, OC. *gols* gl. *cesaries* < **u̯olto-* could formally belong with *wald* etc., but probably do not belong here for semantic reasons (*contra* IEW 1139, Matasović 2009: 428). The closest connection is with Gk. λάσιος ‘hairy, wooly’ < **u̯l̥tii̯o-*, which has an *aniṭ* root. Although the Irish and Welsh words could be used metaphorically of foliage, and post-Homeric λάσιος could mean ‘shaggy with brush wood, bushy’, this is a common usage, and does not imply a connection with *wald* etc.

26. Celtib. *kentis*, *gente* (dat. sg.) ‘child, descendant’, OW. *-gint* (p.n. element) < **genti-* (MLH V.1: 130–131, 178–181; Irslinger 2002: 185) are directly cognate with Lat. *gēns* ‘family, offspring, descendants’, Gk. γένεσις ‘origin, birth, race, creation, family’ < **ĝenh$_1$-ti-* (LIV 163–165; see OIr. *·gainedar* p. 93). Since this root is widespread in Celtic, it is possible that **genti-* is a new creation (as supposed for Latin by Schrijver 1991a: 330), but there is no reason why it should not reflect an inherited form.

27. MIr. *les* (m. *o*-stem) ‘space around houses surrounded by a rampart’, MW. *llys* (m., f.) ‘court, palace, hall’, OB. *lis*, MB. *les*, B. *lez* (f.) ‘court’, MC. *lys* (in pl.n.s) show laryngeal loss if they come from **lit-to-* < **p̥lth$_2$-to-* (LIV 486–487; Irslinger 2002: 283–284; see MIr. *leithe* p. 204). But there are various other possibilies: it may be a derivative of an original *s*-stem, in which case we could suppose **p̥lth$_2$-es-* → **p̥lt-s-o-* after loss of the laryngeal before a vowel; or, as David Stifter suggests to me (p.c.) it may reflect **lis-to-* ‘the area which is traced out’, to the root **lei̯s-* ‘trace, track’ (cf. Lat. *līra* ‘ridge between two furrows’; LIV 409–410).

28. MIr. *mál* (m. *o*-stem) ‘prince, chief’, MW. *mael* (m.) ‘prince, chieftain, lord’, OB. *-mail* (p.n. element), Gaul. *Maglo-* (p.n. element) < **maglo-* are cognate with Lat. *magnus* ‘great’, Gk. μέγας ‘great’, Skt. *máhi* (n.) ‘great’ < **megh$_2$-*. Matasović (2009: 253) suggests that this may be seen with regular vocalisation in the Gaulish variant *Magalos* < **magh$_2$-lo-*. If this is correct, then the laryngeal must have been lost in the other forms. One might suppose that since the word appears as the second element of compound names, the laryngeal was dropped in these forms to give **mag-lo-*, and that this was then generalised as the simplex form also (for loss in compounds see p. 255 ff.). Alternatively, the laryngeal may have been lost regularly in **magh$_2$-i̯o-* > Gaul. *Magius*, MIr. *maige* (*i̯o-*, *i̯ā*-stem adj.) ‘great, mighty’ and

the root *_mag-_ was then used to form other words. However, Meissner (2006: 60–64) considers *_-h_$_2$- here an archaic adjectival suffix, and it is therefore more likely that the Celtic forms were based on a root without final laryngeal (in which case, Gaul. _Magalos_ must have an epenthetic _-a-_ or be a spelling mistake). The _a_-vocalism in the root in Italic and Celtic must be secondary (cf. Goth. _mikils_ 'great'; Schrijver 1991a: 477–485).

29. OIr. _meirc_, _meirg_ (f. _ī_-stem) 'rust, corrosion' < *_mergī_, MW. _meryt_, W. _merydd_ (adj.) 'slow, sluggish, lazy, timid; stagnant; moist, humid, wet' < *_mergi̯o-_, OB. _mergidhaham_ gl. _besco_ (for _hebesco_) < *_mergi̯e/o-_ are supposedly cognate with OIr. _meirb_ 'lifeless, a corpse (?); flaccid, feeble, weak' < *_merh_$_2$- (LIV 440; p. 207) with an enlargement *_-g-_ (IEW 739–740; followed by LEIA M-30). Other forms from the enlarged 'root' do not require a laryngeal: Alb. _marth_ 'strong frost', MHG. _murc_ 'decayed, withered' and OCS. _mrъzitь_ 'be loathsome'; consequently, the derivation of *_merg-_ from *_merh_$_2$- is an etymological guess, and cannot be taken as certain. MIr. _mert_ 'sorrow, trouble, despair (?)' < *_mertV-_ may belong to *_merh_$_2$- (cf. OIr. _mrath_ 'betrayal' p. 75), but since the verb continued into Celtic (OIr. _marnaid_ 'betrays'), it is possible that _mert_ is a late derivation from the verbal root after laryngeals were lost (and note that the original desiderative and aorist formations of this verb were remodelled in this way: McCone 1991b: 106; Schumacher 2004: 477).

30. MIr. _mell_ (m. _o_-stem) 'ball, sphere', B. _mell_ (f.) 'ball' < *_melno-_, *_meldo-_ or *_melso-_ may reflect *_melh_$_3$_-Co-_, if IEW (721) is right to connect Gk. βλώσκω 'go' < *_melh_$_3$- (LIV 433–434). But the semantics are quite different.

31. OW., MW. _pell_ (adj.) 'far, long (of time; far off)', MB. _pell_ (adj., adv.) 'far, distant; a long time', MC. _pell_, _pel_ (adj., adv.) 'distant, long; far' < *_k_^{w}_elno-_, *_k_^{w}_eldo-_ or *_k_^{w}_elso-_[33] < *_k_^{w}_elH-Co-_ are cognate with Gk. τῆλε 'far off, far away', πάλαι 'long ago', and perhaps Skt. _cirám_ 'for a long time, long-lasting' (IEW 640; KEWA 1.390).

32. MIr. _ros_ (m. _o_-stem) 'flax-seed, linseed, any small seed' is connected by IEW (890) with Goth. _frasts_ 'child' < *_pro-sh_$_1$_-ti-_, to the root *_seh_$_1$- 'sow' (LIV 517–518). Although both LEIA (R-43–44) and Lehmann (1986: 125–126) consider this doubtful, the semantics involved are similar to those seen in Lat. _planta_ 'plant' → OIr. _clann_ (f. _ā_-stem), OW., MW. _plant_ (pl.) 'children'. The

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[33] Not *_k_^{w}_elH-i̯V-_ (Matasović 2009: 176), because *_-li̯-_ gave *_-l-_ in a monosyllable in Brittonic (Schrijver 1995: 321–324).

etymology is not implausible; if it is correct, then it suggests that *_pro-sh$_1$-to-_ gave Proto-Celtic *_rosto-_. However, the loss of the laryngeal could be due to loss in composition (p. 255 ff.).

33. OIr. _scís_ 'tiredness' may go back to *_skeh$_1$th$_2$-tu-_, if OIr. _scíth_ (_o-_, _ā_-stem adj.) 'tired, weary' belongs with Gk. ἀσκηθής 'unhurt, unharmed, unscathed', Goth. _gaskaþjan_ 'to harm, hurt' (IEW 950), which suggest a root *_skeh$_1$t^h-_ < *_skeh$_1$th$_2$-_. But whether Proto-Indo-European *_-t^h-_ must come from *_-th$_2$-_ is still a debated question: Schrijver (1992: 8–9); Mayrhofer (1986: 98–99); Elbourne (1998, 2000). However, the etymology is uncertain (Schrijver loc. cit. compares instead Lat. _quiēs_ 'rest' < *_k^{w}i̯eh$_1$-_), and _scís_ could be a secondary formation after _scíth_ anyway (Irslinger 2002: 300–301, 417).

34. OIr. _serc_, MIr. _serg_ (m. _o_-stem) 'decline, wasting sickness' is difficult to pin down to a definite preform, because there is a large group of words in Indo-European languages which can be traced back to roots of the general type *_s(u̯)er(H)g$^{(h)}$/k-_ and which have a range of meanings ranging from 'heed, care about' to 'grieve, be anxious' to 'be ill'. Discussion and lists of words can be found in Lindeman (1993) and Woodhouse (2003), who take very different positions. A fairly coherent group consists of OIr. _serc_, Lith. _sir̃gti_ 'be ill', Toch. A _särk_, B _sark_ 'illness', all of which can go back to *_serg^h-_ (thus Lindeman). The circumflex tone of Lithuanian suggests the absence of a laryngeal (and a voiced aspirate rather than a plain voiced stop). _Pace_ LIV (613–614), on formal and semantic grounds this is probably to be distinguished from Lith. _sérgiu_ 'watch, guard', Skt. _sūrkṣati_ 'heed, care about, trouble about', which look as though they reflect *_su̯erHg$^{(h)}$-_ (although a sporadic change *_su̯-_ > *_s-_, also found in Lith. _sesuõ_ 'sister', must then be accepted). Goth. _saurga_, OHG. _sworga_ 'sorrow' probably belongs to the latter group, but raises various formal problems.

Consequently _serc_ < *_serg^h-o-_ is unlikely to have ever had a laryngeal. OIr. _serc_ (f. _ā_-stem), MW. _serch_ (f.) 'affection, love', MB. _serch_, B. _serc'h_ (m., f.) 'bedmate, concubine' < *_serkā_ could come from the second root on semantic grounds, but cannot begin with *_su̯-_ (> W. _chw-_, B. _c'hw-_; Jackson 1953: 525–526), and contain *_-k-_ rather than *_-g^h-_. They probably do not belong here at all (LEIA S-91–92).

35. OIr. _sét_ 'likeness, equivalent' < *_semtV-_ or *_samtV-_ is taken by DIL (S-202; followed by de Bernardo Stempel 1999: 284 fn. 8), as a metaphorical usage of _sét_ 'object of value, chattel; unit of value', but LEIA's (S-99) connection to OIr. _samail_ 'likeness, similarity; like of, such a' is far more likely. The root (or stem?) is *_semh$_2$-_: _samail_, Lat. _similis_ 'like, similar' < *_semh$_2$-l-i-_; Gk. ὁμαλός

‘equal, alike’ < _*somh$_2$-lo-_ (or ← _*semh$_2$-lo-_); Skt. _samáḥ_ ‘same’ < _*somh$_2$-o-_ (cf. Gk. ὁμός ‘same’; Joseph 1982: 38–39; Schrijver 1991a: 218–219).

If _sét_ comes from this root, then it can only reflect _*semh$_2$-tV-_, with loss of the laryngeal to give _*semtV-_, since _*sm̥h$_2$-tV-_ would have given _*smătV-_. It is possible that _sét_ is a secondary creation, created as _*sam-tV-_ on the basis of _samail_, segmented as _*sam-ali-_ (cf. MIr. _sádail_ ‘easy, comfortable’ < _*sōd-ali-_; de Bernardo Stempel 1999: 456). Although this cannot be disproved, it seems unlikely without a productive relationship between _tV-_ and _ali_-suffixes already existing in Irish.

It should be noted that _*sem-_ ‘one’ was _aniṭ_ (Gk. εἷς, ἕν ‘one’), so _sét_ could come directly from that. However, as noted by Joseph, the meaning ‘like, similar’ consistently has a _seṭ_-stem. Although other explanations are possible, a derivation of OIr. _sét_ from _*semh$_2$-tV-_ is the most appealing.

36. MIr. _técht_ (_o-_, _ā_-stem adj.) ‘thick, sluggish, viscid’ < _*tenkto-_, OIr. _téchtae_ (_i̯o-_, _i̯ā_-stem adj.) ‘rightful, fitting, proper’ < _*tenkt(i)i̯o-_, MIr. _con·téici_ ‘congeals, becomes solid’, MW. _teithi_ (pl.) ‘characteristics, qualities, properties; rights, entitlement’, MW. _teithiawc_, W. _teithiog_ (adj.) ‘right, rightful’ < _*tenkt(i)i̯āko-_ are cognate with Hitt. _tamekzi_ ‘attaches, clings to’, Skt. _ā́-tanakti_ ‘causes coagulation’, Lith. _tánkus_ ‘thick, copious’ < _*temk-_ (LIV 625–626). On the basis of the Lithuanian acute intonation one might suppose _*temHk-_, but it is difficult to see how this would give the Sanskrit form. Furthermore, although the Celtic forms can come from _*tenk-_, _*tn̥k-_ > _*tank-_ > _técht_, _·téici_ is morphologically more probable (Schumacher 2004: 615–617). Therefore, despite the Lithuanian form, _*temk-_ is probably correct.

37. OBrit. _Venta_, MW. _Gwent_ (pl.n.) < _*u̯entā_ are connected by Schumacher (2004: 368) with Alb. _vë_ ‘places’, Gk. εὐνή ‘bed’. The root is is reconstructed by LIV (683; following Klingenschmitt 1981: 124 fn. 14) as ?_*u̯enh$_1$-_ on the basis of Alb. (Old Gheg) _vû_ (pret.) ‘set up, lay’ < _*u̯n̥h$_1$-_; εὐνή can come from _*u̯n̥h$_1$-eh$_2$_ according to the rule _u̯R̥H-_ > _*Hu̯R-_ in Greek (Peters 1980: 31, 52–54; Balles 2007). According to Ziegler (2004), the original meaning of the root was ‘pour out, spread out’, on the basis of Indo-Iranian forms such as OPers. _avaniya_ (3sg. impf. pass.), with a change from a more concrete to more abstract meaning in Albanian. Because of the lack of vocalisation in _Venta_, Schumacher proposes to separate it and Gk. εὐνή from Alb. _vë_, but if laryngeal loss were regular in Celtic all the words could be derived from the same root, with _Venta_ coming from _*u̯enh$_1$-teh$_2$_. Such a root is a plausible origin for a place name, but names are particularly difficult to etymologise, so an alternative origin is possible.

38. Proto-Celtic *_-mno-_, the best examples of which are found in forms such as Og. _VALAMNI_ (p.n., gen. sg.), OW. _-guallaun_ (p.n. element), Gaul. _Vellaunus_ (p.n.), Gaul. _barnaunom_ 'judge or judgement?', is supposed to come from the original middle participle suffix (Lambert _apud_ Lejeune et al 1985: 177; Lambert 1990: 213–214; other possible examples are found in de Bernardo Stempel 1994). Since this suffix was *_-mh_$_1$_no-_ in Proto-Indo-European (Klingenschmitt 1975: 159–163; Mayrhofer 1986: 130), these forms suggest that the laryngeal was lost in Proto-Celtic. The derivation from a middle participle for these words is not certain, however. An alternative explanation would be to see in the suffix *_-mno-_ a thematised derivative of an agent noun in *_-mon-_ (Delamarre 2003: 68, 311), in which case no conclusion can be drawn about the behaviour of laryngeals in this context.

§ 138. *_-CHC-_ > *_-CaC-_

1. MW. _adaf_ (f.) 'hand, talon' < *_pth_$_2$_-meh_$_2$[34] may be cognate with Lat. _pateō_ 'am open', Gk. πίτνημι 'spread out' (LIV 478–479; GPC^2 27; Matasović 2009: 125) or come from *_pet_(_h_$_2$)- 'fly' if it was _seṭ_ (see OIr. _én_ p. 185). MW. _adaf_ suggests the laryngeal was vocalised in this form.

2. MIr. _alaid_ (m.) 'herd of cattle', apparently from *_alatV-_, appears in only three passages of the Book of Leinster Táin, where the parallel passages in other texts of the Táin have _folud_ 'wealth' (DIL F-280–283; Joseph 1980: 28–29; for _folud_ see p. 230). MIr. _alaid_ was probably created by a misanalysis of _folud_ with lenited initial *_f-_ (perhaps by contamination with _alam_ 'herd of cattle', below).

3. MIr. _alam_ (n. ?), MW. _alaf_ (m.) 'herd of cattle, riches, wealth, property' come from *_pelh_$_2$_-mV-_ according to Schrijver (1995: 75–76), from the same root as Gk. πλῆτο (aor.) 'drew near' (*_pelh_$_2$- 'drive'; LIV 470), or posssibly *_h_$_2$_elh_$_2$_-mV-_ (cf. Gk. ἀλάομαι 'wander'; LIV 264; Stifter _apud_ Delamarre 2003: 37). Either way, the laryngeal is vocalised.

4. OIr. _anaid_ 'stays, remains, abides', MW. _kynnhan_ (3sg.) 'speaks', MB. _ehanaff_ (inf.) 'abide, rest' come from *_anā-_ ← *_h_$_2$_enh_$_1$-, and may reflect vocalisation of the laryngeal if there was an intermediate step *_ană-_ derived from the context *_h_$_2$_enh_$_1$_-C-_, e.g. 1sg. *_h_$_2$_enh_$_1$_-mi_. But *_ană-_ might also come directly from zero-grade contexts such as 1pl. *_h_$_2$_n̥h_$_1$_-mosi_ (see p. 38 ff., esp. p. 41).

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[34] For anaptyctic *_-a-_ in consonant clusters see Isaac (2007a: 62, 66, 68, 71–72).

5. Gaul. _Aramici_ (p.n., nom. pl.), and OFr. _aremon_, Picard, Walloon _armon_ ‘les deux pieces de bois qui tiennent de chaque côte le timon d’un chariot’ < Gaul. *_aramon-_ are supposed to be cognate with Lat. _armus_, Goth. _arms_, Skt. _īrmáḥ_ ‘arm’ and hence reflect *_h_$_2$_erH-mo-_ (Jud _apud_ Howald & Meyer 1941: 374–376; Joseph 1980: 43–44). In principle, therefore, these forms suggest *_-CHC-_ > *_-CaC-_, but the evidence is not certain enough (and *_h_$_2$_r̥H-mo-_ might give the same result, see p. 38 ff.).

6. MB. _arat_ (inf.), LC. _aras_ (v.n.) ‘plough’ < *_aratu-_, MW. _eredic_ (v.n.) ‘plough’ < *_aratīko-_, _aradwy_ (m.) ‘ploughed land, tilth, ploughing’ < *_ara-tou̯-i̯o-_ (Schumacher 2000: 209) point to *_h_$_2$_erh_$_3$_-tu-_. However, as _aradwy_ shows, this originally had an ablauting stem *_h_$_2$_erh_$_3$_-tu-_, *_h_$_2$_r̥h_$_3$_-teu̯-_; if *_HR̥HC-_ gave *_aRaC-_ whatever the final consonant (p. 38 ff.), these forms could have generalised the weak stem. Furthermore, the suffix *_-at_ became productive in Breton and in Cornish (Schumacher 2000: 86; Lewis & Zimmer 1990: 54), so individual examples which appear to go back to *_-H-tu-_ are not necessarily probative. For a discussion of the origin of this suffix see below, p. 199 ff.

7. Gaul. _Balarus_ (p.n., and the basis for French toponyms; Delamarre 2003: 65) may be cognate with Gk. Hesych. φαλός ‘white’ < *_b_^{h}_l̥H-o-_, Gk. φαληρός ‘white’, Lith. _báltas_, Latv. _bal̃ts_ ‘white’ < *_b_^{h}_olH-to-_ (IEW 118–119), in which case it would represent *_b_^{h}_elH-ro-_.

8. OIr. _barae_ (f. _n_-stem) ‘vehemence, excitement, exaltation’ < *_baren-s_, dat. sg. _barainn_, MW. _baran_ (f.) ‘fury, rage’, OB. _baran_ ‘fury, anger’ < *_baran-_ are cognate with Lith. _bárti_ ‘scolds’, which may or may not be _seṭ_ (see OIr. _berg_ p. 182). MW. _bar_ (m.) ‘anger, indignation, fury’ could come from *_b_^{h}_r̥H-o-_, which is supported by Gaul. _-barii_ (tribal name element) < *_b_^{h}_r̥H(i)i̯o-_, or from the old nom. sg. *_barens_. According to Matasović (2009: 56), the Celtic forms reflect the oblique stem of an _n_-stem *_b_^{h}_erHō_/*_b_^{h}_erHn-_, with *_beran-_ > *_baran-_ by Joseph’s law. But OIr. _barae_ shows that this was originally a hysterodynamic stem with nom sg. *_-en-s_ ← *_-en_ < *_-ēn_, gen. sg. *_-n-es_ (Stüber 1998: 169–170). The Celtic forms could reflect weak *_b_^{h}_erH-n-_ > *_b_^{h}_eran-_ > *_baran-_, but we would expect zero grade of the root throughout the paradigm. If the final laryngeal were *_-h_$_2$_-_, then _barae_ would be the regular result of *_b_^{h}_r̥h_$_2$_-ēn_ > *_barēn_[35] > *_baren_ → *_baren-s_ (McCone 1996: 61–64). Acc. sg. *_b_^{h}_r̥h_$_2$_-en-m̥_ would give *_baranam_, and the strong stem *_baran-_ was then spread through the paradigm (replacing weak *_b_^{h}_r̥h_$_2$_-n-_ > *_b_^{h}_rān-_), whence OIr. dat. sg. _barainn_, MW. _baran_. If the root was _aniṭ_, *_bar-_

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[35] Or *_barān_, see p. 249 ff.; *_barān_ > _baran_ → _baran-s_ would also give _barae_.

might have been generalised from the weak stem *_br̥-n-_ > *_bar-n-_ (Stüber 1998: 171). Either way, _barae_ does not provide evidence for *_-CHC-_ > *_-CaC-_.[36]

9. OIr. _bodar_ (_o-_, _ā_-stem adj.), MW. _bydar_, W. _byddar_ (adj.) ‘deaf’, MB. _bouzar_ (adj.) ‘deaf’, OC. _bothar_ gl. _surdus_, MC. _bothar_ (adj.) ‘deaf’ < *_bŭdaro-_ are compared by GOI (74) with Skt. _badhiráḥ_ ‘deaf’; if the equation were correct, this would imply *_-aro-_ < *_-Hro-_. However, first syllable _-a-_ in the Sanskrit word cannot be reconciled with Celtic *_-u-_ (Schrijver 1995: 52 fn. 1). EWAIA (2.207) and KEWA (2.405) suggest that the Celtic and Sanskrit words may have been identical, but that the Celtic forms were altered under the influence of forms like Goth. _bauþs_ ‘deaf’ < *_b^hou̯d^ho-_. This would be supported by Gaul. _Bodaro_ (p.n.; Delamarre 2003: 80–81). The matter is hardly clear enough for these forms to be used as evidence.

10. OW. _calamennou_ gl. _culmos_, MW. _calaf_ (f., pl.) ‘reeds, stalks’ < *_kalamā_ come from *_k̂elh_2-meh_2_, if they are cognate with Gk. καλάμη ‘stubble’, κάλαμος ‘reed’, SCr. _slȁma_ ‘stubble’ < *_k̂l̥h_2-mo-_, Latv. _sal̃ms_ ‘stubble’, Lat. _culmus_ ‘stalk, stubble’ < *_k̂olh_2-mo-_. However, _calaf_ might be a loan word from Lat. _calamus_ ‘reed’ ← Gk. κάλαμος (Jackson 1953: 84). The gender of _calaf_ is against this, but could be a secondary development.

11. MW. _dauat_, W. _dafad_ (f.), MB. _dauat_, B. _dañvad_ (m.), OC. _dauat_ gl. _ouis_, MC. _dauas_ (f.) ‘sheep’ < *_damato-_ is cognate with OIr. _daimid_ ‘endures’ < *_dm̥h_2-i̯e/o-_ (LIV 116–117; p. 92). Joseph (1982: 35–36) reconstructs *_demh_2-to-_, but ‘meliorative’ *_demh_2-eto-_ ‘well (i.e. easily) tamed/the tamed thing par excellence’ (cf. Skt. _darśatáḥ_ ‘visible, conspicuous, beautiful’ < *_derk̂-eto-_) or ‘gerundive’ *_dm̥h_2-eto-_ (cf. Gk. ἀδάματος ‘untameable’) are both possible (Schrijver 1995: 77–78; for this analysis of _eto_-formations see Vine 1998, especially 38–44).

12. MW. _elein_, W. _elain_ (f., m.) ‘young deer, doe’ < *_alanī_ is probably cognate with Lith. _élnis_ ‘deer’, Latv. _al̂nis_ ‘elk’ < *_$h_1$elHni-_/*_$h_1$olHni-_ (see Andersen 1996 for the problem of initial vowels in Balto-Slavic). MW. _elein_ may therefore come from *_$h_1$elHnih_2_. Gk. ἔλαφος ‘deer’ might also imply a laryngeal, but Gk. ἐλλός ‘young deer’ < *_$h_1$el-no-_ suggests that the laryngeal does not belong to the root (Schrijver 1995: 78–79). Consequently, it is also possible that MW. _elein_ reflects a _devī́_ noun, with the stem *_elan-_ generalised from the oblique forms in *_$h_1$el-n̥-i̯eh_2_.

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[36] A completely different etymology is proposed by Balles (2002), who compares Gk. φρήν ‘midriff, heart, mind’.

13. MB. _eneff,_ B. _ene_ (m.), _anaon_ (pl.), OC. _enef_ gl. _anima_, MC. _enef, eneff_ (m.) ‘soul’ < *_anamō_ are cognate with OIr. _anaid_ ‘stays, remains’ < *_h_$_2$_enh_$_1$- ‘breathe’ (LIV 267–268). OIr. _ainim, anaim_ (f. _n_-stem) ‘soul’ seems to reflect confusion of *_anamō_, *_anamēn_ and Lat. _anima_ ‘soul’ (Stüber 1998: 148–149). The forms may come directly from *_h_$_2$_enh_$_1$_-mon-_, but it is also possible that these forms were created or restored within Proto-Celtic on the basis of the verbal stem *_ană-_ (on which see p. 41). The same goes for other forms derived from this root such as MIr. _anamain_ and _anair_, both kinds of metre (Watkins 1963: 216–217).

14. OIr. _galar_ (n. _o_-stem) ‘sickness, disease’, MW. _galar_ (m.) ‘mourning, grief, sorrow’, MC. _galar_ (m.) ‘grief, sorrow, affliction’ < *_galaro-_ < *$\hat{g}^h$_elH-ro-_ are related to ON. _galli_ ‘blemish, fault’, Lith. _žalà_ ‘hurt, damage’ and perhaps Hitt. _kallar-_ ‘baleful, destructive’. According to Driessen (2003: 301–302) both the Celtic and the Hittite forms go back to *$\hat{g}^h$_elh_$_2$_-ro-_, although the identification of the laryngeal as *-_h_$_2$- rests only on his etymology of Γαλάτης (see below), and the assumption that MIr. _galannas_ ‘slaughter’, MW. _galanas_ ‘hatred, enmity, slaughter’ < *_galanassu-_ reflect an old-_n_-stem *$\hat{g}^h\underset{\circ}{l}$_h_$_2$_-en-_ (rather than, say, *$\hat{g}^h$_elH-no-_).

15. Gallo-Greek Γαλάτης ‘Galatian’ < *_galatV-_ is subject to the difficulties involved in etymologising any proper noun. Schumacher (2000: 42; 2004: 325) and McCone (2006b: 95–103) assume it is a loan-word from Proto-Celtic *_galati-_ < *_gelH-ti-_ (*_gelH-_ ‘be mighty’: W. _gallu_ ‘be able; take away, steal’; LIV 185) or < *$\hat{g}^h$_elh_$_3$_-ti-_ (Gk. χλωρός ‘yellow, green’) respectively. But Driessen (2003, esp. 282–284) derives it from *$\hat{g}^h\underset{\circ}{l}$_h_$_2$_-eto-_[37] (cf. Hittite _kallar-_ ‘baleful, destructive’, Old Norse _galli_ ‘blemish, fault’, Lithuanian _žalà_ ‘hurt, damage’ < *$\hat{g}^h$_elh_$_2$- ‘be very upset and to manifest according behaviour’). In fact, Vine (1998: 21) shows that full-grade adjectives with *-_eto-_ from intransitive verbs act as “a kind of quasi-participle with active diathesis”. Γαλάτης ‘very upset person’ ← *_galatā_ is probably therefore the result of the substantivisation of an adjective *$\hat{g}^h$_elh_$_2$_-eto-_ ‘very upset’. Compare Gk. ἑρπετόν ‘(walking, crawling) creature; reptile, esp. snake’ < *_serp-eto-_ ‘moving/creeping (thing)’. There is no reason to prefer a suffix *-_ti-_ to *-_eto-_ → *-_etā_, as _ā_-stems are quite common in Gaulish tribal names: cf. _Ambiomarcae, Allobrogae, Arotrebae, Baginatiae, Carnonacae,_ and an *-_eto-_ suffix is found in e.g. _Caleti._

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[37] Driessen reconstructs *$\hat{g}^h\underset{\circ}{l}$_h_$_2$_-eto-_ rather than *$\hat{g}^h$_elh_$_2$_-eto-_ or *$\hat{g}^h$_elh_$_2$_-to-_ on the grounds that it is not known whether Joseph’s law (*-_eRa-_ > *-_aRa-_) applied in Galatian. But this is not a very strong argument; since Joseph’s law applies in British, Irish and Gaulish, it is reasonable to suppose it is a Proto-Celtic development.

16. MW. _garan_ (m. and f.) 'heron, crane', B. _garan_ (f.) 'crane', OC. _garan_ gl. _grus_, Gaul. _trigaranus_ 'with three cranes' < _*garano-_ may go back to _*gerh$_2$-no-_, if directly cognate with Gk. γέρανος 'crane'. The laryngeal is also suggested by Lith. _gérvė_ 'crane' < _*gerH-u̯-_ and Lat. _grūs_ 'crane' < _*gruH-s_ < _*gr̥H-u-s_. The origin of Germanic forms such as OE. _cran_, OS. _krano_ is uncertain, and onomatopoeia is a possible complicating factor, but this seems a fairly likely example (_*gr̥h$_2$-Hn-_, with the Hoffmann suffix, as suggested by Schrijver 1995: 79–80, is unnecessarily complex).

17. Gaul. _Isara_ (hydronym) may be cognate with Skt. _iṣiráḥ_ 'refreshing, fresh; vigorous, active, quick', Gk. ἱερός 'mighty, divine, wonderful; holy' < _*ish$_1$-ro-_ (Delamarre 2003: 191).[38]

18. OIr. _lethan_ (_o_-, _ā_-stem adj.), MW. _litan_, W. _llydan_ (adj.), MB. _ledan_ 'broad, wide', Gaul. _Litanus_ (p.n.), Celtib. _litanokum_ (_o_-stem gen. pl.; family name) < _*pl̥th$_2$-no-_ are cognate with Gk. πλάτανος 'oriental plane tree' (< _*pleth$_2$-_; LIV 486–487; see MIr. _leithe_ p. 204).

19. OIr. _nenaid_ (_i_-stem) 'nettle', MW. _dynat_, W. _dynad_, _danad_, _danadl_ (pl.) 'nettles', MB. _linhadenn_ (singul.), B. _linad_ (coll.) 'nettles', OC. _linhaden_ gl. _urtica_ (with Brittonic dissimilation of the initial nasal) < _*ninati-_, if this is a reduplicated form, may be cognate with OPruss. _noatis_, Latv. _nâtre_ 'nettle', Slov. _nât_ (IEW 759) < _*nā̆t-_. Consequently, a root _*neh$_2$t-_ is possible (_*neh$_2$-_, if the _*-t-_ is part of the suffix). OHG. _nazza_, ON. _nǫtr_ 'nettle' point to _*nă̆d-_, which could be related if the root were _*neh$_2$-_ (although it is not clear what the suffix _*-d-_ would be), if these are not connected to the 'bind' root _*ned-_ (_neHd-_? see MIr. _naiscid_ p. 64) as suggested by IEW (759). Further connections are not possible (Irslinger 2002: 218–219). Given the variation in forms, it is only possible that _nenaid_ etc. come from _*ni-nh$_2$-ti-_.

20. MIr. _olann_ (f. _ā_-stem) < _*ulanā_, OW. _gulan_, MW. _gwlan_ (m.), MB. _gloan_ (m.), OC. _gluan_ gl. _lana_ 'wool' < _*u̯lanV-_ < _*h$_2$u̯l̥h$_{1/2}$-neh$_2$_ does not reflect a sequence _*-CHC-_ according to expected Proto-Indo-European syllabification rules. Schrijver's (1995: 177) proposal that the Celtic forms reflect an archaic syllabification _*h$_2$ulh̥$_{1/2}$n-eh$_2$_ is extremely unlikely. McCone's (1985: 173–175) Proto-Celtic rule _*u̯l̥-_ > _*u̯ul-_ is a somewhat more plausible explanation, although as noted on pp. 50–51, the evidence is otherwise slim. If it occurred before the loss of laryngeals _*h$_2$u̯l̥h$_{1/2}$-neh$_2$_ might have become _*h$_2$u̯ulh$_{1/2}$neh$_2$_ > _*u̯ulanā_. But this is not certain.

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[38] This preform may also be found in MIr. _íaru_ (f. n-stem) 'weasel, squirrel' < _*isarō_, according to Ziegler (2002).

21. OIr. _osnad_ (f. _ā_-stem) ‘sigh, groan’ < _*uss-anatā_, _esnad_ (f.) ‘musical sound, roaring, droaning’ < _*eks-anatā_, MW. _ucheneid_, W. _uchenaid_ (f.) ‘sigh, groan, moan’, MB. _huanat_, B. _huanad_ (m.) ‘sigh’ < _*oṷks-anatV-_ are all derived from the root _*h$_2$enh$_1$-_ ‘breathe’ (LIV 267–268), and may directly reflect _*h$_2$enh$_1$-tV-_. However, as with MB. _eneff_ ‘soul’ above, it is possible that these forms were derived instead from the Proto-Celtic verbal stem _*ană-_ (above, and p. 41).

22. OIr. _samail_ (f. _i_-stem) ‘likeness, similarity; like of, such a’, MW. _haval_, W. _hafal_, MB. _haual_, B. _hañval_ ‘like’, MC. _haval_, _havel_ ‘similar, resembling’ < _*samali-_ come from _*semh$_2$-li-_ (see OIr. _sét_ ‘likeness’ p. 191). It is possible that _samail_ could come from _*sm̥h$_2$-el-i-_, but it is not clear what the suffix _*-el-_ would be. Therefore, it is more likely that it reflects _*semh$_2$-li-_, like Lat. _similis_.

23. OIr. _scaraid_ ‘separates, parts’, MW. _ysgarawd_ (3sg. pret.), W. _ysgaraf_ ‘separate, divide, part’, OB. _scarat_ gl. _diiudicari_ come from _*skarā-_. The root can be reconstructed as _*(s)kerH-_ on the basis of U. _kartu_ (3sg. impv.) ‘allot’ < _*kare/o-_ < _*kr̥H-e/o-_, Lith. _skìrti_ (inf.) ‘separate, distinguish’ (LIV 558). Consequently we can reconstruct e.g. 1sg. _*skerH-mi_ > _*skerami_ > _*skarămi_ by Joseph’s law → _*skarāmi_ (Joseph 1982: 55; Schumacher 2004: 576–578). On the formation of OB. _scarat_ < _*skaratu-_ see below (p. 199 ff.).

24. OIr. _talam_ (m. _n_-stem) ‘earth, world, ground’, Gaul. _Talamone_, _Talmun_ (pl.n.s; the latter apparently with syncope) come from _*talamō_ < _*telH-mō_. The root may be _*telh$_2$-_ ‘lift, take up’ (cf. Gk. τελαμών ‘strap for bearing anything’; LIV 622–623), or _*(s)telH-_ ‘spread out, lie flat’ (Lat. _lātus_ ‘broad, wide’, Lith. pl. _tìlės_ ‘floorboards’; IEW 1061; Nussbaum 1997: 192–193).

25. OIr. _tamun_, _taman_ (m. _o_-stem) ‘trunk of a tree, stock, stem’ can come from _*tamno-_ or _*tamano-_.[39] IEW (1008) and NIL (639–640) connect it with Gk. στάμνος ‘earthen jar or bottle’, OHG. _stam_ ‘stem’ < _*sth$_2$-mn-o-_, Toch. A _ṣtām_, B _stām_ ‘tree’ < _*steh$_2$-smn̥_. On the other hand, Joseph (1982: 36–38; thus also IEW 1063) attributes this word to _*temh$_1$-_ (cf. Gk. τέμενος ‘cut off

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[39] According to Joseph (1982: 37–38), there is a distinction to be found in Old Irish sources between vowels that arose as a result of anaptyxis in post-apocope _*-CR_ sequences in Irish (spelled <_a_, _o_, _u_>) and original _*-a-_ (spelled <_a_>). But this is not the case (cf. _topur_ ‘well’ < _*to-uss-b^{h}er-o-_, Wb 29c7). McCone (2011) shows that unstressed vowels are liable to be spelled <_u_, _o_> in Old Irish when preceded by a non-palatal labial or velar consonant, and followed by a non-palatal consonant.

piece of land, sacred precinct'; LIV 625), but due to his mistaken belief that it must reflect _*tamno-_, derives it from the verb MIr. _tamnaid_ 'lops, cuts down, beheads' < _*tamnā-_ ← _*tamnă-_ < _*tm̥-n-h$_1$-_. But nasal stems to roots ending in laryngeals are not otherwise remodelled to the _ā_-stem verbs (either remaining as _ă_-stems or being thematised).[40] Since it is possible for _tamun_ to come from _*temh$_1$-no-_ > _*tamano-_ regularly, this seems the most likely preform. It is preferable to the derivation from _*(s)th$_2$-mn-o-_, since _tamnaid_ (and its variant _tamnaigid_), now to be understood as denominal to _tamun_ rather than the other way round, shows that _tamun_ originally referred to a tree trunk with its upper parts cut off. But although _tamun_ probably does reflect _*temh$_1$-no-_, the possibility cannot be absolutely ruled out that it comes from a substantivised zero grade adjective _*tm̥h$_1$-no-_, which ought to have given _*tmāno-_. Since I do not know of any other examples of the sequence _*tm-_ in Irish, it is possible that an anaptyctic vowel would have arisen, giving _*tamāno-_ > _tamun_.[41]

26. MW. _tywyll_ (adj.) 'dark', OB. _timuil_ 'darkness', MB. _teffoal_, B. _teñval_ (adj.) 'dark' come from _*temēlo-_ (Schrijver 1995: 221, 228) rather than from _*temalo-_ < _*temH-lo-_ (Schrijver 1991a: 104).

§ 139. _Conclusion_

The best examples of laryngeal loss are § 137.8 OIr. _·cer_ < _*k̂erh$_2$-t_, § 137.18 MIr. _fell_ < _*u̯elH-Co-_, § 137.20 OIr. _ferc_ < _*u̯erH-ĝeh$_2$_, and § 137.31 OW., MW. _pell_ < _*k^{w}elH-Co-_. In addition there are a number of cases where laryngeal loss is likely, although other explanations cannot be altogether ruled out: § 137.14 OIr. _elc_ < _*h$_1$elH-ko-_, § 137.26 Celtib. _kentis_, _gente_ < _*genh$_1$-ti-_, § 137.35 OIr. _sét_ < _*semh$_2$-tV-_, § 137.37 OBrit. _Venta_ < _*u̯enh$_1$-teh$_2$_.

Good examples of a vocalic reflex are § 138.1 MW. _adaf_ < _*pth$_2$-meh$_2$_, § 138.3 MIr. _alam_ < _*pelh$_2$-meh$_2$_ or _*h$_2$elh$_2$-meh$_2$_, § 138.14 OIr. _galar_ < _*ĝ^{h}elh$_2$-ro-_, § 138.18 OIr. _lethan_ < _*pl̥th$_2$-no-_, § 138.22 OIr. _samail_ < _*semh$_2$-li-_, § 138.24 OIr. _talam_ < _*telh$_{(2)}$-mon-_, and it is likely in § 138.7 Gaul. _Balarus_ < _*b^{h}elH-ro-_, § 138.16 MW. _garan_ < _*gerh$_2$-no-_, § 138.17 Gaul. _Isara_ < _*ish$_1$-ro-_, § 138.25 OIr. _tamun_ < _*temh$_1$-no-_.

It is striking that in two of the best examples of laryngeal loss, and in all the other possible examples, the laryngeal is followed by a plosive. In the remaining two examples (_fell, pell_), it is possible that *-_d_- followed the laryngeal (also possible are *-_s_- and *-_n_-). In none of the good examples of laryngeal retention (giving *-_a_-) is the laryngeal followed by a plosive. I conclude that in Proto-Celtic a laryngeal which is not in the syllable onset of an initial syllable was lost without reflex before a tautosyllabic plosive: in most cases this can be expressed as _*-C.HP-_ > _*-C.P-_. In the case of _·cer_ < _*ḱerh$_2$-t, *-h$_2$- and *-t_ were both in the syllable coda. Laryngeals before a heterosyllabic plosive, when they had not already been lost in _*-CHCC-_ sequences (see p. 160 ff.), were not lost, but developed an epenthetic vowel as usual, as is shown by forms like MIr. _arathar_ < _*h$_2$erh$_3$-tro-_.

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[40] It must be admitted that OIr. _anaid_ 'stays' < _*ană-_ < _*h$_2$enh$_1$-_ (see p. 41) was transferred into the _ā_-stems, but here the nasal is part of the root.

[41] The past participle of OIr. _daimid_ 'endures' (see p.92 ought to have been _*dm̥h$_2$-to-_ > _*dmāto-_, but it was remodelled to _*dam-to-_ > OIr. _·dét_ (pret. pass.) after the present stem.

The loss of the laryngeal in this sort of environment is not particularly surprising, and may be due to the failure of perceptual cues to the laryngeals before tautosyllabic plosives. Neutralisation of features can be attributed to the failure to perceive acoustic cues, which, for some features (e.g. place contrasts, voicing, ejection) are particularly dependent on C-V transitions. For many of these features neutralisation is especially frequent before obstruents, while contrast is maintained before sonorants (Blevins 2004: 89–132). Consequently, the cues identifying the presence of the laryngeal (perhaps by now [h]) may have been particularly weak before obstruents, which could have encouraged the misanalysis leading to its loss by dissimilation.

If this rule is correct, some thought must be given to some of the other forms laid out above. § 138.23 OIr. _scaraid_ poses little problem. Although in principle 3sg. _*skerH-ti_ ought to have given _*skerti_, the laryngeal could have been replaced on the basis of the forms in the rest of the paradigm (or the 3sg. _*skarati_ could have been created at a later stage, after _*skerH-mi_, _-si_ had given _*skarami_, _*skarasi_; if the laryngeal were _*-h$_2$-_ the stem _*skara-_ would also be the result of 3pl. _*skr̥h$_2$-enti_).[42] The same goes even more for § 138.4 OIr. _anaid_ < _*h$_2$enh$_1$-_, in which the 1pl. might also have been _*ana-_ as the regular result of the sequence _*h$_2$n̥h$_1$-mosi_. The same restoration would also be unsurprising in nasal-infix presents to roots of the shape _*CeRH-_ and _*CeḽH-_ such as OIr. _benaid_ 'strikes', MB. _benaff_, B. _benañ_ 'cut'. These formed singulars of the type _*CR̥-ne-H-mi, -si, -ti_ and plurals _*CR̥-n-H-mosi, -te, -enti_. These verbs would have lost the laryngeal only in the 2pl.

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[42] However, this evidently did not occur with OIr. _·cer_ < _*ḱerh$_2$-t_, since secondary *-_t_ was lost altogether in _*kert_ > _*ker_. The usual preterite endings were then built on the 3sg. as a bare stem, exactly as in the _s_-preterites (Watkins 1969a: 90–96, 156–180).

A similar process must also have taken place in verbal nouns like OB. _scarat_, which cannot come directly from *_skerH-tu-_ > ^{x}_skertu-_, but must come from *_skara-tu-_, formed on the late Proto-Celtic verbal stem *_skara-_. As is well known (Watkins 1969a: 179–180; Schumacher 2004: 46, 66–68), these verbs with a stem ending in *-_ă-_ merged in Celtic with the secondary _ā_-verbs. The result of this merger was that all verbs in *-_ā̆-_ adopted a present stem ending in *-_ā-_, and a preterite stem ending in *-_ă-_. The original verbal noun suffixes *-_ā-tu-_ and *-_ă-tu-_ (e.g. OB. _scarat_) were then in competition, with *-_ă-tu-_ becoming the more common. Full grade ablaut in the suffix is seen in the productive verbal adjectives in W. _-adwy_, MC. _-adow_, OB. _-atoe_ < *-_ă-tou̯-i̯o-_ (Schumacher 2000: 79–87).

Although the rule as set out here explains all the evidence considered above satisfactorily, it runs into problems with regard to the word for 'daughter': *_d^hugh$_2$-ter-/tr-_ (p. 163). Given the possibility that the laryngeal was lost in the weak stem according to a rule *-_CHCC-_ > *-_CCC-_, except for *-_RH.SR-_ (p. 160 ff.), we would expect Proto-Celtic to have inherited an allomorphy strong *_d^hugh$_2$-ter-_, weak *_d^hug-tr-_. If the rule proposed here is correct, the strong stem ought also to have lost the laryngeal, which would provide no basis for the epenthesis of *-_a-_ seen in Celtib. _tuateros_. There are three ways in which this problem might be avoided. The first is to further define the rule *-_CHC-_ > *-_CHP-_ (where *-_H-_ and *-_P-_ are tautosyllabic) as taking place only when the laryngeal also followed a sonorant, i.e. in the sequence *-_RHP-_ (as in all the other examples above). The second is to suppose that at a point in Proto-Celtic prior to the operation of the rule, the allomorphy of *_d^hugh$_2$-ter-_ and *_d^hug-tr-_ was removed by restoration of the laryngeal in the weak cases of the paradigm by analogy with the strong cases. The third, as already discussed (p. 167 ff.) is to accept that *-_CHCC-_ > *-_CCC-_ failed to take place in the sequences of the shape *-_SHSR-_ as well as *-_RHSR-_, that is to say the laryngeal was lost in all *-_CHCC-_ sequences except *-_CHSR-_.

-VCHI̯-

§ 140. _Introduction_

The counterpart to the loss of laryngeals in *_CR̥Hi̯-_ clusters in Celtic (p. 89 ff.) is loss in *-_VRHi̯-_, which is again generally accepted (Joseph 1980: 9–10; de Bernardo Stempel 1987: 47; Ringe 1988: 424–425; McCone 1996: 53; Schumacher 2004: 135). This may be a Proto-Indo-European rule: G.-J. Pinault (1982) claims that laryngeals were lost in Proto-Indo-European before *-_i̯-_

in the environment *_-VCHi̯-_ (i.e. when the laryngeal is in a non-initial syllable).[43] Although his conclusion is based on evidence from Vedic Sanskrit, Greek, and Lithuanian, it includes some Celtic forms. Loss of laryngeals in this environment had already been suggested for Greek and Sanskrit by Beekes (1976b: 90; also implied by Beekes 1969: 234, 254) and in Greek, Balto-Slavic and Latin (but explicitly not Sanskrit) by Peters (1980: 80 fn. 38).[44] The same problems in identifying original *_-i̯o-_ rather than *_-ii̯o-_ as discussed on p. 89 ff. apply here.

Many of the scholars mentioned above assume that the same loss of laryngeals occurred before *_-u̯-_ in Celtic. Rasmussen (1989: 98 fn. 40) suggests that loss of the laryngeal in the environment *_-VRHu̯-_ occurred only after Joseph's law (*_-eRa-_ > *_-aRa-_; Schrijver 1995: 73–93).

§ 141. *_-VRHi̯-_ > *_-VRi̯-_

1. MIr. _airid_ 'ploughs, tills', MW. _ard_ (3sg.), W. _arddaf_ 'plough', MB. _arat_ (inf.), LC. _aras_ (v.n.) 'plough' < *_ari̯e/o-_ (Schumacher 2004: 204–205) are cognate with Gk. ἀρόω, Lat. _arō_, OHG. _erien_, Lith. _árti_, OCS. _orati_ 'plough'. All of these are compatible with a full-grade root; the Germanic and Balto-Slavic forms must come from full-grade. The Greek and Lithuanian forms point to a _seṭ_-root. Consequently, all these forms are derivable from a present stem *h_2_erh_$_3$_-i̯e/o-_,[45] from which the laryngeal must have been lost in Proto-Celtic.

2. MIr. _bile_ (_i̯o_-stem) 'tree, tree trunk' < *_beli̯o-_ is cognate with Gk. φύλλον 'leaf', perhaps Lat. _folium_ 'leaf' < *b^h_oli̯o-_ (Vine 1999b: 563–569).[46] It is very tempting to assume, with IEW (122), a connection with OIr. _bláth_ 'flower', OHG _bluot_ 'flower, blossom', Lat. _flōs_ 'flower' < *b^h_leh_$_3$- (or *b^h_leh_$_1$-: OE. _blǣd_, OHG. _blāt_ 'blossom'), which would imply *b^h_elh_$_{1/3}$_-i̯o-_ > *_beli̯o-_. It is difficult to explain the _schwebeablaut_ in this root: Lat. _flōs_ < *b^h_leh_$_{1/3}$_-ōs_ looks old (Stüber 2002: 76), and the same full grade is found in OE. _blōwan_ 'bloom' <

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[43] Accepted by e.g. Jasanoff (1988–1990 [1991]: 175, esp. fn. 9), and Ringe (2006: 15) defines the rule as follows: "laryngeals were dropped between an underlying nonsyllabic and /*y/ (in that order) if there was a preceding syllable in the same word" (counting *_-u̯-/-u-_ and *_-i̯-/i-_ as underlyingly nonsyllabic /w/ and /y/: Ringe 2006: 9).

[44] Oddly, although Ringe refers to Peters, he does not address Peters' assumption that *_CR̥Hi̯-_ could also give *_CR̥i̯-_.

[45] If *_-VRHi̯-_ > *_-VRi̯-_ occurred in Proto-Indo-European then Greek, Latin and Baltic have replaced the laryngeal after other parts of the verbal paradigm.

[46] Lat. _folium_ has also been related to Gk. θαλλω 'bloom' (NIL 83–85; de Vaan 2008: 230), perhaps from *d^h_alh_$_1$- (see OIr. _duilne_, below), but whereas *_a/o_ alternation is unusual, the connection with φύλλον is unproblematic both formally and semantically.

**b^{h}leh$_3$-i̯e/o-* (or **b^{h}loh$_1$-i̯e/o-*; LIV 88). MIr. *bile* could be a *vr̥ddhi* derivative from an old *i*-stem **b^{h}l̥h$_{1/3}$-i-*, but the *o*-grade in Gk. φύλλον is then unexpected. But whatever the explanation, the similarity in form and meaning between *bile* and *flōs* etc. make a reconstruction **b^{h}elh$_{1/3}$-i̯o-* very likely. Although it is not possible to posit a suffix **-i̯o-* rather than **-ii̯o-* on the basis of the Irish form, Gk. φύλλον must come from **b^{h}olh$_{1/3}$-i̯o-* rather than **b^{h}olh$_{1/3}$-ii̯o-* (which would have given ^{x}φόλιον).[47] Consequently, *bile* suggests that laryngeals were lost in **-VRHi̯-* sequences in Celtic.

3. OIr. *buae, büe* (m. *i̯o*-stem) ‘native’ < **b^{h}ou̯i̯o-* or **b^{h}eu̯i̯o-*, better attested in *ambuae* ‘foreigner’ is connected by LEIA (B-112) with Skt. *bhávyaḥ* ‘existing, suitable, beautiful’. Since the root is **b^{h}uH-* (see OIr. *biid* p. 103), this would suggest **b^{h}eu̯H-i̯o-*, but McCone (1991c: 41) shows that *buae* comes from **g^{w}ou̯-i̯o-* ‘possessing cattle’, cf. Skt. *gávyaḥ* ‘bovine, consisting of cattle’, Gk. -βοιος in forms like ἑκατόμβοιος ‘worth a hundred cows’.

4. MW. *croew*, W. *croyw* ‘sweet, pure; new, fresh’ cannot go back to **k̂rou̯i̯o-* (as it were < **k̂reu̯H-i̯o-*) as supposed by LEIA (C-249); it must come from **krai̯u̯o-* and is probably unrelated to OIr. *crú* ‘blood’ < **kruh$_2$-s*, OE. *hrēaw* ‘raw’ < **krou̯h$_2$-o-* (see p. 115). MW. *crei*, W. *crai* (adj.) ‘new, fresh, raw, crude’ is also unrelated, since it should go back to something like **kregi̯o-*.

5. OIr. *doe* (adj.), *doi* (nom. pl.) ‘slow, sluggish’ points to **dou̯i̯o-* (not **du̯āi̯o-* or **dāu̯i̯o-* as supposed by Matasović 2009: 110, which would have given ^{x}*dá* and ^{x}*dae* respectively). Matasović compares Skt. *davīyaḥ* ‘very long, very distant’ (which would be formally identical), Gk. δήν ‘long, for a long while’, Lat. *dū-dum* ‘some time ago’, Arm. *tew* ‘duration’. If *doe* belongs here, it must come from **deu̯h$_2$-i̯o-*, and suggests loss of the laryngeal, but since its semantics are divergent from the supposed cognates, this etymology is not certain.

6. OIr. *doé, dúae* (m. *i̯o*-stem) ‘rampart, circumvallation’ < **dou̯i̯o-* is presumably related to OIr. *dún* ‘fort’ (p. 116; IEW 263); therefore it may reflect **deu̯h$_2$-i̯o-* (but **dou̯h$_2$-i̯o-* and **deu̯h$_2$-ii̯o-* are also possible). LEIA (D-133) offers a different connection, with Lat. *fouea* ‘pit’.

7. MW. *deil*, W. *dail* (coll.) ‘leaves, foliage’, OB. *dol* (in *dolgoed*), MB. *delyenn*, B. *deliенn* (f.) ‘leaf’, OC. *delen* (singul.) gl. *folium* come from **doli̯o-* (or **dali̯o-*); the *o*-grade in OIr. *duilne, duille* (f. *i̯ā*-stem) ‘leaf; foliage’ < **dolini̯āi* may

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[47] The loss in φύλλον and Lat. *folium* may be due to the Saussure effect.

suggest that we should reconstruct _*doli̯o-_, although the Welsh singulative _dalen_ would then have to be analogical. These words are probably cognate with Gk. θάλλω 'bloom', θαλερός 'blooming, fresh', Arm. _dalar_ 'green' (LEIA D-216–217; Matasović 2009: 103), but the root shape is problematic (possibilities include _*d^{h}alh$_1$-_, _*d^{h}h$_2$elh$_1$-_ _*d^{h}elH-_; for discussion and literature see NIL 83–85). The root probably ended in a laryngeal on the basis of the Greek and Armenian forms, so MW. _deil_ < _*d^{h}ElH-i̯o-_ might be evidence for loss of the laryngeal, either by the Saussure effect or before _*-i̯-_. However, a form _*dolā_ appears to be attested by Gaul. -δουλα (in Gaul. πομπέδουλα, _pempedula_ 'a plant'),[48] so _deil_ could be a later derivation of _*dolā_ (→ _*doli̯ā_). The origin of _deil_ is not certain enough to be used as evidence.

8. OIr. _fine_ (f. _i̯ā_-stem) 'group of the same family or kindred; descendants', OB. _coguenou_ gl. _indegena_, MB. _gouen_, B. _goenn_ (f.) 'race, species' < _*u̯eni̯ā_[49] < _*u̯enH-i̯eh$_2$_ are cognate with Skt. _vánate_ 'loves', _vanitaḥ_, _-vātaḥ_ (p.p.), _vāmáḥ_ 'worth, love' (Gotō 1987: 283–286; LIV 682).[50]

9. MIr. _meile_ (m. _i̯o_-stem) 'grinding; hand-mill, quern' cannot go directly back to _*meli̯o-_ < _*melh$_2$-i̯o-_ (for the root see LIV 432–433), which would have given ^{x}_mile_. It is presumably a later derivation from the Old Irish present _melid_ 'mills' (itself remodelled according to Schumacher 2004: 470–471).

10. Gaul. _Sucellos_ (theonym) is generally etymologised as 'good-striker' or 'who has a good hammer' (the god is represented holding a hammer; Delamarre 2003: 113–114). The most likely derivation is from _*kelh$_2$-i̯o-_ to _*kelh$_2$-_ 'strike' (LIV 350; see OIr. _claidid_ p. 71). However, it must be borne in mind that etymologising divine names is never certain (although, given the iconography of the god, an alternative derivation from _*su-k^{w}ei̯slo-_ 'the well-aware one' mentioned by Delamarre is less likely).

§ 142. _*-VPHi̯-_ > _*-VPi̯-_

1. MIr. _leithe_ (f. _i̯ā_-stem) 'width, breadth' may come directly from _*pleth$_2$-i̯eh$_2$_ (cf. Skt. _práthati_ 'speads out', _pr̥thúḥ_ 'wide, broad', Gk. πλαταμών 'flat stone', Πλάταια (pl.n.); IEW 833–834; LIV 486–487), but _*pleth$_2$-ii̯eh$_2$_ is also possible. Furthermore, MW. _llet_ (m.) 'breadth, width' shows that a form _*pleth$_2$-V-_

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[48] The surprising spelling <ου, _u_> in this Gaulish word perhaps reflects a particularly closed /o/ before _-l-_ (Delamarre 2003: 146).

[49] _*-i̯ā_ did not cause _i_-affection in British Celtic (Schrijver 1995: 259–264).

[50] MW. _gwen_ (f.) 'smile, smirk' probably does not belong here, for semantic reasons, _contra_ IEW (1147).

existed in Proto-Celtic, and _leithe_ could be derived from that. If Meissner (2006: 61–63) is right that _*-h$_2$-_ was originally an adjectival suffix, it is possible that the Celtic forms could reflect an _aniṭ_ root anyway (although OIr. _Letha_ < _*pl̥th$_2$-eu̯-i̯eh$_2$_ shows that at least some Celtic forms had a laryngeal).

2. MIr. _seiche_, _seche_ (f. _t_-stem) 'hide of an animal; human skin' < _*seki̯et-_ is cognate with ON. _sigg_ 'hard skin' < _*seki̯ā_; Hamp (1985: 183) argues that the lack of syncopation in acc. pl. _seichida_ and dat. pl. _sechedaib_ suggests a late switch into the dental stems and that _seiche_ also came from _*seki̯ā_, perhaps from _*sekh$_{(2)}$-i̯eh$_2$_.

The evidence for a laryngeal is restricted to Italic and Celtic forms: Lat. _secāre_ 'cut' has a perfect _secui_ < _*sekau̯ai̯_, and the verb _*sekā̆i̯e/o-_ seen in U. _prusekatu_ (3sg. fut. impv.) 'cut out' has a past participle _*sek-eto-_ in U. **aseçeta** (abl. sg.) 'cut up', in which the suffix _*-eto-_ probably reflects original _*-ato-_, either by regular sound change (Haug 2004) or by analogical replacement (Rix 1999: 526). However, some other _ā_-verbs in Latin form perfects in _-uī_ beside expected _-āuī_, where a laryngeal is clearly not involved, e.g. _fricuī_ beside _fricāuī_ 'rubbed', _plicuī_ 'folded' beside _plicāuī_, _necuit_ beside _necāuī_ 'killed' (de Vaan 2008: 243–244, 407–408, 471–472; Weiss 2009: 438), so a laryngeal is not completely guaranteed. Rix (1999: 532 fn. 63) considers MIr. _tescaid_ to be evidence for a laryngeal, since it is a non-denominative _ā_-verb. But, although a noun _*sekā_ is not attested in either Italic or Celtic, it is not completely impossible that it once existed. Consequently, although the root is probably _*sekh$_{(2)}$-_, this is not completely certain.

§143. _*-VRHu̯-_ > _*-VRu̯-_

1. OIr. _arbor_, gen. sg. _arbe_ 'grain, corn' < _*aru̯ar_ < _*h$_2$erh$_3$-u̯r̥_, gen. sg. _*aru̯en-_ < _*h$_2$r̥h$_3$-u̯en-_ (Ringe 1988: 421) reflects an original _r/n_-stem found also in Gk. ἄρουρα 'arable land' and Arm. _harawownk^{c}/_ 'tilled land, fields';[51] the root is _*h$_2$erh$_3$-_ 'plough' (LIV 272–273; see MIr. _airid_ p. 202). Given the archaic form of the noun, and the different semantics, it is not likely that _arbor_ was derived directly from MIr. _airid_ 'ploughs'.

Since _arbor_ goes back to an originally ablauting pattern, strictly speaking, the loss of the medial laryngeal shows only that one of the following rules must have taken place: _*HR̥HC-_ > _*HR̥C-_, _*CR̥Hu̯-_ > _*CR̥u̯-_, or _*-VRHu̯-_ >

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[51] Although this may rather reflect _*h$_2$erh$_3$-mon-_ (Olsen 1999: 614).

*_-VRu̯-_. Of these, *_CR̥Hu̯-_ > *_CR̥u̯-_ is the least likely to be correct, since the correct development may be to *_CRāu̯-_ (or possibly to *_CRău̯-_), although there is very little evidence either way (see p. 89 ff.). An explanation by way of *_HR̥HC-_ > *_HR̥C-_ is much more likely to be correct. As discussed earlier (p. 38 ff.) such a development may be regular when the laryngeals are tautosyllabic, as in OIr. _ainm_ 'name' < *_h$_1$n̥h$_3$.mn-_ (cf. MW. _araf_ 'slow' < *_h$_1$r̥.h$_3$mo-_). There is some slight evidence that while *_-VCRV-_ sequences were syllabified as *_-V.CRV-_ in Proto-Celtic, the same was not true of *_-VCI̯V-_ (see p. 89 ff. and p. 150 ff.). Consequently, _arbor_ might show the regular reflex of the weak stem *_h$_2$r̥h$_3$.u̯en-_, and cannot be used as evidence here.

2. OIr. _delb_ (f. _ā_-stem) 'form, appearance, image, statue', OW. _delu_ gl. _nummismatis_, MW. _delw_ (f.) 'image, statue; form, semblance, likeness, manner', MC. _del_ in _delma_ 'in this manner', _della_ 'in that matter, so' < *_delu̯ā_ may reflect *_delh$_1$-u̯eh$_2$_ (LIV 114; see MIr. _dalb_ p. 95). However, MW. _ethyl_ (3sg.) 'selects, elects, chooses' < *_eks-dolī-_ < *_-dolh$_1$-ei̯e-_ shows that there was a verb from this root in Proto-Celtic. There is no evidence for anything other than the _o_-grade iterative/causative, but it is possible that other forms existed which gave rise to a secondary _aniṭ_ root *_del-_.

3. MW. _erw_ (f.) 'measure of land, plot of land, field', MB. _eru_, _erv_, B. _erv_ (m., f.) 'furrow', OC. _ereu_ (in _gunithiat ereu_ gl. _agricola_), _erw_ gl. _ager_ < *_eru̯ā_ is connected by IEW (63) with OHG. _ero_ 'earth', Gk. ἔρᾱ 'earth' (usually found as the adverb ἔραζε 'to earth').[52] Neither of these forms provides evidence for a _seṭ_-root, but they are connected by Hackstein (2002a: 4–5) to a root *_h$_1$erh$_2$-_ found also in Hitt. _erḫ(a)-/arḫ(a)-_ 'border, edge, coast', Lat. _ōra_ 'coast, border' and Gk. ἔραμαι 'love'. For the basic meaning 'divides', Weiss (1998: 35–47) adduces also Gk. ἔρανος 'a meal to which each contributed his share' and Lith. _ìrti_ (1sg. _inrù_) 'dissolve oneself', _ìrti_ (1sg. _iriù_) 'tear open', and provides parallels for the semantic shift from *'takes apart (for oneself)' → *'enjoys' → 'love'. It must be noted, however, that Lith. _inrù_ has been related to Toch. B _āra_ (preterite) 'ceased' < *_h$_2$erH-_ by LIV (271), which also separates ἔραμαι 'love' from any other forms (LIV 240). It is also the case that OHG. _ero_

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[52] Attributing the words to the root *_h$_2$erh$_3$-_ 'plough'. But this cannot be the case, since it is impossible for this root to give the required initial _e-_ in Greek and Germanic. According to Joseph (1980: 43), the _e-_ of the Brittonic forms is due to _i_-affection in *_aru̯ī_ < *_h$_2$erh$_3$-u̯ih$_2$_. The normal result of final _i_-affection of *_-a-_ in this form would however give W. ^{x}_eirw_ (Schrijver 1995: 258). Joseph explains the unexpected result in _erw_ as being due the presence of *_-u̯-_, comparing MW. _cenau_ < *_kanEu̯ī_. But the fact that an affected vowel directly before *_-u̯-_ falls together with *_-ou̯-_/*_-uu̯-_ hardly has any relevance here.

'earth', Gk. ἔρᾱ 'earth' do not seem to share the basic meaning of 'divides' which characterises Hitt. _erḫ(a)-/arḫ(a)-_, Lat. _ōra_. However, the meaning 'division of land/earth' which underlies the Celtic forms suggests that they belong with the Hittite and Latin nouns, Gk. ἔρανος, and probably also _ìrti_ (1sg. _iriù_).[53] Taken all together, therefore, MW. _erw_ can be reconstructed as *_h_$_1$_erh_$_2$_-u̯eh_$_2$.

4. OIr. _meirb_ (_i_-stem adj.) 'lifeless, a corpse (?); flaccid, feeble, weak', MW. _merw_, W. _merf_ (adj.) 'insipid, tasteless; weak, powerless' < *_meru̯i-_ come from *_merh_$_2$- 'crush' (LIV 440; see OIr. _mrath_ p. 75), but the root continued into the Proto-Celtic verbal system (OIr. _marnaid_ 'betrays'), and it is possible that these could be derived from a secondary _aniṭ_ root.

5. MIr. _menb_ 'something minute or small?' < *_menu̯V-_ and its derivatives _menbach_ 'minute, fragmentary?', _menbachaid_ 'breaks to fragments', and MB. _miynhuiguenn_ (singul.), B. _minvig_ (coll.) 'crumbs, fragments' < *_menu̯-īkV-_, belong with W. _difanw_ (adj.) 'vanishing, evanescent, fading' < *_manu̯V-_. The ablaut variation suggests that these words reflect an original _u_-stem which was thematised. The same is shown by Gk. μανός 'loose in texture; few, scanty' < *_manu̯o-_ besides Hesych. μάνυ· πικρόν (if for μικρόν) and Arm. _manr_ 'small, thin, fine' (IEW 729). Since the Armenian and Hesychian forms come from *_manu-_, this implies the presence of a laryngeal, i.e. *_mn̥H-u-_. In principle, therefore, the Irish and Welsh forms might be the direct reflexes of *_menH-u̯o-_ and *_mn̥H-u̯o-_. However, it is more likely that they are derived by thematisation from *_menu-/manu-_ < *_menH-u-/_*_mn̥H-u-_ like Gk. μανός (*_mn̥H-u̯o-_ would have given ^{x}_mnāu̯o-_ in Greek). Therefore they are probably not evidence for the reflex of laryngeals before *_-u̯-_.

6. OIr. _selb_ (f. _ā_-stem) 'property, appurtenance, possessions', MW. _helw_, _elw_ (m.) 'profit, gain; possession', Gaul. _-selua_ (p.n. element) < *_selu̯V-_ < *_selh_$_1$_-u̯V-_ are cognate with Gk. ἑλεῖν 'take, seize', Lat. _cōnsuluī_ 'consider, take counsel for, have regard for the interests of' (LIV 529). It is possible that a secondary _aniṭ_ root existed, if OIr. _do·slí_ 'cringes to; merits, deserves', _ad·roilli_ 'deserves, is entitled to' are derived from *_slĭi̯e/o-_ < *_sl-i̯e/o-_, as supposed by Schumacher (2004: 588–591). However, this may not be the case, since his other examples of this type of formation such as OIr. _gniid_ 'does', _sniid_ 'spins'

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[53] Which suggests that, even if the *_-h_$_2$_-_ was originally a suffix rather than part of the root, as proposed by Kloekhorst (2008: 245–247), it was treated as part of the root in the non-Hittite branches of the Indo-European family.

probably have another origin (Zair 2009). Consequently, it is quite possible that _selb_ demonstrates laryngeal loss.

7. MIr. _serb_ 'a theft', MW. _herw_ (m.) 'attack, raid, pillaging' < _*seru̯V-_ are not connected with Gk. στέρομαι 'am deprived, do without' < _*sterh$_1$-_ (IEW 1028; LIV 599), but rather Hitt. _šāru_ 'booty'. Hence they reflect _*seru̯-o-_ and do not belong here (Watkins 1976b: 116–118).

§ 144. _*-VRHu̯-_ > _*-VRau̯-_

1. OIr. _anai_ (m. pl. _i̯o_-stem) 'wealth' < _*anau̯i̯oi̯_, MW. _anaw_ (m.) 'wealth, bounty, gift', Gaul. _Anauus_ (p.n.) < _*anau̯o-_ do not go back to _*h$_3$pnău̯o-_, as implied by LEIA (A-73; see p. 53). A derivation from the root _*h$_2$enh$_1$-_ 'breathe' (Joseph 1980: 34; Delamarre 2003: 45; see OIr. _anaid_ p. 41) would imply _*h$_2$enh$_1$-u̯o-_, with retention of the laryngeal. However, this relies on the assumption that OIr. _anai_, MW. _anaw_ 'wealth' and W. _anaw_ 'musician, singer, poet' (not 'poetic inspiration', as glossed by LEIA A-73) are the same word; and that their range of meaning reflects the reciprocal relationship between poet and patron (for which in general see Watkins 1976a). This is purely speculative, and the words must be considered separately. As such, there is no etymology for OIr. _anai_ and MW. _anaw_, which cannot be used as evidence.

For W. _anaw_ 'musician', the connection with _*h$_2$enh$_1$-_ is more likely, given the general assumption that MW. _anant_ 'musicians, bards', and the Irish poetic metres _anamain_ and _anair_ come from this root (LEIA-A-73; IEW 38; Joseph 1980: 34–35). However, derivatives of this root were evidently extremely productive in Celtic, and the laryngeal might have been replaced on the basis of the verbal stem seen in OIr. _anaid_ (as with MW. _eneid_ p. 166). It is even possible that _anaw_ is not an inherited formation at all; it is scarcely attested, and GPC^2 (264) considers that it may simply be the result of a misunderstanding of MW. _anaw_ 'wealth'. W. _anaw_ 'musician' is not good evidence either.

2. MW. _beleu_, pl. _balawon_, W. _belau_ (m.) 'wild beast, wolf; marten, sable' comes from _*belau̯on-_ or _*balo/au̯on-_ (Schrijver 1995: 326–344).[54] According to IEW (119) it is derived from a root _*b^{h}elH-_ 'shining, white' (Gk φαλός 'shining, white', Lith. _báltas_ 'white'). However, although wolves can have

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[54] Although the only evidence for an _n_-stem is the pl., which is not reliable (Stüber 1998: 120).

white fur, and some types of marten have a white ‘bib’ on their neck, the only really likely connection of this word is with Lat. *fēlēs* ‘cat, marten, ferret, polecat’, and anything else is speculative.

3. MIr. *cana*, *cano* ‘cub, whelp’, MW. *cenau* (m.), pl. *canawon* ‘cub, whelp’, OB. *ceneuan* gl. *catulaster* come from **kanEu̯on-* (Schrijver 1995: 123); Gaul. *Canauos* (p.n.) is ostensibly from < **kanEu̯o-*, but it could be hypocoristic.[55] The origin of these forms is very doubtful. They are usually connected to Skt. *kanyā́* ‘girl’, OIr. *cain* < **kenh*$_{(1)}$- (see p. 91), but Burrow (1983) points to a much closer connection with Lat. *canis* ‘dog’, which is surely correct.[56] The further relationship of *cana* and *canis* to the root **kenh*$_{(1)}$- is more dubious. Burrow argues that *cana* and *canis* do belong with the Indo-Iranian root *kan-* of Skt. *kanyā́*, but that these do not belong with the other forms derived from **kenh*$_{(1)}$-. This is for two reasons: firstly he suggests that the Indo-Iranian forms reflect a base meaning ‘small, little’ rather than ‘young’; secondly, he notes that forms like the Sanskrit superlative *kániṣṭhaḥ* ‘youngest, smallest’ ought to have *e*-grade. Since there is no palatalisation of the velar in these forms, they show the Proto-Indo-European root was **kan-*.

If Burrow is right, there is no reason to posit a laryngeal at the end of the root, and we must reconstruct **kan-ou̯-on-*.[57] If Burrow’s arguments for a root **kan-* are not accepted and all the words go back to the root **kenh*$_{(1)}$-, Latin *canis* could come from **kn̥h*$_{(1)}$*-i-*. A possible reconstruction for *cana* would then be **kenh*$_{(1)}$*-u̯on-* > **kenau̯on-* > **kanau̯on-*, but the suffix **-u̯on-* is not common in Celtic, and is of uncertain origin (Stüber 1998: 118–120); Stüber raises the possibility that *cana* < **kanEu̯on-* may be a secondary derivation from the weak cases of a *u*-stem **kn̥H-eu̯-* (for a similar derivation cf. MW. *aradwy* ‘ploughed land, tilth, ploughing’ < **ara-tou̯-i̯o-*; Schumacher 2000: 209). Either way, an etymology of *cana* as **ken*(*h*$_1$)*-u̯on-* is extremely uncertain.

4. B. *divalav* (adj.) ‘ugly, odious, hateful’ is derived by Joseph (1982: 41, 45; following IEW 716) as **dī-malau̯o-* ‘not-gentle’ < **-melh*$_2$*-u̯o-*, comparing MIr.

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[55] According to Schrijver **-E-* is **-a-*, but in fact it could also be **-o-* (also from **-e-*; Schrijver 1995: 337–338; McCone 1996: 55). Gaul. *-au̯-* can come from **-ou̯-* : cf. Gaul. *Lauenus* vs. MC. *lowen* ‘merry’.

[56] The link between *canis* and *cano* strangely seems not to have been widely observed, despite the many problems involved in trying to derive *canis* from **k̂u̯on-* ‘dog’ (thus still NIL 436, 438).

[57] Joseph’s (1980: 58) etymology of this word as ‘singer’ from **kan-* ‘sing’ (LIV 342–343), which would give the same preform, is appealing but unlikely.

díbláith 'ungentle'. The root is that of Gk. μαλακός 'soft'. This is not necessarily connected with OHG. _melo_ 'meal, flour' < _*melh$_2$-u̯o-_, from _*melh$_2$-_ 'grind' (Schrijver 1995: 78; LIV 432–433); at any rate, forms with the meaning 'soft' seem to show full grade II: Skt. _mlātáḥ_ 'weakened', OIr. _mláith_ 'soft' (not from _*ml̥h$_2$-ti-_; see p. 69 ff.). Consequently a reconstruction _*-melh$_2$-u̯o-_ is problematic. Schrijver (loc. cit.) suggests _*ml̥h$_2$-eu̯-o-_, but this is difficult morphologically (see discussion of OIr. _tanae_ below). As with _tanae_, it may be more plausible to derive _divalav_ from the feminine of a _u_-stem adjective, thus reflecting _*ml̥h$_2$-eu̯-i̯eh$_2$-_, which would give Breton _divalav_ regularly.

5. OIr. _madae_ (_i̯o-_, _i̯ā_-stem adj.) 'vain, ineffectual, fruitless', MW. _maddeu_ (v.n.) 'let go, dismiss, leave', OB. _madau_ in _in madau_ gl. _pessum dederunt .i. inaniter_ < _*madau̯i̯o-/ā_ is derived by NIL (455–457, esp. 456) from _*mad-h$_2$-eu̯-i̯o-/eh$_2$_, reflecting an old _u_-stem adjective to the root _*mad-_ seen in OIr. _maidid_ 'breaks, bursts', with the addition of an adjectival suffix _*-h$_2$-_.[58] Apart from the Celtic _*-a-_, Gk. μαδαρός 'wet; flaccid' and Skt. _madiraḥ_ 'intoxicated' suggest the presence of a laryngeal. In principle, it would be possible to reconstruct _*mad-h$_2$-u̯i̯o-_ rather than _*mad-h$_2$-eu̯-i̯o-/eh$_2$_, but the latter is just as plausible (see OIr. _tanae_ below for further discussion of the derivational history of these forms).

6. OIr. _tanae_ (_i̯o-_, _i̯ā_-stem adj.) 'slender, thin', MW. _teneu_, W. _tenau_ (adj.) 'thin, slender, slim', MB. _tanau_, B. _tanav_ (adj.) 'thin, meagre', MC. _tanow_ (adj.) 'thin, slim, slender, lean' are difficult for several reasons. While OIr. _tanae_ and MW. _teneu_ can go back unproblematically to _*tanau̯i̯o-_, _i_-affection is not found in Cornish and Breton. They probably generalised the feminine form _*tanau̯i̯ā_ (Schrijver 1995: 262, 297). All the Celtic forms point to a stem _*tanau̯-_, which cannot go back to _*tn̥Hu̯-_. Consequently, _*tanau̯-_ probably comes from _*tenau̯-_ by Joseph's law.

The verbal root from which the adjective is presumably derived (_*ten-_ 'stretch out, extend'; LIV 626–627) is clearly _aniṭ_: Skt. _tanóti_ 'stretches, spreads', _tatá-_ 'stretched'; Lat. _tentus_ 'stretched'; Gk. τάσις 'stretching, tension',[59] but there are signs of a laryngeal in the _u_-adjective which probably lies behind *tanae* etc.: Gk. τανυ- 'long' (only in compounds), τανaός 'outstretched, tall, spread', OCS. *tьnъkъ* 'thin' < **tn̥H-u-ko-*, Lith. *tę́vas*, Latv. *tiêvs* 'slender' < **tenH-u̯o-*, in addition to the medial *-a-* of Celtic itself.

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[58] A possible source of the laryngeal in the adjectival forms of the root may be Meissner's (2006: 61–63) proposal that _*-h$_2$-_ was an archaic adjectival suffix, which subsequently became reanalysed as part of verbal roots.

[59] Lith. _tìnti_ 'swell', which implies a laryngeal, is semantically divergent and cannot definitely be assigned to this root.

Rico (2001; with previous literature) attempts to explain all these forms on the basis of the *aniṭ* root, but his discussion of the Greek and Celtic forms is particularly implausible. He explains Gk. τανυ- and τανaός by epenthetic vowels, arguing that initial **tn-* was not permissible in Greek,[60] and that it became **tan-*. However, the epenthetic vowel in **t*$_ə$*nu̯o-*, "par son caractère fugace" (2001: 110) was not enough to allow the usual Greek syllabification **CV.nu̯o-* (cf. Att. ξένος, Ion. ξεῖνος < *ξε.νϝος), and consequently a second epenthetic vowel appeared in **t*$_ə$*n*$_ə$*u̯o-*, whence τανaός. This is extremely unlikely in itself, and anyway there was of course an entirely acceptable Greek syllabification of **tnu̯o-*, i.e. **tn̥.u̯o-* (paradigmatic pressure did not operate to keep **t*$_ə$*n-*: cf. τάσις < **tn̥-ti-*). So the proposed epenthetic vowel must either have been analogically introduced from **t*$_ə$*nu-* to **tn̥u̯o-* (if the two already existed side by side), or **tanu̯o-* was a later thematisation of τανυ- < **t*$_ə$*nu-*. In either case, the originally epenthetic vowel can hardly have been anything other than a real **-a-* in the system by the time **tanu̯o-* was created, and hence there was no impetus for the creation of the second epenthetic vowel. Epenthetic vowels are also Rico's explanation of OIr. *tanae*; he hypothesises (*ad hoc*) that such a vowel broke up the sequence of three non-syllabified sonorants in **tenu̯i̯o-* or **tanu̯i̯o-* < **tn̥u̯i̯o-*. However, since Proto-Celtic could cope with a sequence such as **betu̯i̯o-* (OIr. *beithe*, W. *bedw* 'birch', Gaul. *Betuius*) without the necessity of an epenthetic vowel, it is difficult to see why **tanu̯i̯o-* should require one.

Despite the attempts of Rico to explain all forms in another way, all languages point to an original *u*-stem **tenh*$_2$*-u-* (**-h*$_2$*-* because of Gk τανaός; see below).[61] The one exception is Skt. *tanvī́* (f. adj.) 'thin, slender' (otherwise ^{x}*tanivī́*), but this is doubtless analogical on the masculine *tanu-* < **tenh*$_2$*-u-* (as noted by Beekes 1976a: 11); cf. Skt. *pr̥thúḥ* (m.), *pr̥thvī́* (f.) 'wide', but *pr̥thivī́* 'earth', all from **pleth*$_2$*-* (LIV 486–487). Clearly *pr̥thivī́* represents the regular result of **pl̥th*$_2$*-u̯ih*$_2$, and *pr̥thvī́* is the result of remodelling on the basis of the masculine.

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[60] In itself this is perfectly plausible, but it can hardly, as claimed by Rico, be because of the difficulty of pronouncing two consonants with the same point of articulation, since, as he himself observes, **dn-* is acceptable in Greek: δνόφος 'darkness'.

[61] With the same 'adjectival' **-h*$_2$*-* as in OIr. *madae* above.

On the basis of a *seṭ*- 'root' *tenh*$_2$-, OIr. *tanae* must come from **tanau̯i̯o-*, which would come regularly from **tenh*$_2$*-u̯o-*, **tenh*$_2$*-eu̯o-*, or **tn̥h*$_2$*-eu̯-o-* (the first two by Joseph's law). On the face of it, it seems likely that its ultimate preform would be identical to that of Gk. ταναός < **tanau̯o-*, which remains unexplained.[62] It is possible it could come from **tenau̯o-* < **tenh*$_2$*-u̯o-* (or **tenh*$_2$*-eu̯-o-*) by vowel assimilation (discussed by Sihler 1995: 88–89, although he has a different reconstruction for ταναός itself). But such assimilation in Greek, insofar as it exists at all, is clearly sporadic. A reconstruction **tn̥h*$_2$*-eu̯-o-* is therefore most plausible on phonological grounds, and is assumed by Beekes (1976a: 9–12), who sees this form as derived from an earlier *u*-stem noun. Such a reconstruction is problematic methodologically, however. The prevailing view suggests that proterodynamic Indo-European *u*-adjectives were internally derived possessive adjectives from original acrostatic *u*-stem nouns; the corresponding thematised forms were not derived from these adjectives, but from the original noun by means of the possessive suffix **-ó-*, which was added to the consistently zero-grade suffix of the acrostatic noun. Consequently, from an abstract **tonh*$_2$*-u-/tenh*$_2$*-u-* 'extension' we expect either a proterodynamic possessive adjective **tenh*$_2$*-u-/*tn̥h*$_2$*-eu̯-* 'long, thin', or a thematic possessive adjective **tenh*$_2$*u̯-o-* 'long, thin', but not a thematic adjective **tn̥h*$_2$*-eu̯-o-* derived from the proterodynamic *u*-stem adjective (Widmer 2004: 78–103).

A possible explanation would be to suppose that Greek ταναός was the result of a later thematisation of **tenh*$_2$*-u-/*tn̥h*$_2$*-eu̯-* within Greek itself. That such a thematisation is possible is suggested by Lat. *arduus* < **h*$_2$*r̥Hd*^{h}*-eu̯-o-* (on which see the discussion under OIr. *ard* p. 39), *saluus* 'safe' < **sl̥h*$_2$*-eu̯-o-* and *caluus* 'bald' < **kl̥H-eu̯o-* (for the necessity of Latin *-lu-* reflecting **-lVu̯-* see p. 96 fn. 59).[63] But *u*-stem adjectives are not unproductive in Greek, and thematised forms usually reflect zero grade of the suffix as expected.[64] A possible alternative would be to suppose that Greek preserved both the proterodynamic *u*-stem **tenh*$_2$*-u-/*tn̥h*$_2$*-eu̯-* > τανυ- and the thematised adjective *_tenh$_2$-u̯o-_, which gave *_tenau̯o-_ regularly, and was then altered to *_tanau̯o-_ under the influence of ταvυ-. In either view, Gk. ταvαός does not in fact provide any direct evidence for OIr. _tanae_.

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[62] It is frequently supposed that secondary retraction of the accent onto **CR̥HC-* sequences resulted in **CaRaC-* in Greek (literature in Rico 2001), but in ταναός the accent remains unretracted, so **tn̥h*$_2$*-u̯o-* is not a possible explanation.

[63] The latter two Latin forms could also be derived directly from **sl̥h*$_2$*-u̯o-* and **kl̥H-u̯o-* respectively, if **CR̥HC-* could give **CaRaC-* in Latin (as e.g. Meiser 1998: 109; Weiss 2009: 110). The only evidence for such a development in which the position of the accent is certain appears to be Lat. *palma* 'palm' beside Gk. παλάμη 'palm', which are taken to come from **pl̥̍h*$_2$*-meh*$_2$. But Lat. *lāna* 'wool' < **h*$_2$*u̯l̥̍h*$_1$*-neh*$_2$ beside Skt. *ū́rṇā* provides a counter-example, so the matter remains uncertain.

[64] Cf. Gk. καλός < **kl̥-u̯o-*, στενός < **sten-u̯o-* (de Lamberterie 1990: 192–194, 260).

On the basis of the Proto-Indo-European derivational system just outlined, *_tenh$_2$u̯-o-_ > *_tanau̯o-_ → *_tanau̯i̯o-_ is a plausible starting point for OIr. _tanae_, but NIL (694–698, esp. 697) puts forward an argument for *_tn̥h$_2$-eu̯-_ as the original form, with the feminine stem *_tn̥h$_2$-eu̯-i̯eh$_2$-_ > *_tanau̯i̯ā-_ (nom. sg. *_tn̥h$_2$-eu̯-ih$_2$_) leading to reanalysis of the adjective as a _-i̯o_-stem. Such a derivation cannot be ruled out (and one could also consider direct thematisation in Celtic, as in the Latin adjectives derived from proterodynamic _u_-stems discussed above, with subsequent addition of the _i̯o_-suffix which seems to have been so productive in Celtic).

7. MW. _taraw_, (v.n.), _tereu_ (3sg.), W. _trawaf_ 'strike, hit, beat', OB. _toreusit_ gl. _atriuit_, MB. _tarauat_ (inf.) 'rub', B. _tarav_ (m.) 'rubbing' are formally difficult to explain. MW. _taraw_, points to *_tarau̯-_, as does MB. _tarauat_, with the addition of the verbal noun suffix _-at_ (Hemon 1975: 199). The Welsh verb is derived from the verbal noun (_tereu_ < *_tarau̯īt_, with _i_-affection). OB. _toreusit_ is an absolute 3sg. _s_-preterite built on the verbal noun *_tarau̯_ (Watkins 1962: 176–177); however, the _-o-_ is unexpected. Schumacher (2000: 191) attributes to W. _taraw_ "a lack of a convincing etymology", but Fleuriot & Evans (1985: 1.316) and Matasović (2009: 370–371) derive it from *_terh$_1$-_ 'bore' (see MIr. _tarathar_ p. 167). If this is correct, as seems likely, the verbal noun might come from *_terh$_1$-u̯o-_ > *_tarau̯o-_. Note that a derivation from the feminine stem of a _u_-stem adjective *_tr̥h$_1$-eu̯-i̯eh$_2$-_ is not possible, partly because _taraw_ is a noun rather than an adjective,[65] but primarily because *_tr̥h$_1$-eu̯-i̯eh$_2$-_ > *_tareu̯i̯ā-_ > *_torou̯i̯ā-_ would have given ^{x}_tareu_ (for the reflexes of *_-Vu̯i̯V-_ sequences in the Brittonic languages see Schrijver 1995: 293–302).

§145. *_-VPHu̯-_ > *_-VPu̯-_

1. OIr. _fodb_ (m. _o_-stem?) 'cutting, sundering?'[66] < *_u̯odu̯o-_ < *_u̯od^{h}h$_1$-u̯o-_ is probably cognate with Skt. _ávadhīt_ (aor.) 'struck, slew', Gk. ὠθέω 'thrust, push, shove' (< *_u̯ed^{h}h$_1$-_; IEW 1115; EWAIA 2.497; LIV 660). If Hitt. _ḫuttiyezi_ 'draws, pulls, plucks' belongs here, the root may be *_h$_2$u̯ed^{h}h$_1$-_, but this is uncertain (Kloekhorst 2008: 349–352; Craig Melchert points out to me that

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[65] Some Welsh verbal nouns are derived from adjectives (Schumacher 2000: 152–156), but B. _tarav_ 'rubbing' is also a noun (cf. the infinitive _tarauat_).

[66] Perhaps the same word as OIr. _fodb_ (n. _o_-stem) 'spoils'.

the meaning ‘pull’ of the Hittite form matches very poorly with the meaning ‘push’ in Greek). There are _aniṭ_ forms, e.g. Skt. _avadhráḥ_ ‘indestructible’, but these are probably formed on the basis of the thematic present.

2. OIr. _adbae_ (f. _i̯ā_-stem) ‘abode, dwelling place’ is compared by LEIA (A-16) with Skt. _vásati_ ‘resides’ < *_h$_2$u̯es-e/o-_ (Gk. Hom. ἄεσα ‘slept’; LIV 293), which would imply *_ad-h$_2$u̯es-(i)i̯ā_. However, laryngeals are usually lost after preverbs in Celtic, by analogy with the simple forms, so this is not good evidence. An alternative etymology, from *-_u̯ei̯(h$_1$)-eh$_2$_ (*_u̯i̯eh$_1$-_ ‘wind’, LIV 695) is also possible (Marstrander 1962: 203).

§146. *-_VPHu̯-_ > *-_VPau̯-_

1. OIr. _Letha_ ‘Armorica, Brittany’, OW. _Litau_ (in _dilitau_ gl. _Latio_), W. _Llydaw_, OB. _Letau_ ‘Brittany, the continent’, Gaul. _Litaui_ (theonym), _Litauia_ (pl.n.) are cognate with Gk. Πλάταια (pl.n.), Skt. _pr̥thivī́_ ‘earth’ (< *_pleth$_2$-_; LIV 486–487; NIL 564–566; see MIr. _leithe_ p. 204). Presumably, these forms reflect a substantivised proterotonic _u_-adjective. Although Skt. _pr̥thivī́_ < *_pl̥th$_2$-u̯-ih$_2$_ has zero grade in the suffix, it cannot be ruled out that OIr. _Letha_ and Gk. Πλάταια reflect the old full-grade suffix, and come from *_pl̥th$_2$-eu̯-ih$_2$_ (with the oblique stem *_pl̥th$_2$-eu̯-i̯eh$_2$-_ generalised to the nominative in all the Celtic forms except Gaul. _Litaui_).

§147. _Conclusion_

There is good evidence for the loss of laryngeals in *-_VRHi̯-_ clusters: §141.1 MIr. _airid_ < *_h$_2$erh$_3$-i̯e/o-_, §141.2 MIr. _bile_ < *_b^{h}elh$_{1/3}$-i̯o-_, §141.8 OIr. _fine_ < *_u̯enH-i̯eh$_2$_. §142.2 MIr. _seiche_ < *_sekh$_{(2)}$-i̯eh$_2$_ is a possible piece of evidence for *-_VPHi̯-_ > *-_VPHi̯-_.

There is a single piece of evidence for *-_VRHu̯-_ > *-_VRau̯-_ in §144.7 MW. _taraw_ < *_terh$_1$-u̯o-_. But there are also reliable forms which seem to show *-_VRHu̯-_ > *-_VRu̯-_: §143.3 MW. _erw_ < *_h$_1$erh$_2$-u̯eh$_2$_, probably §143.6 OIr. _selb_ < *_selh$_1$-u̯eh$_2$_. If the laryngeals were lost in these forms because of following *-_u̯-_, _erw_ and _selb_ suggest that, contrary to Rasmussen, the loss occurred before Joseph’s law. For *-_VPHu̯-_ > *-_VPu̯-_ there is a single piece of evidence (§145.1 OIr. _fodb_ < *_u̯od^{h}h$_1$-u̯o-_).

One way of explaining this variation is to suppose that forms like MW. _erw_ reflect late thematisations of older _u_-stems, like §143.7 MIr. _serb_ beside Hitt. _šāru_ ‘booty’, after laryngeals had been lost before a vowel. But there is no obvious reason why MW. _taraw_ should then reflect an earlier thematisation, before loss of the laryngeal. Since there are three examples of loss of laryngeal without reflex in the sequence *_-VCHu̯-_, I think it is more likely that this was the regular result. However, I do not know how MW. _taraw_, ostensibly from *_terh_$_1$_-u̯o-_, is then to be explained.[67]

-VCHV-

§148. _Introduction_

A variety of developments have been suggested for a laryngeal following a consonant in Proto-Indo-European and the daughter languages. Not all of them are applicable to Celtic; for example, next to voiceless stops, *_-h_$_2$_-_ caused aspiration in Sanskrit (Mayrhofer 2005: 110–114). *_-_T^h_-_ would presumably have given *_-T-_ in Proto-Celtic, as the voiced aspirate stops gave voiced stops, so we cannot tell if the same aspiration occurred in Celtic. However, some are susceptible to examination here. For example, it is argued that *_-h_$_3$_-_ may have caused voicing of a previous voiceless stop in Proto-Indo-European (Mayrhofer 1986: 143–144); the possible examples in Celtic are collected in section §149 below.

Schumacher (_apud_ Schrijver 1995: 289–291; 2000: 173–175) suggests that the regular result of *_-Vi̯HV-_ clusters was *_-Vi̯i̯V-_, and that *_-ei̯Ho-_ > *_-ei̯i̯o-_ gave Welsh _-wy_, with a different development from *_-ei̯o-_ > Welsh _-ydd_ (Schrijver 1995: 287–288, 289, 393–394) or _-oedd_ (Griffith 2010). The development of *_-ei̯o-_ and *_-ei̯Ho-_ was the same in Old Irish (both to -(_a_)_e_). The only available evidence for the sequence *_-VI̯HV-_ consists of sequences of the type *_-EI̯HV-_, discussed in section §150.

Next to other consonants, laryngeals were lost without reflex except the colouring of adjacent vowels; two examples are given in section §151.

§149. *_-VTh_$_3$_V-_

1. OIr. _aub_ (f. _n_-stem) 'river' < *_abū_, OBrit. _abona_, MW. _afon_ (f.), MB. _auon_, _auoun_, _auonn_, B. _aven_ (f.) 'river', OC. _auon_ gl. _flumen l. fluuium_ < *_abonā_ <

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[67] In the earlier version of this section to be found in my doctoral thesis, I suggested the possibility of a development *_CVC.Hu̯-_ > *_CVCu̯-_, but *_CVCH.u̯i̯-_ > *_CVCau̯i̯-_. At the time, the main evidence for this claim was OIr. _Letha_, which I took to be exactly cognate with Skt. _pr̥thivī́_ < *_pl̥th_$_2$_-u̯-ih_$_2$; since I now see that *_pl̥th_$_2$_-eu̯-ih_$_2$ is also a possible reconstruction, _Letha_ is of course not probative. Such an explanation remains a theoretical possibility, but it must be openly admitted that there is no positive evidence for a suffix *_-u̯i̯eh_$_2$ rather than *_-u̯o-_ in _taraw_, and indeed the fact that B. _tarav_ is masculine speaks against it, although not strongly.

*_$h_2eb^{(h)}$-on-_ are cognate with Palaic _ḫapnas_ 'river' < *_$h_2eb^{(h)}$-n-o-_ and Lat. _amnis_ 'river' < *_$h_2eb^{(h)}$-n-_. According to Hamp (1972) they are further cognate with Av. _ā́fs_, Skt. _āpaḥ_ 'water', Toch. A and B _āp_ 'water, river, current', OPruss. _ape_ 'stream' < *_h_2ep-_, with voicing caused by the laryngeal of the 'Hoffmann' possessive suffix *_-H(o)n-_ (Hoffmann 1955) in *_h_2ep-Hon-_ 'having water'. Since the same voicing occurred in OIr. _ibid_ 'drinks' < *_pi-ph_3-e/o-_ (see below), Hamp reconstructs the laryngeal in the suffix as *_-h_3-_.[68]

However, Hitt. _ḫapaš_ 'river' and OBrit. Ἄβου (gen. sg.) < *_$h_2eb^{(h)}$-o-_ suggest that the root of _aub_ ended in an original *_-b-_ rather than *_-p-_ (Watkins 1973). McCone (1992: 109) dismisses the existence of this thematic form. He suggests that Ἄβου is a writing of *_Abō_, either treated as indeclinable, or mistakenly taken as an _o_-stem genitive singular. On the basis of Melchert (1989: 98, 100 fn. 4), he argues that Hitt. _ḫapaš_, Palaic _ḫapnaš_ are both thematisations of an original _n_-stem, the former from the nominative (which would also have been _ḫapaš_), the latter from the oblique cases of the singular. Such thematisation is the usual fate of animate _n_-stems in Hittite, according to Melchert, and there may be some relic _n_-stem forms in Hittite (Kloekhorst 2008: 294–295).

Whether *_h_2ep-_ and *_$h_2eb^{(h)}$-_ should be connected remains unclear,[69] although the argument for voicing of *_-p-_ by *_-h_3-_ has the appealing advantage of reducing two roots of similar shape (*_h_2e_ + labial) and near-identical semantics to one.[70] It should be noted that there is no independent evidence that the laryngeal in the putative *_h_2ep-h_3on-_ was *_-h_3-_, except that *_-h_3-_ seems to have been responsible for voicing in OIr. _ibid_.

2. OIr. _ibid_ 'drinks', OW. _iben_ (1pl. impf.), MW. _yfaf_, MB. _evaff_ (inf.), B. _evañ_ (inf.), MC. _evaf_ 'drink', Gaul. _ibetis_ (2pl. indicative or imperative) < *_pibe/o-_ are cognate with Skt. _píbati_ 'drinks', Lat. _bibō_ 'drink' (which has assimilated the first stop to the second) < *_pi-ph_3-e/o-_ (Gk. Aeol. πώνω 'drink'; LIV 462–463). Voicing of the second *_-p-_ may be due to the following laryngeal. Alternatively, the voicing may be due to dissimilation (Penney 1988: 366–367); if *_-b-_ did not exist in Proto-Indo-European, then this would be unlikely, but securely reconstructable *_-b-_ seems to be rare rather than

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[68] For a different view see Schrijver (1991a: 321–322).

[69] For an etymology which connects *_h_2eb^h-_ with Gk. ἄφενος 'wealth' see Willi (2004).

[70] In pursuance of this aim, one might note that the existence of *_h_2ek^w-_ (Lat. _aqua_ 'water', Goth. _ahva_ 'river, waters') is also problematic. An entirely speculative suggestion would be to reconstruct instead *_h_2ep-u̯-_, and to assume that *_-pu̯-_ gave *_-ku̯-_ (this sequence is particularly disfavoured typologically: Ohala and Kawasaki-Fukumori 1997: 345).

non-existent (Mayrhofer 1986: 99–100). Without further good examples of _*-Th_3-_ > _*-D-_ it seems impossible to deny the possibility of dissimilation in this word.

3. OIr. _ubull_ (n. _o_-stem) 'apple' < _*abūlo-_, MW. _aual_, W. _afal_, OB. _abal_, MB. _aval_ (m.), MC. _aval_ (m.) 'apple' < _*abalo-_ are probably derived from an original _l_-stem, the Irish form coming from _*abōl_, the Brittonic forms from _*ab-l̥-_. They are cognate with forms such as OE. _æppel_ 'apple', Lith. _obelìs_ 'apple tree' (NIL 262–266). The original form is reconstructed by Matasović (2009: 23) as nom. sg. _*h_2eph_3ōl_, with voicing of _*-p-_ by _*-h_3-_. However, as he notes, there is no independent evidence other than the desire to avoid reconstructing Indo-European _*-b-_. It is often suggested that this is a non-Indo-European word (Mees 2003: 27; Venneman 2006: 139).

§ 150. _*-ei̯HV-_

1. Gaul. _Boii_ (tribal name) is most likely to come from _*b^hoi̯h_2-o-_, from _*b^hei̯h_2-_ 'strike' (LIV 72); _*g^woi̯h_3-o-_, from _*g^wi̯eh_3-_ 'live' (LIV 215–216) is also possible (Bammesberger 1997). For other less likely reconstructions see Delamarre (2003: 81–82). Schumacher (2000: 175 fn. 146), following Schrijver (1995: 290), suggests that a change of _*-Vi̯H-_ to _*-Vi̯i̯-_ is demonstrated by the consistent spelling of this word in Latin sources with <_oi_> rather than <_oe_>, and by the inscriptional _Boiiodur_[(pl.n.).

2. MW. _datprwy_ (v.n.) 'redeem', _dirprwy_ (v.n.) 'free through suretyship', _gobrwy_ (m.) 'reward, payment', MIr. _tinnscra_, _tochra_ (n. _i̯o_-stem) 'dowry, bride-price' all come from _*-k^wrei̯i̯o-_ < _*-k^wrei̯h_2-o-_ from the root _*k^wrei̯h_2-_ 'buy' (LIV 395–396; see OIr. _·críth_ p. 115).

3. MW. _dirwy_ (m. and f.) 'fine', OIr. _díre_ (n. _i̯o_-stem) 'honour-price, penalty, mulct' < _*dī-rei̯i̯o-_ come from _*-$h_2$rei̯H-o-_ from the root _*$h_2$rei̯H-_ 'count' (see OIr. _rím_ p. 117). The _e_-grade in the root is guaranteed by OIr. _díre_ rather than _dírae_.

4. NIr. _fé_ 'anger, fury', Gaul. _ueia_ may be connected with Lat. _uīs_ 'force, power, strength', Gk. ἴς 'strength, force', Skt. _váyaḥ_ 'food, meal; strength, energy' (Delamarre 2003: 309). If this is correct, _fé_ goes back to _*u̯ei̯H-eh_2_; neither the Irish or Gaulish words demonstrate a development _*-ei̯i̯ā_ rather than _*-ei̯ā_.

5. MW. _gofwy_ (v.n.) 'visit, come to', OIr. _fubae_ (n. _i̯o_-stem) 'act of attacking, injuring' < _*u̯o-bei̯i̯o-_ come from _*u̯o-b^hei̯H-o-_ from the root _*b^hei̯H-_ 'strike' (LIV 72; see OIr. _·bíth_ p. 113). The _e_-grade in the root is guaranteed by the raising in the first syllable of OIr. _fubae_, which comes from _*u̯o-b^hei̯H-o-_ >

*u̯obei̯(i̯)o- > _*u̯obe.o-_ (loss of intervocalic _*-i̯-_) > _*u̯obi.o-_ (raising of _*-e-_ to _*-i-_ in hiatus)[71] > _*u̯ubii̯o-_ (creation of hiatus-filling glide; raising of _*-o-_ by _*-i-_ in following syllable) > _*u̯ubei̯a-_ (unstressed _*-o-_ > _*-a-_; lowering of _*-i-_ by _*-a-_ in following syllable).

§ 151. _*-VCHV-_ (_Where C is not T or_ *-i̯-)

1. MW. _bel_ (3sg.), W. _belu_ (v.n.) 'kills, pierces, strikes' < _*bele/o-_ < _*g_^{w}_elH-e/o-_ is cognate with Arm. _kełem_ 'torture', OE. _cwelan_ 'suffer, spoil', Lith. _gélti_ 'pierce, hurt' (LIV 207; Schumacher 2004: 218).

2. MIr. _seir_ (f. _t_-stem) 'heel, ankle', MW. _ffer_ (m, f.) 'ankle', B. _fer_ (f.) 'ankle', OC. _fer_ gl. _crus_ < _*speret-_ < _*sp_$^{(h)}$_erH-et-_ are cognate with Lat. _spernō_ 'spurn', Skt. _sphuráti_ 'spurns; darts, rebounds, springs', Lith. _spìrti_ 'hit with the foot, stamp out; resist' (LEIA S-73; LIV 587).

§ 152. _Conclusion_

The only form which definitely reflects _*-VTh_$_3$_V-_ is § 149.2 OIr. _ibid_ < _*pi-ph_$_3$_-e/o-_. Since _*-b-_ < _*-ph_$_3$_-_ could also be due to dissimilation it is not certain that _*-h_$_3$_-_ causes voicing of a preceding voiceless stop.

§ 150.1 Gaul. _Boii_ < _*b_^{h}_oi̯H-oi̯_ is not enough on its own to be evidence for a development _*-VI̯HV-_ > _*-VI̯I̯V-_. But the Welsh verbal noun ending _-wy_ in § 150.2 MW. _datprwy_ < _*-k_^{w}_rei̯h_$_2$_-o-_, § 150.3 MW. _dirwy_ < _*-h_$_2$_rei̯H-o-_ and § 150.5 MW. _gofwy_ < _*-b_^{h}_ei̯H-o-_ also seems to point to a different development of the sequences _*-ei̯o-_ and _*-ei̯Ho-_. Schrijver (1995: 289–291) suggests that _-wy_ may reflect _*-oi̯(i̯)o-_ < _*-oi̯H-o-_, in which case these forms would not be evidence. However, as Schumacher (2000: 173–175) points out, _o_-grade is not expected in verbal nouns of this type, and _e_-grade is guaranteed in _dirwy_ and _gofwy_. It seems more likely than not that _*-VI̯HV-_ gave _*-VI̯I̯V-_ in Proto-Celtic.

In other _*-VCHV-_ sequences the laryngeal is lost without reflex.

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[71] The relative chronology of raising in hiatus is still a matter for debate (e.g. McCone 1996: 109, 130; Isaac 2007a: 15–20; Stifter 2011a: 4–8); this form does not seem to have been mentioned in discussions so far, but suggests that at least the first iteration of raising in hiatus must have taken place prior to raising by a following high vowel. The alternative is to suppose a rule _*-ei̯-_ > _*-ii̯-_ in unstressed syllables, for which, however, there is little other evidence.

CHAPTER FIVE

WORD-FINAL LARYNGEALS

_-IH#_

§ 153. _Introduction_

In Greek and Tocharian, at least some sequences of word final *-_IH_ developed to *-_(I)I̯E_, e.g. *_trih_$_2$ > Toch. B _tarya_ ‘three’, *_potnih_$_2$ > Gk. πότνιᾰ ‘mistress’. Although there is some disagreement as to the effects of other *-_IH_ sequences, this development seems to have occurred at least to sequences of *-_ih_$_2$ in both languages, and perhaps more generally (Beekes 1988b: 72; Hackstein 1995: 17–19; Ringe 1996: 22–34; Olsen 2009). Another possible result of *-_IH_ can be *-_Ĭ_, coexisting with *-_Ī_; laryngeals were apparently lost after vowels in Indo-European in _pausa_ (hence _ā_-stem vocatives like Gk. Hom. νύμφᾰ < *-_eh_$_2$ ‘maiden’; Mayrhofer 1986: 149).

§ 154. _Material_

1. W. _chwegr_ (f.) ‘mother-in-law’, OC. _hweger_ gl. _socrus_ < *_su̯ekrV-_ are cognate with Skt. _śvaśrū́ḥ_, Lat. _socrus_, OCS. _svekry_, OE. _sweger_ ‘mother-in-law’ (Matasović 2009: 362). The Sanskrit and Old Church Slavonic forms attest original *_su̯ek̂rū_ < *-_uh_$_2$. However, since there is no _i_-affection in Welsh (we would expect ^{x}_chwygr_; Schrijver 1995: 258), the Celtic forms cannot go directly back to *_su̯ekrū_, but may instead reflect a development of *-_uh_$_2$ to *-_ŭ_ in the vocative, with subsequent use of vocative for the nominative (on which see Stifter ms). However, it is also possible that the rare type *_su̯ekrū_ was simply transferred the far more common _u_-stem type (as in Latin; Schrijver 1991a: 259) without this intermediate step.

2. MW. _deigyr_ (pl.) ‘tears’ may come directly from *_dakrū_ < *_dakruh_$_2$ (Hamp 1971: 181–184; cf. Gk. δάκρυα ‘tears’). But plurals are productively formed with _i_-affection in Welsh, which originated in the _o_-stem plural *-_ī_ < *-_oi̯_ (Evans 1964: 27–28).

3. OIr. _fiche_ (m. _nt_-stem), gen. sg. _fichet_ reflects *_u̯ikants_, *_u̯ikantos_. OW. _uceint_,[1] MW. _ugeint_, W. _ugaint_, OB. _ucent_, MB. _uguent_, B. _ugent_, MC. _ugans_, _vgens_ 'twenty' come from *_u̯ikantī_ (not *_u̯ikantĭ_, because *-_ĭ_- does not cause _i_-affection of *-_a_-; Schrijver 1995: 265–268). Cognates include Gk. εἴϰοσι, Lat. _uīgintī_ and Skt. _viṁśatiḥ_, YAv. _vīsaiti_ < *_du̯i dk̑m̥tih_$_1$ 'two tens' (Rau 2005: 12–63); the final short vowel in Greek and Indo-Iranian is due to laryngeal loss in _pausa_ (Klingenschmitt 1992: 92 fn. 9). This being the case, it is possible that in addition to the development *-_ih_$_1$ > *-_ī_ found in British, Irish could have generalised the alternate form *-_ih_$_1$ > *-_ĭ_. Since final *-_ĭ_ would have been lost early (McCone 1996: 100–102), the result would have been an aberrant *_u̯ikant_, which could have been regularised by addition of *-_s_. However, all the other decads in Irish are also consonant stems (see OIr. _trícho_ p. 222), so it is possible that _fiche_ could have been remodelled directly from *_u̯ikantī_.

4. OIr. _sí_ (f. sg. personal pronoun) 'she', W. _hi_, MB. _hy_, B. _hi_, MC. _hy_ 'she' < *_sī_ < *_sih_$_2$ are cognate with Goth. _si_ 'she' and Skt. _sīm_ (m., f., n. acc. sg.) 'him, her, it' (Schrijver 1997: 46–47, 56).

5. Proto-Celtic *-_ī_ in old participles such as OIr. _méit_ (f. _ī_-stem) 'greatness, magnitude', MW. _meint_, W. _maint_ (m., f.) 'size, dimension' < *_mantī_ (p. 177) reflect original _devī́_ stems < *-_ih_$_2$ (GOI 187; Wackernagel & Debrunner 1954: 368–427, esp. 425–427; Sihler 1995: 275–276).

§ 155. _Conclusion_

§ 154.3 OW. _uceint_ < *_u̯ik̑m̥tih_$_1$, § 154.4 OIr. _sí_ < *_sih_$_2$, § 154.5 Proto-Celtic *-_ī_ < *-_ih_$_2$ show that the regular result of *-_IH_ was *-_Ī_. It is possible that § 154.1 W. _chwegr_ < *_su̯ekruh_$_2$ and § 154.3 OIr. _fiche_ < *_u̯ik̑m̥tih_$_1$ may show an alternative change to *-_Ĭ_, perhaps by loss of laryngeal in _pausa_, but this is not certain.

_-EH#_

§ 156. _Introduction_

Only one possible example of final -_EH_ has been found, which suggests that it gave *-_Ē_. For the possibility of laryngeal loss in _pausa_ in *-_EH_ clusters, giving *-_Ĕ_, see p. 219. Joseph (1980: 17) raises the possibility that the voc. sg. of the Celtic _ā_-stems may reflect *-_ă_,[2] but, as he notes, there is no way to tell whether a form like OIr. _túath_ (f. _ā_-stem voc. sg.) ‘people’ comes from _*teu̯tă_ or _*teu̯tā_.

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[1] In _trimuceint_ 'sixty'.

[2] Although he attributes putative short *-_ă_ to *-_Ch_$_2$ rather than the expected *-_eh_$_2$.

§ 157. _Material_

1. OIr. _dí_, MW., MB. _di-_, MC. _dy-_, perhaps Celtib. _ti-_ ‘from, of’ (Schumacher 2004: 119, 724–725) is cognate with Lat. _dē_. These may be from an old instrumental _*deh_$_1$ of a pronoun derived from the particle _*de_ seen in Gk. -δε ‘to’, Lat. _-de_ ‘there’ in _unde_ ‘where’ etc. (de Vaan 2008: 160–161). But according to Stüber (forthcoming), no pronominal forms can in fact be identified, and there was simply an adverb _*do_, with allomorphs _*dō_, _*de_ and _*dē_. If this is the case, the long vowel may not be due to the presence of a laryngeal, for which there is no other evidence.

_-CH#_

§ 158. _Introduction_

According to Sihler (1995: 419) “post-consonantal word-final laryngeals dropped without a trace in P[roto-]Celt[ic]”; Joseph (1980: 17) claims that _*-CH_ gave _*-Că_. Neither scholar provides any firm evidence. In the case of _*-RH_, there is a third possibilty: according to Nussbaum (1986: 129–133) and Jasanoff (1989: 137) _*-ERH_ gave _*-ĒR_ in Proto-Indo-European (cf. Szemerényi’s law, whereby _*-ERs_ gave _*-ĒR_; Szemerényi 1980: 109). Thus neuter collectives like Gk. ὕδωρ ‘water’ come from _*-or-h_$_2$, with the usual neuter plural ending (for the endings of neuter _r/n_-stems see Schindler 1975b). A possible example of _*-CH_ clusters in Celtic which cannot be used is the nominative and accusative plural of _s_- and _n_-stems (e.g. OIr. _slébe_ ‘mountains’ < _*slei̯besā̆_, _anman_ ‘names’ < _*anmenā̆_; GOI 200). Since it is not possible to tell the quantity of the final _*-ā̆_, it is possible that _*-CH_ gave _*-Că_ or that the laryngeal was lost without reflex, and that the bare stem was reformed with the nom. acc. pl. ending _*-ā_ from the _o_-stems.

§ 159. _*-PH_

1. Gaul. _da_ (impv.) ‘give’ could reflect /dā/ or /dă/ (RIG 2.2: 323). If the latter, it may go back directly to _*dh_$_3$, but the vowel could also have been generalised from other parts of the verbal paradigm, e.g. 1pl. _*dh_$_3$_-mos_ > _*damos_. In fact, however, a preform /dā/ seems more likely, since a stem _*dā-_ is found in OIr. _do·rata*_ ‘can give’ (suppletive to _do·beir_ ‘gives, takes’) < _*to-ro-ad-dā-_ (e.g. 3pl. impf. rel. _nad·tardatis_) and _·íada_ ‘closes’ < _*epi-dā-_.

This *_dā-_ looks like an old root aorist *_deh$_3$-_; according to Schumacher (2004: 265–267) it was taken into the present via the (originally aorist) imperative *_dā_. This imperative, which would be identical to Gaul. _da_, is probably due to paradigmatic levelling from forms in which *_dō-_ < *_deh$_3$-_ was not in the final syllable (where it would have given ^{x}_dū_).

2. OIr. _trícho_, gen. sg. _tríchot_ (m. _nt_-stem) ‘thirty’ comes from *_trīkonts_, *_trīkontos_ (apparently with long *_-ī-_, despite the lack of evidence from Old Irish; GOI 679). All the Irish decads are _nt_-stems, so the discussion here can stand for all. OB. _tricont_, _trigont_, MB. _tregont_ ‘thirty’ reflect a form *_trĭkontV-_; MW. _trychwn_ normally means ‘three warriors’, but there is one possible example meaning ‘thirty’ (Szemerényi 1960: 22 fn. 106; GPC 36–37). The stem *_trī̆kont-_ is also found in ‘Gaulish’ _tricontis_ (in an otherwise Latin inscription, and with Latin morphology; Delamarre 2003: 301). The only other Brittonic evidence for the original form of the decads is MW. _pumynt_ (m.) ‘fifty’. Although forms like Lat. _trīgintā_, Gk. τριά́κοντα reflect an original neuter collocation *_trih$_2$ deḱomth$_2$_ ‘three decads’, Rau (2005: 13–63) shows that there were also abstract-collective compounds of the type *_trideḱomts_ ‘thirty’, whence e.g. Skt. _triṁśát-_ ‘thirty’, Gk. Att. τριᾱκάς ‘thirty; thirtieth day of the month’. It is possible that some Celtic forms reflect the *_trih$_2$ deḱomth$_2$_ type: the length of the first vowel in OIr. _trícho_ suggests that it might come from *_trih$_2$ deḱomth$_2$_, in which case the final laryngeal might have been dropped without reflex, and the resulting *_trīkont_ remodelled to *_trīkonts_ to fit the pattern of a consonant stem. But the vowel length could be explained by contamination of *_trideḱomts_ by *_trih$_2$ deḱomth$_2$_ > *_trīdekont_(_ă_), rather than direct descent from *_trih$_2$ deḱomth$_2$_. Conversely, MB. _tregont_ might point to a development *_trīkontă_ (with shortening of the long *_-ī-_ by analogy with *_trideḱomts_), but the Breton preform *_trĭkont-_ could reflect the stem of the non-nominative cases. Gaul. _tricontis_ may also suggest *_trīkontă_ → *_trikontā_, since it has a Latin _o-_ or _ā_-stem dative plural ending, but this is hardly a reliable deduction. It is more likely that all Celtic forms reflect the *_trideḱomts_ type, and did not end in a laryngeal.

3. MW. _yt_^{L}, _yd_^{L} (affirmative particle)[3] are connected by Hamp (1976d: 352–353, following IEW 285) and Schumacher (2004: 96 fn. 98), with Skt. _iti_, Lat. _ita_, Lith. _ìt_ ‘thus’. A reconstruction *_ith$_2$_ is suggested by Skt. _-i_, Lat. _-a_ and because of the aspiration in Skt. _itthā́_ ‘here, there’ (although the gemination of the consonant in Sanskrit is unclear). Despite other possibilities (e.g. de

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[3] Not to be confused with MW. _y_, _yd_ [yđ], which has the same use (Evans 1964: 171–172).

Vaan 2008: 311) the connection between the Latin and Sanskrit words seems probable (thus Ernout & Meillet 1979: 325; KEWA 1.86; accepted by Schrijver 1991a: 80). If the Welsh particle also belongs here it shows a development _*ith_$_2$ > _*ita_; the final vowel is guaranteed by the lenition and retention of _*-t-_ > _*-d-_ (final _*-t_ after vowels fell together with _*-d_, which was then lost at some stage of Celtic (McCone 2006a: 102, 173–174; Schrijver 2007: 357–360, 366–368).

However, there are also other suggestions for the origin of this particle. Schrijver (1997: 162–164; apparently without knowledge of IEW or Hamp) suggests that some instances of _yt_^{L}, _yd_^{L} [yd] are a variant of the other particle _y_, _yd_ [yđ], which he reconstructs as _*ed-ed_. The (apparent) lack of lenition shown by _y_, _yd_ [yđ] is attributed by Schrijver to post-syncope provection (assimilation): thus MW. _y bu_ < _*ybbu_ < _*əđ β-_ < _*edV b-_. MW. _yt_^{L}, _yd_^{L} would then be a remnant of this form, according to Schrijver, resulting from provection in other environments. Thus, e.g. MW. _yd gan_ would be the result of a sequence _*əđ g-_ < _*edV k-_, where assimilation did not occur. This explanation would have the advantage of providing a single source for both particles and explaining the restricted distribution of _yt_^{L}, _yd_^{L} in Middle Welsh (it does not appear before MW. _t-_ or _d-_, or vowels, where we find _y_ and _yd_ respectively). Hamp (1979: 167–168) explains the distribution by assuming two particles, _*ith_$_2$ and _*id_^{h}_e_ (= Lat. _ibi_ 'there'), the differing results of which in different contexts led to the distribution observed. However, Schrijver's explanation does not cover _yt_^{L}, _yd_^{L} [yd] before forms of the copula beginning with a vowel, which he considers to be of another, obscure, origin.

Yet another preform is suggested by McCone (2006a: 231–232), who suggests _*eti_ 'and', which is plausible semantically and formally. Given the competing etymologies, the derivation of _yt_^{L}, _yd_^{L} from _*ith_$_2$ is not certain.

§ 160. _*-RH_

1. OIr. _bé_ (n.) 'woman' goes back to _*bĕn_. Cognates in other languages include Gk. γυνή, Goth. _qino_, OCS. _žena_, Arm. _kin_, Toch. B _śana_, Skt. _jániḥ_ 'woman'. Although there have been many attempts to explain the difference between these forms (see Jasanoff 1989 for literature), Jasanoff's treatment is the most convincing. The originally proterodynamic paradigm of this word (strong _*g_^{w}_en-h_$_2$_-_, weak _*g_^{w}_n-eh_$_2$_-_) is demonstrated by the irregular paradigm of _ben_ in Irish (e.g. gen. sg. _mná_ < _*g_^{w}_n-eh_$_2$_-s_). According to Jasanoff, _bé_ is the reglar result of nom. sg. _*g_^{w}_en-h_$_2$, with loss of laryngeal and compensatory lengthening to give _*g_^{w}_ēn_, whence, with Celtic shortening before _*-n_, _*bĕ_ > _bé_. Of course, from a Proto-Celtic point of view, the same result would come

from loss of the laryngeal without lengthening. OIr. *ben*, Gaul. *-bena* (p.n. element), OW. *ben* (f.) 'wife, woman', OC. *benen* gl. *sponsa* < **g^wenā* reflect a new nom. sg. **g^wenā* created on the basis of forms like acc. sg. **g^wenăm* < **g^wenh_2-m*.

2. MW. *heul*, W. *haul* (m., f.) 'sun, sunlight', MB. *heaul*, *heol*, B. *heol* (m.) 'sun', OC. *heuul* gl. *sol*, MC. *houl*, *houll* (m.) 'sun, sunlight' are reconstructed as **sāu̯ōl* < **seh_2u̯ōl* by Matasović (2009: 324); see OIr. *súil* p. 120. This reconstruction has the advantage of fitting in with known Indo-European paradigmatic patterns (Jackson's 1953: 374 and Hamp's 1975b reconstructions require unusual sound changes or analogical remodelling). If it is correct, MW. *heul* may reflect original **seh_2u̯-ol-h_2*.

§ 161. *Conclusion*

It is not clear what the result of **-PH* was in Proto-Celtic. The forms of the decads in Celtic need not have anything to do with a laryngeal. Retention of a laryngeal may be most likely, on the basis of § 159.3 MW. *yt*^{L}, but this is not completely certain. **-RH* probably gave **-R*, with lengthening of the preceding vowel already in Proto-Indo-European.

CHAPTER SIX

OTHER ENVIRONMENTS

_-EI̯HC-_

§ 162. _Introduction_

The result of the sequence *_-EI̯HC-_ has been the subject of considerable debate, since both *_-EI̯C-_ and *_-EI̯aC-_ seem to have been possible results. The conditioning factor currently remains uncertain. Joseph (1980: 372–376) argues that the Celtic reflex of *_-EI̯HC-_ was identical to that of *_-EI̯C-_. Cases of apparent *_-EI̯aC-_ are the result of the addition of secondary suffixes like *_-atro-_, which had been back-formed from words like MIr. _tarathar_ < *_tara-tro-_ < *_terh_$_1$_-tro-_ (p. 167). Ringe (1988: 425–429) concurs with this conclusion, and adds a few more examples.

McCone (1997) argues for a different rule, whereby laryngeals (or the resulting *_-a-_) were lost in the sequence *_-ei̯HCā̆-_ (including *_-aN-_ < *_-N̥-_), but were otherwise vocalised, giving *_-ei̯HC-_ > *_-ei̯aC-_. He does not address the equivalent sequence with *_-u̯-_.

The conclusions reached above (p. 160 ff., p. 180 ff.) regarding the fate of laryngeals in *_-CHCC-_ and *_-CHC-_ sequences allow the possibility of a third hypothesis. On the assumption that sequences of the type *_-EI̯HC_(_C_)- act in the same way as *_-CHC_(_C_)- sequences, we could make the following predictions: that *_-EI̯HC-_ sequences will lose the laryngeal without reflex when the consonant following the laryngeal is a single plosive (or two consonants, except when the two consonants form the sequence *_-SR-_); otherwise we expect an epenthetic vowel to be retained as *_-a-_.

In the hopes of assessing these three hypotheses, the following evidence is therefore collected according to whether or not an *_-a-_ is found as the reflex of the laryngeal. Within each section, forms are not in strict alphabetical order: words from the same root are kept together. It should be noted that the evidence below does not include definite examples of the sequence *_-oI̯HC-_, since the lack of a laryngeal reflex in forms with *_-o-_ in the root may be attributable to the Saussure effect, which resulted in the loss of laryngeals in the sequence *_-oRH-_ (see p. 243 ff.).

It is not always easy to differentiate the results in the Celtic languages of the sequence *_-eI̯aC-_ from *_-eI̯C-_. For ease of reference, their reflexes in the Insular Celtic languages are laid out below (from GOI 36, 39–40, 71; Jackson 1953: 305, 330, 358–359, 1967: 206–208, 211–212, 229–234, 140–141). The Gaulish results of these clusters will be discussed when they appear.

> *_-ei̯C-_: Ogam, archaic Old Irish _-ē-_, retained before a palatal consonant, but otherwise giving the diphthong _-ía-_ in Old Irish; OW. _-ui-_, MW. _-wy-_, OC. _-ui-_, _-oi-_, MC. _-o-_, _-oy-_, OB. _-oi-_, _-oe-_, _-ui-_, MB. _-oe-_, _-oue-_, B. _-oue-_.
> *_-ei̯aC-_: Ogam, archaic Old Irish _-iä-_, Old and Middle Irish _-ía-_; (where _-a-_ carries the Old British stress) OW. _-ae-_, _-ea-_, MW. _-aea-_, _-wya-_ (after labials), OC. _-oe-_, _-oy-_, MC. _-oe-_, _-oa-_; OB. _-oia-_, MB. _-oa-_, _-oua-_, B. _-oua-_.
> *_-eu̯C-_: Ogam, archaic Old Irish _-ō-_, retained in Old Irish before a velar > Old Irish _-úa-_; _-u-_ in all the Brittonic languages.
> *_-eu̯aC-_: according to Schrijver (1995: 97–100) *_-eu̯a-_ gave *_-au̯a-_ in Proto-Celtic by Joseph's law; since *_-au̯E-_ gave OIr. _-auE-_ > _-uE-_ > MIr. _-úa-_ (Uhlich 1995: 17 fn. 35), it might be expected that *_-au̯a-_ would give _-aua-_, but in fact we find that *_-au̯a-_ fell together with *_-ou̯a-_ in Archaic Old Irish _-oä-_ > Old Irish _-ó-_. A similar change *_-au̯a-_ > *_-ɔu̯a-_ occurred also in Breton and Cornish to give MB. _-oua-_, B. _-aoua-_, MC. _-owa-_. The sequence *_-au̯a-_ was apparently retained in Welsh (on these developments see Zair 2012b: 155–157).

§ 163. *_-EI̯HC-_ > *_-EI̯C-_

1. OIr. _béimm_ (n. _n_-stem) 'act of striking; blow', B. _boem_ (m.) 'furrow', MC. _bom_ (m.) 'bang, blow, thump' < *_bei̯smn̥_ might reflect *_b^{h}ei̯H-smn̥_ (LIV 72; see OIr. _·bíth_ p. 113). The verb continued into Proto-Celtic (OIr. _benaid_ 'strikes' < *_b^{h}i-n-H-_), however, so it is not impossible that this could be a secondary creation from neo-_aniṭ_ *_bei̯-_, which is found, for example, in the subjunctive *_b^{h}ei̯H-se/o-_ → *_bei̯-āse/o-_ > OIr. _·bia_ (Schumacher 2004: 226–232). Note that _béimm_ is the verbal noun of _benaid_.

2. MIr. _bían_ (m.) 'skin, hide' comes from *_b^{h}ei̯h$_2$-no-_, but on the basis of mediaeval sources it is not possible to tell whether it reflects *_bei̯ano-_ or *_bei̯no-_. In Modern Irish the dictionaries give both gen. sg. _béin_ (Dwelly 1988: 93), which would imply *_bei̯nī_, and _biain_ (Ó Dónaill 1977: 107), which would imply *_bei̯anī_, so the question remains unresolved.

3. OIr. _bríathar_, archaic _brethar_ (f. _ā_-stem) 'word, utterance, discourse', MW. _brwydyr_, W. _brwydr_ (f.) 'pitched battle, conflict; dispute, controversy' < *_brei̯trā_ are derived by Joseph (1982: 42; following IEW 166–167) from

*b^{h}reih$_2$- (Russian Church Slavonic _brijǫ_ 'shear, cut', Skt. _bhrīṇánti_ 'hurt'; LIV 92–93). He compares the semantics of OIr. _foccul_ 'word', W. _gwaethl_ 'dispute, battle' < _*u̯ok^w-tlo-_ (cf. Skt. _vaktram_ 'mouth'). The derivation is not implausible, but is not necessarily correct (and note that _gwaethl_ shows a shift 'speech' → 'battle', whereas here the clearly primary meaning of _bríathar_, _brwydr_ is 'speech' and the putative shift from 'battle' is the other way round). If the etymology is correct, Insular Celtic _*brei̯trā_ may be a secondary formation; the root _*b^{h}rei̯h$_2$-_ survived into Celtic (OIr. _·bria_ (subj.) 'would hurt, damage'), and _*brei̯trā_ could have been derived from neo-_aniṭ_ forms of the verb.

4. MW. _brwyt_, W. _brwyd_ (adj.) 'variegated; bloodstained; broken', OC.[1] _bruit_ gl. _uarius_ < _*brei̯to-_ < _*b^{h}rei̯h$_2$-to-_ (Joseph 1980: 65) may reflect the same neo-_aniṭ_ root as OIr. _bríathar_.

5. MIr. _búaidir_ 'confusion', MW. _budyr_, W. _budr_ 'dirty, filthy' must go back to _*bou̯dVrV-_, with syncope of the second syllable.[2] Since such a syncope would only have occurred in a four-syllable word in Brittonic, the primary (noun) formation is only apparently attested by Irish; MW. _budyr_ is derived from the denominal verb W. _budro_ (v.n.) 'defile' (Pedersen 1909–1913: 1.112; Schrijver 1995: 355). Skt. _gūthaḥ_ 'dirt', _guváti_ 'shits', MHG. _quāt_ 'dirt', OE. _cwead_ 'dirt', Russ. _govnó_ 'dung, mud', Arm. _kow_ 'dung' are cognate (LEIA B-108; EWAIA 3.160; Kluge & Seebold 2002: 532), and require the following root-shapes: _*g^{w}uH-_ (Skt. _gūthaḥ_, _guváti_); _*g^{w}eh$_1$-_ or _*g$^{(w)}$u̯eh$_1$-_ (MHG. _quāt_); _*g^{w}oHu-_, _*g^{w}eh$_{2/3}$u-_, _*g^{w}h$_{2/3}$eu̯-_, _*g^{w}Hou̯-_ or _*g^{w}ou̯H-_ (OE. _cwead_); _*g^{w}ou̯H-_ (Russ. _govnó_, Arm. _kow_). If MW. _baw_ (m.) 'dirt, filth, mud' belongs here too (LEIA loc. cit.), then it points to _*g^{w}h$_2$eu̯-_ or _*g^{w}Hu̯-_.

All these forms could be explained by assuming an original root _*g^{w}eh$_1$u-_ or _*g^{w}h$_1$eu̯-_, which then formed a new full grade _*g^{w}u̯eh$_1$-_ on the basis of the zero grade _*g^{w}h$_1$uC-_ > _*g^{w}uh$_1$C-_. Alternatively the root could be a so-called 'long diphthong root', in which the final _*-u̯-_ appeared in only some formations: hence full grade _*g^{w}eh$_1$(u̯)-_, zero grade _*g^{w}h$_1$u-_ > _*g^{w}uh$_1$-_. The Germanic forms remarkably seem to show two different full grades, or _u̯_- and _u̯_-less forms. Semantically and phonologically MW. _baw_ and MHG. _quāt_ are both perfectly at home here. Although there must have been a laryngeal in the root, we cannot say that MIr. _búaidir_ reflects _*g^{w}eu̯h$_1$dVrV-_ rather than _*g^{w}eh$_1$udVrV-_ or _*g^{w}h$_1$eu̯dVrV-_.

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[1] Or OW. (Campanile 1974a: 18).

[2] Irish _*-dr-_ remained unlenited (GOI 74); apparently _*-dr-_ > _*-i̯r-_ in Brittonic (Schrijver 1995: 353–355).

6. OIr. _búan_ (_o_-, _ā_-stem adj.) ‘lasting, enduring, constant’, MW. _bun_ (f.) ‘maiden, woman, sweetheart’ is supposed (IEW 148) to come from *_b^{h}eu̯H-no-_ (*_b^{h}uH-_ ‘be, become’; LIV 98–101; see OIr. _biid_ p. 103). This etymology goes against the Proto-Celtic sound law *_-Vu̯n-_ > *_-Vbn-_ proposed by McCone (1992: 105), on the basis of *_au̯n-_ > OIr. _amnair_ ‘mother’s brother’, *_pou̯no-_ > OIr. _omun_, MW. _ouyn_ ‘fear’.[3] Even if the etymology is correct, this root probably had an invariant zero grade in Proto-Indo-European (Jasanoff 1997: 173–176). Therefore, these words reflect a new formation.

7. MW. _bwyt_, _bwyd_ (m.) ‘food, nourishment’, MB. _boet_, B. _boued_ (m.) ‘food’, OC. _buit_ gl. _cibus l. esca_, MC. _bos_, _boys_ (m.) ‘food, meal, fodder’ < *_bei̯to-_, denominal OIr. _bíathaid_ ‘feeds’ < *_bei̯tāi̯e/o-_ come from *_g^{w}ei̯h$_3$-to-_ (Greene 1976: 38; Schrijver 1995: 246; LIV 215 s.v. *_g^{w}i̯eh$_3$-_; see OIr. _béu_ p. 121). But cf. OIr. _biad_ ‘food’ < *_bei̯ato-_ (p. 236).

8. OIr. _cían_ (_o_-, _ā_-stem adj.), archaic _cén_ ‘long, enduring; far, distant (in duration), far away’ < *_kei̯no-_ is connected by LEIA (C-94) with either Gk. ἐκεῖ ‘there’, Lat. _cis_ ‘on this side of’, _citra_ ‘on this side’, or Lat. _quiēs_ ‘rest’, Goth. _hweila_, NE. _while_ < *_k^{w}i̯eh$_1$-_ (cf. Av. _šāitim_ (acc. sg.), OPers. _šiyātim_ ‘happiness’ < *_k^{w}i̯eh$_1$-ti-_, Av. _šyātō, šātō_ ‘happy’ < *_k^{w}i̯eh$_1$-to-_, Russ. _po-čit’_, Slov. _po-číti_ ‘to rest’ < *_k^{w}ei̯h$_1$-_; Schrijver 1991a: 140). If _cían_ belongs with _quiēs_, it shows _schwebeablaut_, and the semantics are not close. If Gaul. _Ceno-_ (tribal name element) is related (Delamarre 2003: 114), the etymology is impossible, because *_-k^w-_ gave Gaulish _-p-_ (or _-q-_; Lambert 1994a: 16–17, 19, 43).

9. OIr. _Cloithe_ (gen. sg.), OW. _Clut_ ‘the Clyde’ < *_klou̯tā_ may reflect *_k̂leu̯H-teh$_2$_ (cf. OLat. _cluere_ ‘clean’, Goth. _hlūtrs_ ‘clean’; LIV 335). But there seem to be ‘enlargements’ of the root without laryngeal (Gk. κλύζω ‘wash, purge’ < *_kludi̯e/o-_), and it is possible that Lith. _šluoti_ ‘sweep, brush’ points to *_k̂leh$_3$(u̯)-_. Given the difficulties of etymologising proper names, and the uncertainty about the root, these words cannot be used as evidence.

10. OIr. _críathar_ (m. _o_-stem) ‘sieve, riddle’, OW. _cruitr_ gl. _pala_, MW. _crwydyr_, W. _crwydr_ (m.) ‘winnowing fan, sieve’, OB. _croitir_, MB. _croezr_, B. _krouer_ (m.) ‘riddle’, OC. _croider_ gl. _cribrum l. cribellum_ < *_krei̯tro-_ have close cognates in

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[3] Although it is very tempting to see OIr. _cúan_ ‘litter (of pups), pack (of wolves)’, MW. _cun_ ‘pack of dogs or wolves’ as being a _vr̥ddhi_ derivative *_k̂eu̯n-eh$_2$_ from *_k̂u̯-on-_ ‘dog’ (the connection is denied by LEIA C-261 and doubted by Matasović 2009: 219). David Stifter (p.c.) suggests that perhaps McCone’s rule did not apply after a front vowel, in which case *_b^{h}eu̯H-no-_ > _búan_ would still be possible.

Lat. _crībrum_, OE. _hridder_ 'sieve' < *_krei̯d^{h}ro-_ or *_krīd^{h}ro-_. The root was probably *_kreh$_1$i̯-_ (cf. Gk. κρησέρα 'flour-sieve', OCS. _krajь_ 'side, edge' < *_kroh$_1$i̯-o-_; Rasmussen 1989: 276), with secondary *_krei̯h$_1$-_ from the zero grade *_krih$_1$-C-_ < *_kr̥h$_1$i-C-_ (cf. Gk. κρίνω 'separate, distinguish', Lat. _cernō_ 'separate, sift', Latv. _kreju_; LIV 366–367; on the metathesis in this envvironment see p. 112). Since _críathar_ is probably from *_kreh$_1$i-tro-_ it cannot be used as evidence.

11. MIr. _crúach_ (f. _ā_-stem) 'stack of corn, rick; heap', MW. _cruc_, W. _crug_ (m.) 'hillock; cairn; heap; stack', OB. _cruc_ gl. _gibbus_, B. _krug_ (f., m.) 'hillock, heap', OC. _cruc_ gl. _collis_, OBrit. -_crucium_ (pl.n. element) < *_krou̯kV-_ are cognate with ON. _hrúga_ 'heap' < *_krūkā_, _hraukr_ 'heap', OE. _hréac_ 'corn-rick' < *_krou̯ko-_. Lat. _crux_ 'wooden frame, cross', ON. _hryggr_ 'backbone', OE. _hrycg_, OHG. (_h_)_rukki_ 'back' < *_krŭk-_ probably are not related, given their formal and semantic divergence. Lith. _kriáuklas_ 'rib' points to *_kreu̯Hk-lo-_ (or *_kreh$_1$uk-lo-_?); formally it agrees with the Germanic 'heap' words, but semantically it fits better with the 'back' words. On the basis of ON _hrúga_, we might reconstruct *_kreu̯HkV-_ or *_krou̯HkV-_ for the Celtic words. Lith. _kriáuklas_ adds more evidence for the laryngeal, but may not be related. The evidence is not enough for this form to be absolutely certain.

12. MIr. _crúaid_ (_i_-stem adj.) 'hard(y), harsh; stern, strict', Gaul. _Crodius_ (p.n.) < *_krou̯di-_ are cognate with Lat. _crūdus_ 'bleeding; raw; hard, rough, cruel', Skt. _krūráḥ_ 'bloody, raw, cruel', Gk. κρέας 'raw meat' (IEW 621). They may come from *_kreu̯h$_2$-di-_, but *_krou̯h$_2$-di-_, with loss by the Saussure effect, is also possible.

13. MIr. _cúar_ (_o_-, ā-stem adj.) 'curved, crooked' < *_keu̯ro-_ is probably cognate with OIr. _cúl_ 'corner, recess' (p. 118), and may therefore go back to *(_s_)_k̂eh$_1$u-ro-_ (although this is not certain). It could also go back to *(_s_)_kou̯H-ro-_, with laryngeal loss by the Saussure effect (p. 243 ff.). MIr. _cúarán_ (m. _o_-stem) 'shoe, sock'[4] is probably a derivative of this (DIL C-575) rather than a separate formation (IEW 951).

14. OIr. _dían_ (_o_-, _ā_-stem adj.) 'swift, rapid', nom. pl. _déin_ < *_dei̯no-_ < *_dei̯h$_1$-_ is cognate with Skt. _dī́yanti_ (3pl.) 'fly', Gk. δίενται (3pl.) 'flee, hasten', δῖνος 'whirling, rotation', Latv. _diêt_ 'hop, dance' (LEIA D-68; LIV 107).

15. OIr. _éscae_ (n. _i̯o_-stem) 'moon' cannot be cognate with OCS. _iskra_ 'spark' < *_isk-_, Lith. _áiškus_ 'bright', Russ. _jáska_ 'bright star', from a root *_h$_1$ei̯Hsk-_, as

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[4] W. _curan_, _cuaran_, _cwaran_ 'shoe' is surely a loan-word from Irish.

claimed by Matasović (2009: 118–119). The sequence *_-sk-_ would not be palatalised in Irish by following *-(_i_)_i̯o-_, which would be required for the retention of initial _é-_ < *_ei̯-_ (for the palatalisation rules see McCone 1996: 116–117). Instead, _éscae_ must go back to something like *_a/ensk_(_i_)_i̯o-_.

16. MIr. _féth_ 'art, knowledge, technical skill?' < *_u̯ei̯t-_ (? or _feth_: the quality of the vowel is uncertain; DIL F-103) may come from *_u̯ei̯h_1-tV-_ (cf. Skt. _véti_ 'turns towards, aims for, pursues', Lat. _uīs_ (2sg.) 'want'; LIV 668–669; Irslinger 2002: 370). The connection is plausible, but since the meaning and form of the Irish word are uncertain, _féth_ cannot be used as evidence.

17. OIr. _féith_ (f.) 'kidney; fibre; twining plant' < *_u̯ei̯-ti-_, MW. _guden_, _gwyden_, W. _gwden_ (f.) 'withe, rope', OC. _guiden_ gl. _circulus_ < *_u̯ei̯tinā_[5] are cognate with Skt. _ávyat_ 'wraps up' < *_u̯i̯eh_1-_, Lith. _vejù_ 'wind' < *_u̯ei̯h_1-_ (LIV 695; see MIr. _fíthe_ p. 119).[6] OIr. _féith_ would reflect *_u̯ei̯h_1-ti-_, but once again we find a nasal present to this root attested in Celtic in forms like OIr. _for·fen_ 'finishes, completes' < *_u̯i-n-h_1-_. According to Schumacher (2004: 689), the semantics of the verb in Celtic were 'make, do', but if the original semantics lasted long enough it is possible that _féith_ was formed on the basis of the synchronically _aniṭ_ root *_u̯ei̯-_ found in forms like the nasal present and the subjunctive *_u̯ei̯h_1-se/o-_ → *_u̯ei̯-āse/o-_ > OIr. _far·fia_.

18. MIr. _fiam_ 'chain?' (badly attested; DIL F-117) may come from *_u̯ei̯h_1-mV-_ > *_u̯ei̯amV-_ or *_u̯ei̯mV-_, or be secondary (see OIr. _féith_ above).

19. MIr. _fíar_ (_o-_, _ā_-stem adj.) 'crooked, bent, curving', MW. _gwyr_ (adj.) 'askew, slanting', B. _gwar_ (adj.) 'curved, twisted' < *_u̯ei̯ro-_ may come from *_u̯ei̯h_1-ro-_ or be secondary (see OIr. _féith_ above).

20. OIr. _folud_ (n. _o_-stem) 'substance, material; property, wealth', MW. _golut_, W. _golud_ (m., f.) 'wealth, riches', OC. _wuludoc_ gl. _diues_ < *_u̯o-lou̯-to-_, OIr. _lóg_, _lúag_ (n. _s_-stem) 'value, equivalent; reward, payment' < *_lou̯g-es-_ are cognate with Gk. ἀπολαύω 'have enjoyment of, have benefit of, enjoy' <*_leh_2u̯-_ (IEW 655; Schrijver 1991a: 240–241; see Lat. _lŭcrum_ p. 144). If _golud_ can only come from *_-lou̯-to-_, the Celtic forms must reflect either *_loh_2u-C-_, or a new full grade *_leu̯h_2-_ (Schrijver 1995: 337), and we cannot tell which.[7] Furthermore, Isaac (2007b) argues for the falling together of tautosyllabic *_-au̯-_ with

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[5] See Schrijver (1995: 158) for the Welsh development _gwy-_ > _gw-_.

[6] Matasović's (2009: 419) objections on semantic grounds are unconvincing.

[7] Original _s_-stems only had _e_-grade or zero grade roots (Schindler 1975a), but _lóg_ has a mysterious *_-g-_ formant so it may be secondary.

*_-ou̯-_, in which case *_-leh$_2$u-_ is also a possiblity. These forms cannot be used as evidence.

21. MIr. _gúaire_ ‘hair (of animals), bristles, a bristle’ < *_geu̯ri̯o-_, NIr. _guairneán_ ‘whirlwind’ might be cognate with Gk. γῡρός ‘round’ (IEW 397), which would suggest a laryngeal, but there is no particular reason to connect these words.

22. OIr. _íath_ (n. _u_-stem) ‘land, country’ < *_pei̯(a)tu-_ may be from *_pei̯H-tu-_ (LIV 464–465 cf. OIr. _íriu_ ‘land’ p. 107, OIr. _íth_ ‘fat’ p. 116), or be related to OIr. _ith_ ‘corn, grain’ (McCone 1991a: 3–4; p. 139); whether _ith_ comes from *_pei̯H-_ or an _aniṭ_ root is a moot point. Either way, we cannot tell whether _íath_ was originally disyllabic, so it provides no evidence (unless Gaul. _Etu-_, _-etius_ (p.n. element) belongs here; Delamarre 2003: 167–168). For discussions of _íath_, with literature, see Irslinger (2002: 165–166) and particularly Widmer (2004: 17–77).

23. MIr. _lían_ ‘_lēnis_’ (only marginally attested; DIL L-146) and _léine_ (f. _i̯ā-_ and _t_-stem) ‘linen cloth; smock’ are not likely to belong to the root *_lei̯h$_2$-_ ‘cease, stop’ (Gk. Hesych. λίναμαι ‘turn aside’) as claimed by IEW (661). It is more likely that _lían_ is either borrowed from Lat. _lēnis_ ‘soft’ (admittedly not as an _i_-stem), or is cognate, with both coming from *_lei̯n-_ (the origin of Lat. _lēnis_ is obscure: Schrijver 1991a: 125). Since the word for ‘linen’ shows strange variations in vocalism anyway (cf. Lat. _līnum_, OIr. _lín_ ‘linen’, perhaps borrowed from Latin, Gk. λῑ́νον; Schrijver 1991a: 243–244), _léine_ is probably another example of this variation.

24. MIr. _lúaith_ (f. _i_-stem) ‘ashes, dust’ < *_leu̯t(u̯)i-_, MW. _lludw_ ‘ashes’, MB. _ludu_ (coll.) ‘ash’, MC. _lusow_, _lusew_ (coll.) ‘ash, embers’ < *_leu̯tu̯ā_ may come from *_leu̯h$_3$t(u̯)V-_, if cognate with Lat. _lauō_ ‘wash’, Myc. _re-wo-to-ro_ > Gk. Hom. λοετρόν ‘bath’[8] (LIV 418), since ash is used in the manufacture of soap (Irslinger 2002: 115; Ringe 1988: 427; following IEW 692). On the basis of the Brittonic forms Irslinger reconstructs *_leu̯tu̯ā_,[9] a collective of a _tu_-stem (with subsequent movement into the _i_-stems in Irish). This would imply loss of laryngeal in *_leu̯h$_3$-tu̯eh$_2$_, but other parts of the original paradigm would have had *_leu̯h$_3$-tu-_ or *_leu̯h$_3$-teu̯-_ (Irslinger 2002: 75–76). Loss of the laryngeal

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[8] Metathesis of *_-eRo-_ to *_-oRe-_ is regular in Greek, cf. Gk. ἐστόρεσα ‘I spread’ < *_-sterosa_ < *_sterh$_3$-s-_ (Cowgill 1965: 158–159; Peters 1987b: 289–290 fn. 1).

[9] In fact, she reconstructs _o_-grade, to explain loss of the laryngeal by the Saussure effect, but observes “allerdings wäre erst noch zu klären, ob bei Kollektiva zu _tu_-Bildungen _o_-stufige Wurzel möglich war”. If the loss of the laryngeal can be explained in another way, then the morphologically surprising _o_-grade need not be assumed.

could therefore have occurred elsewhere in the paradigm and been levelled. However, the etymology is not certain: a connection with OIr. *loth* ‘mud, mire’ < **leu̯-* (LIV 414; p. 140) is just as likely.

25. MIr. *méin*, *mían* (f.) ‘mineral, ore; metal’, MW. *mwyn* (m.) ‘mineral, ore; mine’, MB. *men-* (in *mengleuz* (f.) ‘mine’) < **mei̯nV-* may come from **mei̯H-nV-* if cognate with Gk. σμῑ́λη ‘knife for cutting, carving or pruning’, OHG. *smīda* ‘metal, metal jewellery’, ON. *smīđ* ‘skilful work’ (LEIA M-29; IEW 968). However, Gk. σμῐνύη ‘two pronged hoe or mattock’, OE *smiđ*, OHG. *smid* ‘smith’ demonstrate a short-vowel variant of the root, so the presence of the laryngeal is uncertain.

26. OIr. *méth* (*o*-, *ā*-stem adj.) ‘plump, fat’ < **mei̯to-*,[10] W. *mwydyn* (m.) ‘soft inner part, kernel, pith’, MB. *boedenn*, B. *bouedenn* (f.) ‘marrow, pulp, substance’[11] < **mei̯tino-* probably come from the same root as MW. *mwyn* (below).

27. MW. *mwyn* (adj.) ‘tender, mild, gentle’, MB. *moan* (adj.) ‘thin, slim’, OC. *muin* gl. *gracilis*, Gaul. *-mena* (p.n. element) < **mei̯no-* < **mei̯H-no-* are cognate with OIr. *mín* ‘smooth, level’ (p. 119), Skt. *máyaḥ* ‘comfort, ease’.

28. OIr. *núall* (n. and m. *o*-stem) ‘loud noise’ < **neu̯-slo-* is cognate with Skt. *návate* ‘roars’, perhaps from **neu̯H-* (cf. Skt. *anaviṣṭa* (aor. middle); LIV 456–457), but *anaviṣṭa* may be secondary on the basis of other thematic present ~ *-iṣ-* aorist pairs (Narten 1964: 164–166). OIr. *núall* may also come from **nou̯H-slo-*, with laryngeal loss by the Saussure effect (p. 243 ff.). It is not good evidence.

29. NIr. *núar* ‘wail, lament, sorrow’, if it exists (DIL N-71), comes from the same root as OIr. *núall* (LEIA N-24), and is equally unreliable.

30. OIr. *nia*[12] ‘warrior, champion’ (m. *t*-stem), archaic gen. sg. *Neth* (i.e. *Néth*; p.n.), Og. *NETTA-*, *-NETAS* < **nei̯t-*, W. *nwyd* (m., f.) ‘passionate emotion’ < **nei̯tV-* < **nei̯Ht-* are cognate with MIr. *níth* ‘fighting, conflict; anger’ (LIV 450–451; Irslinger 2002: 52–53; p. 116). Although disyllabic *niä* is found in verse, the Ogam forms indicate that this is probably secondary (due to confusion with *niä* ‘nephew’, Og. *NIOTTA*). Alternatively, it is possible

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[10] There is no other source for Irish *-é-*. But it should have given ^{x}*míath*.

[11] If the Breton forms belong here: Matasović (2009: 279).

[12] Joseph (1980: 372–376) disregards OIr. *níach* ‘heroic’ on the grounds that it could be derived from *nia*, but does not notice that *nia* is also evidence for the environment **-eI̯HC-*.

that _niä_ was the regular result in the nominative *_nei̯H-ts_ (see Conclusion below).[13] MIr. _níab_ (m.) 'spirit, vigour?', MW. _nwyf_ (m.) 'strong feeling, passion, desire' probably also belong here (LEIA N-16), and show the same development *_nei̯H-b_^{h}_o-_ > *_nei̯b_^{h}_o-_.

31. OIr. _ném_ 'lustre, radiance?', MIr. _niam_ (f. _ā_-stem) 'lustre, sheen, brilliance' < *_nei̯mV-_ probably do not come from the same root as OIr. _nia_, but belong with Lat. _niteō_ 'shine' (Nussbaum 1999: 391; Matasović 2009: 288).

32. OIr. _rían_ (m. _o_-stem), gen. sg. _réin_ 'Rhine; sea, ocean', Gaul. _Rhenus_ 'Rhine' < *_rei̯no-_ < *h_3_rei̯H-no-_ are cognate with Skt. _riṇā́ti_ 'streams, releases', _rītíḥ_ 'going, motion, course', Gk. ὀρίνω 'stir, move; incite' (LIV 305–306).

33. MIr. _ríasc_, gen. sg. _ríasca_ (_i_-stem) and _réisc_ (_o_-stem) 'fen, piece of marshy ground' comes from the same root as _rían_. It is possible that it may directly reflect *_rei̯skV-_ < *h_3_rei̯H-skV-_. But if _ríasca_ is the original gen.sg., it is possible that _ríasc_ comes from *_rei̯aski-_ < *h_3_rei̯H-skV-_, with _réisc_ being secondary according to the usual pattern in _o_-stems of nom. sg. _-ía-_, gen. sg. _-é-_. MIr. _ríasc_ is not good evidence.

34. OIr. _rúam_ (f. _ā_-stem) 'burial place, cemetery; Rome; monastic settlement; gathering place, capital centre' < *_reu̯mā_ might come from *_reu̯H-me_h_2 (for *_reu̯H-_ 'dig' see _rúathar_ below). However, it shares all its semantic fields with OIr. _róm_ (f. _ā_-stem) 'Rome; saint's settlement; burial ground'. To what extent these all reflect expanded usages of the Latin loan word _Rōmā_ (DIL R-95, R-107–108), and which of _rúam_ < *_reu̯mā_ (?) and _róm_ < *_reu̯amā_ (?) reflects original *_reu̯H-me_h_2, if it existed, is unclear. These forms cannot be used as evidence.

35. MIr. _rúathar_ (m. _o_-stem) 'onrush, onset, attack', MW. _ruthyr_, W. _rhuthr_ (m., f.) 'rush, attack, assault' < *_reu̯tro-_ < *h_3_reu̯-tro-_ are cognate with Lat. _ruō_ 'rush down, fall down, collapse'. According to LIV (510) the root is *_reu̯H-_ 'tear up', but Schrijver (1991a: 24, 234) is probably right to distinguish (both formally and semantically) two roots: Skt. _rutáḥ_ 'battered, smashed',[14] Lat. _rŭtus_, Gk. ὀρούω[15] 'move quickly, rush on' < *h_3_reu̯-_; and ON. _rýja_ 'tear off wool', OCS. _ryjǫ_ 'dig', Lat. _rūta_ (in _rūta caesa_ 'minerals and timber already quarried and felled at the time an estate is put up for sale') < *_reu̯H-_.

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[13] But Og. _NE-_ < *_nēh_ < *_nei̯ts_ in _NEFROIHI_ (p.n.; gen. sg.) suggests that the Irish disyllabic form is secondary (Sims-Williams 2002: 31).

[14] Skt. _rāviṣam_ 'would smash' is secondary (Narten 1964: 226).

[15] With -υ- replaced from the aorist ὀροῦσαι, and unclear _o_-grade (Beekes 1969: 38).

36. MIr. *rúac* (f. *ā*-stem) ‘rush, dash; attack, assault’ comes from *_h$_3$reu̯-kkeh$_2$_ (see MIr. *rúathar* above).

37. OIr. *scíath* (m. *o*-stem) ‘shield, buckler’, MW. *ysgwyd* (m., f.) ‘shield, buckler’, OB. *scoed* (in *uuorscoed* gl. *ola, summi humeri pars posterior*), B. *skoed* (m.) ‘shield’ < *_skei̯to-_ are cognate with OCS. *štitъ* ‘shield’ < *_skei̯to-_, and Lat. *scūtum* ‘shield’, OPruss. *staytan* (for *scaytan*) ‘shield’, OHG. *sceida* ‘shield’ < *_skoi̯to-_. According to Irslinger (2002: 254, 310, 357–358), these belong to the root *_sk̂ei̯h$_2$-_ ‘cut’. The root may originally have been *_sk̂^{h}eh$_2$(i̯)-_ (cf. Gk. σχάω ‘slit, open’, Skt. -*chyáti* ‘skins, takes off’; LIV 547), but ON. *skeggja* ‘axe’ < *_skei̯h$_2$-_ shows an alternative root shape (probably a new full grade from *_sk̂$^{(h)}$ih$_2$-C-_ < *_sk̂$^{(h)}$h$_2$i-C-_), which could be the origin of *scíath* < *_skei̯h$_2$-to-_. But the semantic connection is not at all certain.

38. MIr. *smúan* ‘reflection, consideration’ (hapax) and *smúainid* ‘meditates, reflects on, considers’ < *_smeu̯ni-_ may be cognate with Gk. μῦθος ‘word, speech’, Goth. *maudjan* ‘remind’, Lith. *maudžiù* ‘ardently desire’ < *_meu̯Hd^h-_ (LEIA S-143–144). If so, *smúan* comes from *_smeu̯dno-_ < *_(s)meu̯Hd^h-no-_, but the Irish form is the only word which shows the *s*-mobile and it may not belong here.

39. OIr. *súainem* (m. *n*-stem) ‘rope, cord, string’ appears to reflect *_seu̯n(i)i̯amon-_ (cf. *brithemon* ‘judge’ < *_br̥t(i)i̯amon-_). It is possible that it is derived from an original *_seu̯no-_ < *_seu̯h$_1$-no-_ (cf. OIr. *soid* ‘turns’; LIV 538; p. 171). However, since it fits semantically and formally with *súainem*, LEIA’s (S-197) connection with MW. *hoenyn* (f.) ‘tail hair, net’ < *_sogno-_ is probably better.

40. MIr. *tréith* (*i*-stem adj.) ‘weak, cowardly’ < *_trei̯ti-_, *tríath* ‘weak’ < *_trei̯to-_ are derived by Irslinger (2002: 214–215; following Vendryes 1948: 334) from *_trei̯H-tV-_ (cf. Gk. τρῑ́βω ‘rub down, wear out’, Lat. *trītum* (p.p.) ‘rub, wear away’; and, for the semantics, English ‘worn out’). However, both of these words are problematic: in Greek a stem τρῐβ- is also found (τρῐ́βος ‘a worn track; rubbing’); LIV (632 s.v. *_terh$_1$-_) suggests that Lat. *trītum* comes from a root *_trei̯(H)g-_. Although *_trei̯H-ti-_ is a possible preform for MIr. *tréith*, it is very uncertain.

41. OIr. *tróg*, *trúag* (*o*-, *ā*-stem adj.) ‘wretched, miserable’, (m. *o*-stem) ‘wretch’, MW., MB. *tru* (adj.) ‘wretched, miserable’, Gaul. *Trogi-* (name element) < *_treu̯go-_ might reflect *_treu̯H-g^h-o-_ if they are cognate with Gk. τρῡ́χω ‘wear out, waste, consume’ (LIV 652–653). But the alternative link to Gk. στρεύγομαι ‘am drained, exhausted’ < *_streu̯g-_ (GOI 40; LIV 605) is equally possible.

42. MW. _trylwyn_ (adj.) 'ready, quick; bright, splendid' < *_-glei̯nV-_ may reflect *_g^hlei̯H-nV-_, if it is related to Gk. χλῑ́ω 'am, become warm' (IEW 432). But the Celtic forms derived from this root are very uncertain (see OIr. _glé_, p. 103).

43. MIr. _tuaimm_ (n. _n_-stem) 'mound, hill' (but the meaning is uncertain; DIL T-335), NIr. _túaim_ (f.) 'tumulus', MW. _ystum_ (m., f.) 'gesture, sign, posture; position, form, shape', B. _stumm_ 'aspect, form, mannner' < *_teu̯sman_ might come from *_teu̯h_2-s-mn̥_, if related to Skt. _tavīti_ 'is strong', ORuss. _tyju_ 'become fat' < *_teu̯h_2-_ (IEW 1084; LIV 639–640; see MW. _tyf_ p. 143). But the meaning is very uncertain and the connection with MIr. _túag_ (f. _ā_-stem) 'arch, curve' < *_teu̯-geh_2_ (Stüber 1998: 68–69) is better.

44. OIr. _túath_ (f. _ā_-stem) 'people, tribe, nation', MW. _tud_ (m.) 'people, tribe, nation', MB. _tut_, B. _tud_ (m., pl.) 'people', MC. _tus_ (f.) 'people, folk', Gaul. _Teuto-_, _Touto-_, Celtib. _toutinikum_ < *_teu̯tā_ are cognate with Goth. _þiuda_ 'people', Lith. _tautà_, Latv. _tàuta_, Osc. _touto_ 'people' < *_teu̯tā_.[16] IEW (1084) derives them from *_teu̯h_2-_ (LIV 639–640; see _tuaimm_ above), which would imply a reconstruction *_teu̯h_2-teh_2_, while Irslinger (2002: 363–364) prefers the root *_teu̯H-_ found in Lat. _tūtus_ 'safe' (see below). However, *_teu̯$h_{(2)}$-teh_2_ ought to have given an acute rather than circumflex tone in Latvian (see p. 12 ff.), so it is doubtful whether there was a laryngeal in this word.

45. OIr. _túaith_ (adv.) 'north, in the north', MIr. _túath-_ 'northern, left; perverse, wicked' (only in compounds) < *_teu̯tV-_ are connected by IEW (1079; followed by LEIA T-164–165) with Lat. _tūtus_ 'safe' (< *_teu̯H-_; LIV 639), by a euphemistic usage '*good, favourable'. This derivation need not be correct (although it is accepted by Irslinger 2002: 418–419). If it is, it suggests that *_teu̯H-tV-_ gave Proto-Celtic *_teu̯tV-_. However, we cannot rule out the possibility that these words had original _o_-grades (and lost the laryngeal by the Saussure effect).

46. OIr. _túas-_ in _túaiscert_ (_o_-stem) 'the north, the left', (early) B. _tuçz, tusse_ (interjection) 'to the left' < *_teu̯sto-_ come from the same root as _túaith_ above, which might imply *_teu̯H-sto-_. But this is uncertain, as is the origin of adjectives in *_-st-_ in Celtic. Since there existed a productive relationship between _sto_-adjectives and _to_- and _ti_- stems (Irslinger 2002: 412–413), _túas-_ could be a secondary form.

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[16] In principle, *_tou̯tā_ is also a possible preform for the Celtic, Baltic and Oscan forms. But Gothic shows the _e_-grade. Although Irslinger (2002: 363) describes the Baltic forms as reflecting an _o_-grade, an _e_-grade is also possible (Stang 1966: 73–74).

§164. *_-EI̯HC-_ > *_-EI̯aC-_

1. MIr. _beithir_ (f.?) ‘bear’ is derived by Watkins (1962: 114; although doubted _apud_ Joseph 1980: 373) from *_bʰei̯H-trik-_ (*_bʰei̯H-_ ‘strike’; LIV 72; see OIr. _·bíth_ p. 113). It cannot come via *_bei̯trik-_, which would have given ˣ_béithir_.[17] Nom. sg. _beithir_ could not come from *_bʰei̯H-trik-_ > *_bei̯atrik-_ >ˣ_bíathir_, but gen.sg. _beithrech_ would be regular from *_bʰĕtrikos_ (by syncope) < *_bei̯atrikos_ < *_bʰei̯H-trik-os_, and the oblique stem could have been generalised through the paradigm. But the etymology is not certain enough for this to be good evidence.

2. OIr. _biáil, biail_ (m. _i_-stem) ‘axe, hatchet; battle axe’, OW. _bahell_ gl. _securis_, MW. _bwell_,[18] _buyall_, W. _bwyall_ (f.) ‘axe, battle-axe’, MB. _bouhazl_, _bouchazl_, B. _bouc’hal_ (f.), MC. _boell_ (f.) ‘axe’ are rather problematic. They are also probably derived from *_bʰei̯H-_ ‘strike’ (IEW 118; LIV 72; see OIr. _·bíth_ p. 113), but they resist reconstruction as a single form. OIr. _biáil_, gen. sg. _béla_ would go back to *_bei̯atli-_ < *_bʰei̯H-tli-_, as would MB. _bouhazl_ if not for the mysterious middle _-h-_ (“non-etymological”, Jackson 1967: 232). In neither Cornish nor Welsh would *_-tl-_ have given _-ll_ (Jackson 1953: 399), but instead this points to *_-sl-_ or *_-li̯-_ (Schrijver 1995: 321–324); the _-h-_ in OW _bahell_ might be a hiatus-marker (Joseph 1980: 53). A possible scenario which has been suggested by Paul Russell (p.c.) is that the formation was originally *_bʰei̯H-li-_, which was thematised in British Celtic to give *_bei̯ali̯o-_ (for further examples of this process, albeit in adjectives, see Balles 1999: 13–15); independently in Irish and Breton, the end of the word was then remodelled to match words which had been formed with the instrument-noun suffix *_-tlo-_. It seems clear that we have a case of *_bʰei̯H-C-_ > *_bʰei̯a-C-_ here, but precisely what the suffix was is uncertain.[19]

3. OIr. _biad_ (n. _o_-stem) ‘food’ < *_bei̯ato-_ (LIV 215–216) is disyllabic,[20] by comparison to MW. _bwyt_ ‘food, nourishment’, OIr. _bíathaid_ ‘feeds’ (p. 228) < *_bei̯tV-_ < *_gʷei̯h_$_3$_-to-_. Schrijver (1995: 246) suggests that _biad_ reflects *_gʷih_$_3$_-eto-_ (cf. Gk. βίοτος ‘life; means of living, substance’).

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[17] The word is quite well attested, and never written with a length mark (DIL B-61).

[18] Probably a copying error for _buiell_.

[19] Joseph (1980: 52–54) reconstructs *_bʰeiH-eli-_ or *_bʰiH-eli-_ for Celtic, but this fails to explain the length of the vowel in OIr. gen. sg. _béla_, from compensatory lengthening of post-syncope *_betlei̯s_ (McCone 1996: 123), MB. _-azl_, or the Welsh and Cornish final _-ll_ (except through Jackson’s (1953: 471) poorly constrained rule “[i]n some cases Welsh final _-l_ in polysyllables also gave _-λ_”, for which this form is the only ancient example).

[20] As shown by gen. sg. _biid_, dat. sg. _biud_ (otherwise ˣ_béith_, ˣ_bíath_), and because of the consistent spelling with _-d_ (_-ϑ_ > _-đ_ after an unstressed vowel in Old Irish).

4. MIr. *coar*[21] ‘hero?’, MW. *caur*, W. *cawr* (m.) ‘giant; hero’, Gaul. *Cavarillos*, Καυαρος (p.n.) come from *_kau̯aro-_ < *_keu̯aro-_ < *_ḱeu̯H-ro-_ (cf. Skt. *śávīraḥ* ‘powerful’). For the dissimilation of *_-au̯a-_ to *_-ou̯a-_ in Irish, *_-ɔu̯a-_ in Breton and Cornish, see p. 226.

5. OB. *gloiat* gl. *glis* ‘bur’ < *_glei̯atV-_ is derived by Schumacher (2004: 338) from *_glei̯H-ti-_, a *nomen agentis* to the root of OIr. *glenaid* ‘adheres’, OE. *clǣg* ‘clay’ (LIV 190). However, it is just as likely that *gloiat* reflects a formation with the same suffix *_-et-_ as MW. *ysbyddad* ‘hawthorn’ < *_sk^{w}ii̯at-_ < *_sk^{w}ii̯et-_; thus *_glii̯at_ < *_glii̯et-_ < *_gliH-et-_.[22] Consequently it cannot be used as evidence.

6. MIr. *glór* (*o*-, *ā*-stem adj.), *glúair* (*i*-stem adj.) ‘pure, clear, bright’ are apparently related to Gk. χλόος ‘greenish-yellow, light green colour’, χλόη ‘first shoot of plants, young verdure’ and Goth. *glaggwō* ‘exact’, ON. *glǫggr* ‘clear, plain, accurate’; the *verschärfung* in the Germanic forms suggests *_glou̯u̯-_ < *_g^{h}lou̯H-_. This would imply a Proto-Celtic *_g^{h}leu̯H-rV-_. ON. *glóa* ‘glow, shine’, OE. *glōwan* ‘lighten’ do not reflect *_g^{h}leh$_{2/3}$u̯-_, as implied by IEW (433), because they probably come from *_g^{h}leh$_{2/3}$-i̯e/o-_ (OHG. *gluoen*, OS. *glōian*), with *-w-* in Old English as a hiatus-filler (cf. OE. *flōwan* ‘flow’ < *_pleh$_3$-i̯e/o-_, LIV 485).

The Irish forms allow various preforms. According to DIL (G-110), *glór* is probably an earlier form of *glúair*, i.e. they both come from Proto-Celtic *_glou̯rV-_ > early Old Irish *glór* > later Old Irish/Middle Irish *glúair*. However, it is also possible that *glór* comes from early Old Irish *_gloär_ < *_glau̯aro-_ < *_gleu̯aro-_ < *_g^{h}leu̯H-ro-_ (and perhaps this is more likely, since *-ó-* > *-úa-* had already occurred, except before velars, by the time of the Würzburg glosses; GOI 40). This being the case, *glúair* must come from early Old Irish *_glóir_ < *_glǫuri-_ < *_g^{h}lou̯H-ri-_ by the Saussure effect (see p. 243 ff.) or, less probably, *_g^{h}leh$_{2/3}$u-ri-_.

7. MW. *gwialen* (f.) ‘rod, twig, withe’, probably MB. *goalenn*, B. *gwalenn* (f.) ‘stick, cane, pole’,[23] OC. *guaylen* gl. *uirga*, MC. *gwelen*, *guelen* ‘rod, yard’

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[21] DIL C-475, s.v. *cora*(*i*)*d*, C-575 s.v. *cúar*. Clearly this word became confused with OIr. *caur* ‘hero’ < *_karuts_ (GOI 51). For *coar* as the correct form see Uhlich (1995: 23 fn. 66).

[22] For the development *_-i̯e-_ > *_-i̯a-_ see Schrijver (1995: 108).

[23] This is usually assumed to be the same word as MB. *goalenn*, B. *gwalenn* (f.) ‘ring’ < *_u̯alinā_, cognate with OIr. *fail* (f. *k*-stem) ‘ring, arm-ring, bracelet’ < *_u̯alik-_. But MB. <*goa*> could represent two different sequences: *_gu̯a-_ and *_goia-_, and there was a tendency in most dialects of Breton for the two to fall together as Modern Breton *gwa-* (Jackson 1967: 430–431).

< *_u̯ii̯alinā_ are cognate with MIr. _fíthe_ ‘woven’ (p. 119), Lith. _vejù_ ‘wind’ (LIV 695). The natural assumption is therefore that these words reflect *_u̯ei̯h_$_1$_-lV-_, with a vocalic reflex of the laryngeal. If so, they represent a primary derivation from the root, whereas OIr. _féith_ (p. 230) and MIr. _fíar_ (p. 230) come from secondary *_u̯ei̯-_. But the reverse is also possible: if a change *_-ei̯HC-_ > *_-ei̯C-_ took place while laryngeals still existed in other environments, it is possible that the laryngeal was replaced in _gwialen_ on the basis of the verbal root.

8. OIr. _loathar, lóthar_ (m. _o_-stem) ‘trough, vat, tub’, MB. _louazr_, B. _laouer_ (f.) ‘basin, trough’, (late) Gaul. _lautro_ gl. _balneo_ (Delamarre 2003: 197–198) and Latinised OBrit. _Lauatris_ (loc. pl. pl.n.; Rivet & Smith 1982: 384) < *_lau̯atro-_ are cognate with ON. _lauđr_ ‘foam’, Gk. Myc. _re-wo-to-ro-_, Gk. Hom. λοετρόν ‘bath’, and go back to *_leu̯h_$_3$_-tro-_ to the root *_leu̯h_$_3$_-_ ‘wash’ (LIV 418; for more on these forms see Zair 2012b 156–157).

9. OIr. _loan_, _loon_, _lón_ (_o_-stem) ‘fat; provisions, food’ < *_lou̯ano-_ is traced back by IEW (836) to the root *_pleu̯-_ ‘flow, swim’ via a meaning ‘swimming on top’; the connection seems to be clear in ON. _flaumr_ ‘flowing’, OHG. _floum_ ‘_colluuies_, fat’, MLG. _flōme_ ‘raw belly- and loin-fat’. The root was probably _aniṭ_ (Skt. _plutáḥ_ ‘flooded’, _plutíḥ_ ‘swimming’, Gk. πλυτός ‘washed’, πλύσις ‘washing’; IEW 835–837; LIV 487–488). However, there is some evidence for a laryngeal (Russ. _plytь_, SCr. _plȉti_ ‘swim’, Lith. _pláuju_ ‘wash, flood’), so it is possible that _loan_ comes from *_pleu̯H-no-_. Alternatively, Matasović (2009: 234) suggests a connection with *_leu̯H-_ ‘cut off, loose’ (cf. Lat. _solūtus_ ‘untied, loosened’, Gk. λύω ‘loose’, Gk. βουλῡτός ‘evening’, (post-Vedic) Skt. _lunā́ti_ ‘cuts, severs’; LIV 417). This would, however, require a disconnection from _floum_. The etymology is not certain, and it is possible that _loan_ has a suffix *_-ano-_ (see the Conclusion below).

10. MIr. _lóth_ ‘down, pile’ < *_lau̯atV-_ may come directly from *_leu̯H-tV-_, from *_leu̯H-_ ‘cut off, loose’ (Joseph 1980: 121–122; LIV 417; see OIr _loan_ above). But it is found only in glossaries, and may be derived secondarily from MIr. _lóthar_ ‘fleece’ (below) or MIr. _ló_ ‘fur of an animal, fleece; single lock or tuft of wool’.

11. MIr. _lóthar_ (_o_-stem) ‘fleece’ < *_lau̯atro-_ may come directly from *_leu̯H-tro-_ (see MIr. _lóth_ above), but it is not well attested, and may be a secondary derivation from MIr. _ló_ ‘fur of an animal, fleece; single lock or tuft of wool’.

12. MB. _louan_ (adj.) ‘dirty’ < *_lou̯ano-_ is derived by Joseph (1980: 372), following IEW (681), from *_leu̯H-_ ‘dirty’, but this root probably did not have a laryngeal (LIV 414; see OIr. _loth_ ‘mud’ p. 140). Apparently this is an example of a secondary suffix *_-ano-_ (for which see the Conclusion below).

13. MW. _newyn_ (m.) ‘hunger, starvation’ comes from *_nău̯Vni̯o-_,[24] or *_nŏu̯Vni̯o-_ where _-V-_ is any vowel except *_-i-_. MB. _naffn_, _naoun_, B. _naon_ (m.), OC. _naun_ gl. _famis_, MC. _nown_ (m.) ‘hunger’ can come from *_nŏu̯Vno-_ or *_nău̯Vno-_ (Schrijver 1995: 97–101, 335, 343), and seem to have undergone a secondary syncope also seen in forms like MB. _eontr_ ‘uncle’ vs. MW. _ewythr_. MIr. _naunae_, _núna_ (f.) ‘famine’ is problematic, because while _naunae_ can come regularly from *_nau̯ani̯o-_ (probably < *_neu̯ani̯o-_) and perhaps from *_nou̯ani̯o-_ (Uhlich 1995: 23), _núna_ is not regular from either. Uhlich (1995: 27) suggests raising in the environment of two *_-n-_s, but this is no more than a guess.[25] Paul Russell (p.c.) tells me that he is sceptical of the value of these words, because he suspects contamination from the Latin phrase _in ieiuniis_ ‘in famine’, and they are certainly difficult.

If we take *_nou̯an(i̯)V-_ or *_nau̯an(i̯)V-_ as being the most likely source of the Celtic forms, they seem to be in conflict with the shape of the root in the other Indo-European languages. Goth. _nauþs_ ‘need, compulsion’ can come from *_neh_$_{2/3}$_u-ti-_ or *_nouH-ti-_, as can OPruss. _nautin_ (acc.), while ORuss. _навь_ ‘corpse’, OPruss. _nowis_ ‘trunk, torso’, Latv. _nâwe_ ‘death’ point to *_neh_$_{2/3}$_u̯-i-_. This suggests that Goth. _naus_, ON. _nār_ ‘corpse’ < *_nău̯i-_ come from *_n̥h_$_{2/3}$_u̯-i-_.[26]

On the basis of the Celtic forms alone we would probably reconstruct *_neu̯H-no-_ (or *_nou̯H-no-_), but the evidence of the other languages suggests that the root was *_neh_$_{2/3}$_u̯-_. It is possible that the Celtic words are based on a root in which the laryngeal had undergone metathesis in the zero grade (cf. Russ. _ну́ть_ ‘be sad’ < *_nuh_$_{2/3}$_-t-_), and a new full grade had been created to give *_neu̯h_$_{2/3}$_-_. It would be more in accordance with the extra-Celtic evidence to suppose that Proto-Celtic *_nau̯an(i̯)V-_ comes from *_n̥h_$_{2/3}$_u̯-ano-_, with a suffix *_-ano-_. However, given the problems involved in reconstructing the Celtic forms, this is not very reliable.

14. OIr. _riäthor_ (m. _o_-stem) ‘torrent’ (disyllabic; Ringe 1988: 426 fn. 37), OW. _reátir_, MW. _raeadyr_, W. _rhaeadr_ (f.) ‘waterfall, torrent’ < *_rei̯atro-_ come from *_h_$_3$_rei̯H-tro-_ (LIV 305–306; see OIr. _rían_ p. 233).

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[24] A *_nău̯Vnī_ would also be possible (and note that MIr. _núna_ is f.), and a _devī́_ form with strong *_-ī_, weak *_-i̯ā-_ would also explain the lack of vowel affection in Breton. But both the Brittonic forms are masculine.

[25] The also attested _noíne_ is perhaps due to the influence of _oíne_ ‘fast’ (Pokorny 1921: 37).

[26] A reconstruction *_nou̯H-i-_ would also be thinkable, but this would contradict the Balto-Slavic forms, and ought probably to have given Gmc. ^{x}_nau̯u̯i-_.

15. OIr. _scían_ 'knife' (f. _ā_-stem), gen sg. _scene_, W. _ysgien_ (f.) 'knife, sword' are difficult to reconstruct. The Irish forms point to *_skĭ̯anā_, while _ysgien_ suggests *_skī̯̆enā_. Schrijver (1992: 5) reconstructs *_ski-s-en-ā_, to a root *_ski-_, but this is morphologically problematic (what is the suffix?), and does not explain the lowering of *_-ĭ-_ in the Irish genitive singular. An alternative *_ski-en-ā_ has the same phonological problem; furthermore, there is no good evidence for an _aniṭ_ root of the shape *_skei̯-_ without a final *_-d-_: Lat. _scindō_ 'cut, rend', Gk. σχίζω 'split' etc. reflect *_sk̂ʰei̯d-_ (LIV 547–548).

LIV (547) derives _scían_ from a root *_sk̂ʰeh$_2$(i̯)-_ (cf. Gk. σχάω 'slit, open', Skt. -_chyáti_ 'skins, takes off'), via *_sk̂ʰh$_2$i̯-eneh$_2$_ (Rasmussen 1989: 61), which is still problematic for the Irish lowering. ON. _skeggja_ 'axe' attests a root *_skei̯H-_ (presumably a new full-grade of *_sk̂ʰeh$_2$(i̯)-_ on the basis of zero-grade *_sk̂ʰih$_2$-C-_ < *_sk̂ʰh$_2$i-C-_). A preform *_sk̂ʰei̯h$_2$-neh$_2$_ > *_skei̯anā_ would have the advantage of morphological acceptability and would explain the Irish forms without difficulty. W. _ysgien_ would then have either to have replaced *_-anā_ with *_-enā_ (cf. apparently MW. _llawen_ 'merry' < *_lou̯eno-_ ← *_lou̯ano-_ < *_leu̯h$_2$-(e)no-_; Schrijver 1995: 337), or to be a borrowing from Irish (this is particularly likely, since Jørgensen 2012 argues that *_ski-_ should have given ^{x}_chwy-_). Alternatively, we could reconstruct *_sk̂ʰih$_2$-eneh$_2$_, with the same explanations for the Welsh forms (and the same morphological problems) as above. Note that *_-i̯e-_ would have given *_-i̯a-_ regularly in British anyway (Schrijver 1995: 101–109). The most plausible reconstruction is*_sk̂ʰei̯h$_2$-neh$_2$_, but since these forms are so problematic, they cannot be used as evidence.

16. OIr. _tríath_, gen. sg. _trethan_ (_n_-stem) 'sea, wave' < *_trii̯aton-_ might reflect *_trei̯Ht-on-_ if it belongs with with Gk. Τρῑ́των 'sea-god' (IEW 1096), but the etymology of divine names is extremely difficult, and this is not reliable evidence.

§ 165. _Conclusion_

The evidence for the sequence *_-EI̯HC-_ is particularly unsatisfactory, because of apparent cases where the same root has differing reflexes, which are difficult to explain as due to regular sound changes. In the case of § 163.17 OIr. _féith_ < *_u̯ei̯h$_1$-ti-_ and § 163.19 MIr. _fíar_ < *_u̯ei̯h$_1$-ro-_ beside § 164.7 MW. _gwialen_ < *_u̯ei̯h$_1$-lo-_ it may be that _fíar_, whose semantics are much closer to those of the original root, is a late or remodelled formation on the basis of a living verbal root, while _gwialen_ is a relic formation (the semantics of _féith_ also suggest an old rather than a new formation; the loss of the laryngeal may be expected before an obstruent; see below). In fact, there seems to be a connection between nasal presents and apparently laryngeal-less noun formations, cf. OIr. _benaid_ and §163.1 OIr. _béimm_, Skt. _bhrīṇánti_ (no present is attested in Celtic; Schumacher 2004: 235) and §163.3. OIr. _bríathar_. Although this explanation seems plausible, the variation in the evidence means that it cannot be used. The difference between §163.7 MW. _bwyt_, OIr. _bíathaid_, and §164.3 OIr. _biad_ may be explained differently, by assuming that the former reflect the regular result of *_g_^{w}_ei̯h_$_3$_-to-_, and the latter *_g_^{w}_ih_$_3$_-eto-_, but this is uncertain, and these forms will not be considered as evidence. Given the problems with the data in this section, the discussion below should be considered to be particularly tentative.

The good examples of *_-EI̯HC-_ > *_-EI̯C-_ are: §163.14 OIr. _dían_ < *_dei̯h_$_1$_-no-_, §163.26 OIr. _méth_ < *_mei̯H-to-_, §163.27 MW. _mwyn_ < *_mei̯H-no-_, §163.30 OIr. _nia_ < *_nei̯H-t-_, §163.32 OIr. _rían_ < *_h_$_3$_rei̯H-no-_.

Good examples of *_-EI̯HC-_ > *_-EI̯aC-_ are: §164.4 MIr. _coar_ < *_k̂eu̯H-ro-_, §164.8 OIr. _loathar_ < *_leu̯h_$_3$_-tro-_, §164.14 OIr. _riäthor_ < *_h_$_3$_rei̯H-tro-_. Another case is §164.2 OIr. _biáil_ < *_b_^{h}_ei̯H-C-_, but since we are not sure exactly what followed the root, this is not very helpful.

McCone argues that *_-ei̯HC-_ gave *_-ei̯aC-_ except in *_-ei̯HCā̆-_ > *_-ei̯Cā̆-_. His theory has very little in its favour: the only example of the supposed correlation between loss of laryngeal and *_-ā̆-_ is OIr. _bíathaid_ < *_g_^{w}_ei̯h_$_3$_-teh_$_2$_-i̯e/o-_ and there is no independent evidence (such as a switch to feminine) that MW. _bwyt_ generalised the form appropriate to the neuter plural *_bei̯tā_ < *_g_^{w}_ei̯h_$_3$_-teh_$_2$. The only firm piece of counter-evidence is §163.32 OIr. _rían_ < *_h_$_3$_rei̯H-no-_. The counter-evidence of §163.14 OIr. _dían_ < *_dei̯h_$_1$_-no-_, §163.26 OIr. _méth_ < *_mei̯H-to-_, §163.27 MW. _mwyn_ < *_mei̯H-no-_, §163.30 OIr. _nia_ < *_nei̯H-t-_ could be avoided by arguing that all the adjectives generalised the feminine form in which the laryngeal had been lost before *_-Cā_, and that _nia_ generalised its stem from the acc. sg. *_nei̯tam_ < *_nei̯H-t-m̥_. But this is quite contrived. We would also expect §164.14 OW. _réátir_ (f.) to have lost the laryngeal if it really reflects *_h_$_3$_rei̯H-treh_$_2$. McCone's theory is probably incorrect.

Joseph asserts that the regular result of *_-eI̯HC-_ was *_-eI̯C-_, and that apparent cases of *_-eI̯aC-_ were due to the addition of suffixes which had misanalysed *_-a-_ in other formations as part of a suffix. There certainly does seem to be an independent suffix *_-ano-_ (cf. MIr. _ladan_ <*_l̥h_$_1$_d-ano-_ p. 60, OIr. _loan_ < *_pleu̯-ano-_ p. 238, MB. _louan_ < *_leu̯-ano-_ p. 238). According to Joseph (1980: 375), *_-ano-_ is derived from *_-an-_ < *_-n̥-_ in _n_-stems; thus W. _rhiain_ 'queen' < *_rēgn̥ī_ (i.e. nom. sg. analogical on oblique *_rēg-n̥-i̯ā-_). But there are also other sources of apparent *_-ano-_: since *_-u̯o-_ became *_-u̯a-_ in British (Schrijver 1995: 116–130), another source would be forms like W. _breuan_ 'hand-mill' < *_brāu̯on-_. In Irish, of course, apparent cases of *_-ano-_ could also reflect *_-ono-_ or *_-eno-_ (which would not palatalise a preceding consonant if *_-a-_, *_-o-_ or *_-u-_ were before it; McCone 1996: 116). The agent noun suffix *_-amon-_ seems to have generalised its initial *_-a-_ from roots ending in a laryngeal (Watkins 1969a: 182–185), which may also have been the source of the suffix *_-aro-_ apparently seen in OIr. _bodar_ < *_bodaro-_ (p. 195; although in this case the root may have ended in a laryngeal). But suffixes with *_-e-_ seem to have been far more productive: OIr. _cenél_ < *_ken-e-tlo-_, _scél_ 'story' < *_sk_^{w}_-e-tlo-_, MW. _llawen_ 'merry' < *_lou̯-eno-_ (Schrijver 1995: 337, 343). Joseph's explanation requires us to reconstruct a whole collection of these suffixes, including *_-atro-_ (§164.8 OIr. _loathar_ < *_leu̯h_$_3$_-tro-_, §164.14 OIr. _riäthor_) and *_-alo-_ (§164.7 MW. _gwialen_), along with *_-aro-_ (§164.4 MIr. _coar_).

Joseph's theory cannot be disproved, and may be correct. But as with all analogical explanations, it is important to see if a phonological explanation can be found that fits the facts equally well. The remaining hypothesis, as outlined in the introduction to this section, is that the sequences *_-EI̯HC_(_C_)- behaved identically to *_-CHC_(_C_)- sequences: i.e. that laryngeals were lost without reflex when the consonant following the laryngeal was a single plosive (or two obstruents); otherwise we expect an epenthetic vowel to be retained as *_-a-_. To some extent, the evidence backs this up: as expected, the laryngeal is lost without trace in §163.26 OIr. _méth_ < *_mei̯H-to-_, §163.30 OIr. _nia_ < *_nei̯H-t-_ and produces a prop-vowel before a sonorant in §164.4 MIr. _coar_ < *_k̂eu̯H-ro-_, and before an obstruent followed by a sonorant in §164.8 OIr. _loathar_ < *_leu̯h_$_3$_-tro-_, §164.14 OIr. _riäthor_ < *_h_$_3$_rei̯H-tro-_. All of the possible preforms of §164.2 OIr. _biáil_ and its British equivalents would also be expected to give a prop-vowel. However, against the predictions of the theory, we find laryngeal loss without prop-vowel in §163.14 OIr. _dían_ < *_dei̯h_$_1$_-no-_, §163.27 MW. _mwyn_ < *_mei̯H-no-_, §163.32 OIr. _rían_ < *_h_$_3$_rei̯H-no-_.

If we want to retain the hypothesis, rather than accepting Joseph's explanation, the only possibility is that there existed a general rule *_-C.HP-_ > *_-CP-_ (where _C_ includes the glide of a diphthong), and that this was followed by a more localised rule, in which the laryngeal was lost without trace in the sequence *_-ei̯Hn-_.[27]

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[27] An alternative approach would be to include *_-n-_ amongst the segments which caused loss of the preceding laryngeal in *_-CHC-_ sequences. Some slight support for this might come from §137.4 MIr. _fell_ < *_u̯elH-Co-_, §137.6 OW. _guell_ < *_u̯elh_$_1$_-Co-_, and §137.8 OW. _pell_ < *_k_^{w}_elH-Co-_, on the basis that a suffix *_-no-_ is more common than *_-so-_ or *_-do-_. But this is very weak evidence, and §138.18 OIr. _lethan_ < *_pl̥th_$_2$_-no-_, §138.16 MW. _garan_ < *_gerh_$_2$_-no-_ and perhaps §138.25 OIr. _tamun_ < *_temh_$_1$_-no-_ suggest otherwise. Furthermore, there is no phonological feature that /n/ shares with the plosives but not with other sonorants (especially /m/).

Given the messy nature of the evidence regarding the sequence **-EI̯HC-*, it is not easy to draw a conclusion as to the regular results. What does seem certain is that laryngeals were sometimes lost without reflex in the sequence **-EI̯HC-*: this loss occurs in all our good evidence for tautosyllabic laryngeal before a plosive, and when the pre-laryngeal glide was **-i̯-* and the following consonant was **-n-*. It remains unclear whether this is a phonological development, due to the combination of two separate rules of laryngeal loss, or whether it reflects thoroughgoing loss of laryngeals in the sequence **-EI̯HC-* combined with analogical spread of misanalysed suffixes attached to roots of the shape **CeRH-*.

The Saussure Effect

§ 166. *Introduction*

It is usually assumed that a sequence **-oRHC-* resulted in loss of the laryngeal in Proto-Indo-European, a development sometimes called the 'Saussure effect', since Saussure was the first to draw attention to it (de Saussure 1905: 511 fn. 2; further discussion in Rasmussen 1989: 175–185; Melchert 1994: 49–51; Nussbaum 1997). However, doubts have recently been raised by Pronk (2011b) and van Beek (2011), who argue strongly against the existence of the Saussure effect (and note already Beekes 1988b: 72, who observes that there is "no phonetic basis for the development"). Although the Celtic evidence will prove to be inconclusive, I am inclined to believe that the Saussure effect did take place, at least in some languages, and it has therefore been accepted as a possible reason for loss of laryngeal without a reflex elsewhere in this book.

Only a single Celtic lexeme is discussed by Pronk (2011b: 185); the following section attempts to collect all possible evidence. Clusters of the type **-oI̯HC-* may also have shown the Saussure effect, but they are of only limited use, since the determining factor for the development of the sequence **-EI̯HC-* is not entirely clear (see p. 225 ff.); it may be that apparent examples of **-oI̯HC-* > **-oI̯C-* simply reflect the regular result of the sequence **-EI̯HC-*. Nonetheless, they are collected here. All forms discussed in § 163 and § 164 as reflecting **-eu̯HC-* could also reflect **-ou̯HC-*, since **-eu̯-* and **-ou̯-* fell together in Proto-Celtic (unless there is a morphological reason not to expect *o*-grade). Most of the forms do not provide any evidence either way; only those which are pertinent to the present discussion are repeated.

§ 167. _*-oRHC> *-oRC-_

1. MIr. *coirce*, *corca* (m. *i̯o*-stem) ‘oats’, MW. *keirch*, W. *ceirch*, MB. *querch*, B. *kerc’h* (coll.) ‘oats’, OC. *keirch* (in *bara keirch* gl. *panis auenam*) < _*korki̯o-_[28] are derived by de Bernardo Stempel (1999: 512 fn. 25) from _*k̂erh_$_3$- (Gk. ἐκόρεσα (aor.) ‘sated, satiated’; IEW 577; LIV 329). This etymology is not implausible (cf. Lat. *Cerēs* ‘goddess of agriculture; bread, grain, corn’), but it is not certain to be correct.

2. MIr. *colg* (f. *ā*-stem) ‘awn of barley, wheat; anything pointed, piercing instrument’ < _*kolgā_,[29] OW. *colginn* gl. *aristam*, W. *colyn* (m.) ‘sting’ and MW. *coly*, W. *col* (m., coll.) ‘awn, beard of corn, husks, chaff; spike, prickles, sting’ < _*kolgo-_ are connected by IEW (545) to OIr. *cuilenn*, W. *celyn* ‘(wood of the) holly-tree’, OE. *holegn* ‘holly’, OCS. *klasъ*, Russ. *kólos* ‘ear of grain’.[30] However, given that the basic meaning in Celtic seems to be ‘ear of grain’, one might more plausibly connect these forms with Lat. *culmus* ‘stalk, haulm (esp. of grain)’, Gk. καλάμη ‘stalk, straw of corn, stubble’, κάλαμος ‘reed’, Latv. *sal̃ms*, SCr. *slàma* ‘stubble’ (IEW 612), all of which point to a root _*k̂elh_$_2$-.[31] The missing internal vowel of Lat. *culmus* < _*k̂olh_$_2$_-mo-_ may be due to the Saussure effect or syncope (Schrijver 1991a: 327). OCS. *klasъ*, Russ. *kólos* ‘ear of grain’ may also belong here, if they are an example of the incomplete ‘satemisation’ sometimes found in Baltic and Slavic (Stang 1966: 91).[32] This is the most semantically plausible distribution of the forms given by IEW, and would leave OIr. *cuilenn* and OE. *holegn* separate from MIr. *colg* etc. But in fact, even if we keep to IEW’s groupings, a laryngeal is also implied by OE. *holegn* < Proto-Germanic _*hulagna-_ < _*kl̥(H)-ogno-_.[33] MIr. *colg* probably goes back to _*k̂olh_$_2$_-geh_$_2$.

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[28] It is not clear why LEIA (C-208) assumes _*korkki̯o-_, with expressive gemination, nor why IEW (529) reconstructs _*korkri̯o-_ (misprint?). IEW’s etymology is incomprehensible to me.

[29] It seems most likely that OIr. *cailg* ‘sting; stab, thrust, act of piercing’ is a different word, cognate with MW. *kaly*, W. *cal*, B. *kalc’h* ‘penis’, although there may also be some crossing of etymologies here (Joseph 1982: 51–52; de Bernardo Stempel 1987: 99).

[30] It is not clear that Skt. *kaṭambaḥ* ‘arrow’ belongs here (KEWA 1.141; EWAIA 3.47).

[31] Note that Balto-Slavic sometimes appears not to have been affected by the Saussure effect (Schrijver 1991a: 328; Nussbaum 1997: 196; the examples are discussed at length by Pronk 2011b: 180–184, for whom, of course, the Saussure effect did not exist).

[32] Acute accent would have been lost in a mobile paradigm in Slavic by Meillet’s law, so these forms do not point to an *aniṭ*-root.

[33] Although Joseph (1982: 52) argues against a laryngeal because of other antevocalic zero-grades to *aniṭ*-roots in Germanic. His assumption that the Slavic forms cannot go back to a laryngeal root is not correct (see fn. 32 above).

3. OIr. *coll* (n. *o*-stem) 'destruction, spoiling, injury', MW. *coll* (adj.) 'lost, missing', (m.) 'loss, perdition, hurt, damage', MB. *coll*, B. *koll* (m.) 'loss' come from *_kelh$_2$-_ 'strike' (see OIr. *claidid* p. 71), and reflect *_kolh$_2$-no-_, *_kolh$_2$-so-_, or *_kolh$_2$-do-_ (but this is unlikely, because a spelling *-ld-* is never found, even in the early Irish texts).

4. MIr. *coll* (*o*-stem) 'neck, jaw, head' is connected by IEW (639–640) with Lat. *collum* 'neck', Goth., ON. *hals* 'neck' < *_k^{w}olso-_ < *_k^{w}olh$_1$-so-_ (*_k^{w}elh$_1$-_ 'turn': Gk. τελέθω 'come into being', Toch. A *källāṣ* 'leads, brings', (post-Vedic) Skt. *cīrṇáḥ* 'practised, observed'; LIV 386–388). However, *coll* is known primarily from glosses, and LEIA (C-158) suggests that it is a loan-word from Latin.

5. MIr. *dolb* (m. *o*-stem) 'sorcery, illusion, mystery' is from *_dolu̯o-_; although the root is *_delh$_1$-_ (LIV 114), this form may well be secondary (see MIr. *dalb* p. 95, OIr. *delb* p. 206).

6. OIr. *foll* 'crime', MW. *gwall* (m.) 'mistake, error, oversight, fault; wrong, deceit', MB. *goall*, B. *gwall* (m.) 'fault, crime, vice, evil' < *_u̯olno-_, *_u̯olso-_ or *_u̯oldo-_ belong, according to Matasović (2009: 411), to the same root as MIr. *fell* 'deceit, treachery' (p. 186) and therefore reflect *_u̯olH-Co-_.

7. OW. *hol* gl. *totam*, MW. *holl*, *oll*, W. *oll* (adj., adv.) 'all, the whole, everything, entire', MB. *oll*, *holl*, B. *holl* (adj.) 'all', MC. *oll*, *ol* (adj.) 'the whole, every' might go back to *_solno-_ < *_solH-no-_, connected to Osc. **sullus** (nom. pl.) 'all', Lat. *sollistimus* 'entirely adequate', Lat. *saluus* 'safe, unhurt', Gk. ὅλος, Skt. *sárvaḥ* 'whole, entire' < *_solh$_2$-_, but the origins of these Celtic forms are very obscure (IEW 800; LEIA U-17–18; Nussbaum 1997: 183, 186–192; Hamp 2000).

8. OIr. *molt* (m. *o*-stem) 'ram, wether', MW. *mollt* (m.) 'castrated ram, wether', MB. *mout*, *maout*, B. *maout* (m.) 'sheep', OC. *mols* gl. *uerues*, MC. *mols* (m.) 'wether sheep', Gaul. *Moltus* (p.n.) < *_molto-_ are derived by IEW (716) from the root *_melh$_2$-_ 'mill' (Arm. *malem* 'crush, squash', Hitt. *malla-* 'mills'; LIV 432–433). The semantic distance is surmountable: "the root etymology is attractive because castration by crushing was often practised by farmers to avoid the risk of infection in the animal" (Joseph 1980: 124). If the word does belong to this root, the verb was continued into Proto-Celtic (MW. *malaf* p. 169), and could have been the basis for a *neo-aniṭ* formation. LEIA (M-62), Delamarre (2003: 227) and Matasović (2009: 275) consider the etymology unknown.

9. OIr. *oll* (*o*-, *ā*-stem adj.) 'great, ample', Gaul. *ollon* 'big', *Ollo-* (p.n. element) are connected by Matasović (2009: 136–137), despite the doubts of LEIA

(O-20–21), with Gk. πολύς 'many'; it may thus reflect *_polh$_1$-no-_ (cf. Lith. _pilus_ 'in profusion', Skt. _purúḥ_ 'many', Gk. πλέων 'more').

10. MIr. _scoltaid, scoltid_ 'splits, cleaves, divides' comes from *_skoltV-_ (perhaps derived from _scoilt_ (f.) 'splitting', which is attested only late). Whether MW. _hollt_ (m., f.) 'cleft, cleavage, split' belongs here is doubtful (Schrijver 1992: 6–7). According to LEIA (S-48–49), _scoltaid_ is cognate with Lith. _skeliù_ 'split', Goth. _skalja_ 'brick' and Arm. _c^{c}elowm_ 'split, rend'. On account of the _-ll-_ of Hitt. _iškallari_ 'slits, splits' and the acute tone of Lith. _skìlti_ 'beat (fire)' < *_skl̥H-i̯e/o-_, LIV (553) reconstructs *_skelH-_. However, it also reconstructs an _aniṭ_ version of this root (LIV 552), on the basis of Gk. σκάλλω 'stir up, hoe' < *_skl̥-i̯e/o-_, and forms without sonorant gemination in Germanic such as ON. _skil_ 'separation, discrimination' < *_skel-_.

Since it is possible that σκάλλω is the regular result of *_skl̥H-i̯e/o-_ (Peters 1980: 80 fn. 38; G.-J. Pinault 1982: 270), or a nasal present *_skl̥-n-H-_ (cf. Gk. βάλλω 'throw' < *_g^{w}l̥-n-h$_1$-_; LIV 208), and since the Germanic lack of gemination may not deny the presence of a laryngeal (p. 11 f.), it is probable that _scoltaid_ reflects an original *_skolH-tV-_.

11. MIr. _tomra_, NIr. _tomhra_ 'protection' could come from pre-syncope *_tom-Vri̯i̯o-_ (thus LEIA T-105) or *_tomri̯i̯o-_ (since this would also have given lenited *_-m-_). The etymology is doubtful. LEIA compares Gk. τέμενος 'cut off piece of land, sacred precinct' < *_temh$_1$-_ (LIV 625). Even if this is correct, we cannot tell whether the laryngeal was vocalised or not.

12. OIr. _torm, tarm_ (n. _u_-stem), MIr. _toirm, tairm_ (f. _i_-stem) 'sound, noise, tumult; fame' < *_tor(s)mu-_/*_tor(s)mi-_ may may go back to *_terh$_1$-_ 'drill, pierce' (LIV 632–633; see MIr. _tarathar_ p. 167), i.e. 'a piercing noise' (LEIA T-97–98). But the etymology is not certain.

§168. *_-oIHC-_ > *_-oI̯C-_

1. OIr. _báegul_ (n. _o_-stem) 'unguarded condition, danger; chance, opportunity' < *_boi̯gulo-_ may be related to MW. _bygwl_ (m.) 'fear, fright, apprehension', OB. _bicoled_ gl. _uecordia_ < *_bĭkulo-_. LEIA's (B-4) doubtful connection with Skt. _bhīmáḥ_ 'terrible', _bháyate_ 'is afraid' (< *_b^{h}ei̯h$_2$-_; LIV 72–73) is semantically very plausible, but the formation of the word is very uncertain, since it seems to show both ablaut and a complex suffix with *_-g/k-_ alternation. It cannot, therefore, be used as evidence.

2. OIr. _dóel_ (m. _o_-stem and f. _ā_-stem) 'chafer, beetle', _Dóel_ (hydronym) are compared by IEW (184) to Gk. δέατο 'shines' < *_dei̯h$_2$-_ (LIV 108), which would

imply *_doi̯lo-_ < *_doi̯h_2-lo-_. One might also think of *_doi̯h_1-lo-_, from *_dei̯h_1-_ 'rush, whirl' (LIV 107; see OIr. _dían_, p. 229). But neither connection is very certain.[34]

3. MIr. _gláed_ 'glue' < *_gloi̯dV-_, MW. _glut_, W. _glud_ (m.) 'glue, gum; bird-lime', MB. _glut_, _glud_, B. _glud_ (m.) 'glue', OC. _glut_ gl. _gluten_ < *_gloi̯tV-_ < *_gloi̯H-d/t-_[35] are cognate with OE. _clǣg_ 'clay' < *_klai̯i̯a-_ < *_gloi̯H-o-_; IEW 364; LIV 190). They are probably evidence for laryngeal loss, but a nasal present to this root was preserved into Celtic (OIr. _glenaid_ 'adheres'), so *_gloitV-_ could be based on an _aniṭ_ root taken from the verb.

4. MIr. _glúair_ (_i_-stem adj.) 'pure, clear, bright' < *_glou̯ri-_ might come from *_$\hat{g}^h$lou̯H-ri-_, if MIr. _glór_ < *_glau̯aro-_ shows the regular result of *_$\hat{g}^h$leu̯H-ro-_ (see p. 237). But it is not completely certain that the regular reflex of *_-eu̯HR-_ was *_-eu̯aR-_ rather than *_-eu̯R-_ (see p. 225 ff.), so it is possible that _glúair_ comes from *_$\hat{g}^h$leu̯H-ri-_.

5. W. _hufen_ (m.) 'cream, head, scum' is derived by (IEW 889) from *_soi̯meno-_, related to OHG. _seim_ 'strained honey', ON. _seimr_ 'honeycomb', Lith. _séilė_ 'saliva, spittle'. If this were correct, the Lithuanian acute tone suggests a laryngeal in the root: *_sei̯H-l-_ or *_seh$_1$i̯-l-_, and W. _hufen_ could go back to *_soi̯H-m-_ or *_soh$_1$i̯-m-_.[36] However, Isaac (2004) suggests that _hufen_ should instead be considered a derivative of an original *_seu̯-mo-_ (actually attested in MW. _sud_, W. _sudd_ (m.) 'juice, sap'), cognate with Skt. _somaḥ_, Av. _haoma-_ 'Soma' to the _aniṭ_-root *_seu̯-_ 'press out' (LIV 537–538). Either way, it is not certain that _hufen_ reflects a root with a final laryngeal.

6. MW. _mul_ (adj.) 'simple, innocent; modest, gentle' < *_moi̯lo-_ < *_moi̯H-lo-_, OIr. _móeth_ (_o-_, _ā_-stem adj.) 'soft, tender' < *_moi̯to-_ < *_moi̯H-to-_ are cognate with OIr. _mín_ 'smooth' (p. 119) and MW. _mwyn_ 'soft' (p. 232).

7. OIr. _noíb_ (_o-_, _ā_-stem adj.) 'holy', Gaul. _Noebia_ (p.n.) < *_noi̯b$^{(h)}$o-_ is connected by LEIA (N-20) with MIr. _níab_ 'spirit, vigour?' (see p. 233), but it is not clear that it belongs here semantically. It is better connected with OIr. _ném_ 'lustre, radiance' (see p. 233), Lat. _nitēre_ 'shine' (Nussbaum 1999: 391).

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[34] IEW's etymology is viewed with scepticism by Ringe (1988: 427 fn. 39).

[35] The variation in final dental is peculiar. According to GPC (1412) the Brittonic words are borrowed from Lat. _glūten_ 'glue'; perhaps this explains final [-d] in place of [-đ], but the Irish form shows the word is original to Celtic.

[36] If ON. _simi_ 'sea' also belongs here, it must have undergone shortening by Dybo's rule.

8. OIr. _róen_ (m. _o_-stem) ‘way, path; rout, flight’, OIr. _róenaid_ ‘routs, defeats’, OB. _runt_ (with non-etymological _-t_), B. _run_ (m., f.) ‘hill’ < *_roi̯no-_ are connected by IEW (857) with ON. _rein_, OHG. _rein_ ‘boundary mark, border’ < *_roi̯nā_, Lith. _rievà_ ‘chasm, hill’, Latv. _riẽwa_ ‘cleft, fold, furrow’, and Lat. _rīma_ ‘cleft, crack, fissure’ (which could, however, go back to other roots: de Vaan 2008: 523–524). The Latvian accentuation suggests a laryngeal: *_rei̯H-u̯eh_$_2$ or *_reh_$_1$_i̯-u̯eh_$_2$. The laryngeal is absent in Lith. _raĩvė_ ‘strip, mark’, perhaps due to the Saussure effect in *_roi̯H-u̯eh_$_1$. If the Baltic and Celtic words are related, they suggest loss of a laryngeal in the Celtic form *_roi̯H-no-_.

§ 169. *_-oRHC-_ > *_-oRaC-_

1. OIr. _colainn_ (f. _i_-stem) ‘body, flesh, corpse’ < *_kolani-_, MW. _kelein_, W. _celain_ (f.) ‘corpse’ < *_kolanī_ is derived by IEW (924) from the root *(_s_)_kelH-_ ‘cut’ (see MIr. _scoltaid_ p. 246). For the semantics, see ON. _hold_ ‘flesh’, OE. _hold_ ‘corpse’, _holdian_ ‘cut up’ (Schrijver 1995: 95). However, it is not clear that all the forms collected by IEW go together, so the etymology may not be correct. Even if _colainn_ reflects a _seṭ_ root, the suffix *_-an-_ may be secondary: on the basis of the Welsh forms, this was originally a _devī́_ noun, which tended to generalise *_-an-_ < *_-n̥-_ in the weak stem *_-n̥-i̯eh_$_2$ (cf. MW. _elein_ p. 195 and OIr. _rígain_ ‘queen’ < *_h_$_3$_rēĝ-n̥-ih_$_2$).

2. OIr. _torann_ (m. _o_-stem and f. _ā_-stem) ‘thunder; loud noise’, MW. _taran_ (f.), OB. _taran_ gl. _tonitru_, B. _taran_ (m.), OC. _taran_ gl. _tonitruum_, MC. _taran_ (f.) ‘thunder’, Gaul. _Taranu-_ (p.n. element), _Taranis_ (theonym) < *_toranV-_ (Schrijver 1995: 96) may go back to *_terh_$_1$_-_ ‘drill, pierce’ (LIV 632–633; see MIr. _tarathar_ p. 167), i.e. a piercing noise. However, the connection with OHG. _donar_ ‘thunder’ < *_tn̥h_$_2$_-ro-_, Lat. _tonāre_ ‘thunder’, Skt. _stanáyati_ ‘thunders’ < *(_s_)_tonh_$_2$_-ei̯e-_ (LIV 597), with metathesis in Celtic of *_tonaro-_ to *_torano-_ does not seem implausible in a word like this (LEIA T-113; Matasović 2009: 384). If that is the case, *_tonaro-_ could have been derived from the causative *_tonai̯e/o-_ by misanalysis as *_tona-i̯e/o-_. Onomatopoeia may also have played a part in its formation; _torann_ cannot be used as evidence.

§ 170. *_-oIHC-_ > *_-oI̯aC-_

1. MIr. _coar_ ‘hero?’ seems to point to *_kou̯aro-_ < *_k̂ou̯H-ro-_, but *_kau̯aro-_ < *_k̂eu̯H-ro-_ is more likely, cf. MW. _caur_, W. _cawr_ (m.) ‘giant; hero’, Gaul. _Cavarillos_, Καυαρος (p.n.) < *_kau̯aro-_ (see p. 237).

2. OIr. _loathar, lóthar_, MB. _louazr_, B. _laouer_ 'basin, trough', late Gaul. _lautro_ gl. _balneo_ and OBrit. _Lauatris_ (loc. pl. pl. n.) could come from _*lou̯atro-_ < _*lou̯h$_3$-tro-_, but _*lau̯atro-_ < _*leu̯h$_3$-tro-_ is more likely (see p. 238).

§ 171. _Conclusion_

The only plausible evidence for _*-oRHC-_ shows a development to _*-oRC-_: § 167.2 MIr. _colg_ < _*k̂olh$_2$-geh$_2$_, § 167.3 OIr. _coll_ < _*kolH-Co-_, § 167.6 OIr. _foll_ < _*u̯olH-Co-_, § 167.10 MIr. _scoltaid_ < _*skolH-tV-_. However, it is possible that in all these cases the lack of a laryngeal reflex is due to Proto-Celtic loss of a laryngeal before a tautosyllabic plosive in non-initial _*-CHC-_ sequences. There is some evidence for loss of the laryngeal in _*-oIHC-_: § 168.3 MIr. _gláed_ < _*gloi̯H-do-_, § 168.4 MIr. _glúair_ < _*ĝ^{h}lou̯H-ri-_, § 168.6 MW. _mul_ < _*moi̯H-lo-_, § 168.8 OIr. _róen_ < _*roi̯H-no-_. If laryngeals were only lost in the sequence _*-EI̯HC-_ when the post-laryngeal consonant was a plosive, and in the sequence _*-Ei̯Hn-_ (see p. 225 ff.), then MIr. _glúair_ and MW. _mul_ would provide some evidence for the Saussure effect. But this is very uncertain. § 170.1 MIr. _coar_ and § 170.2 OIr. _loathar_ probably reflect a sequence _*-eu̯HC-_ rather than _*-ou̯HC-_ and therefore provide no evidence. Consequently there is no good Celtic evidence for or against the Saussure effect.

Eichner's Law

§ 172. _Introduction_

It is often supposed that long _*-ē-_ was not coloured by laryngeals in Proto-Indo-European (Eichner 1973; Mayrhofer 1986: 132–134; Jasanoff 1988; Rasmussen 1990–1991b [1999]; Vine 2002 [2006]: 292–296), on the basis of forms like Hitt. _ḫinkzi_ 'apportions' < _*h$_2$ēnk̂-ti_, ON. _ægir_ 'sea' < _*h$_2$ēk^{w}i̯o-_. However, this is not entirely accepted (Lindeman 1987: 56–59, 1997b: 79–88; Kloekhorst 2008: 567–568). Schrijver (1991a: 53, 129–134) argues that colouring of long _*-ē-_ did occur in Latin (_ācer_ 'sharp' < _*h$_2$ēk̂-ri-_), and in Celtic (Schrijver 1995: 300–301).

§ 173. _Evidence for Colouring of *-ē- by Adjacent Laryngeal_

1. OIr. _ág_ (m. _o_- and _u_-stem) 'fight, battle, contest; prowess, valour', Gaul. _Ago-_ (p.n. element) < _*āgV-_ are cognate with Skt. _ājíḥ_ 'race, combat', Gk. ἀγών 'contest' < _*h$_2$eĝ-_ (LEIA A-22–23; LIV 255–256). De Bernardo Stempel (1999: 528) attributes _ág_ to expressive lengthening ("häufig bei Kriegstermini"), but most of the other examples have long vowels regularly, and this explanation

should not be taken seriously. On the face of it, long *-_ā_- is also found in Skt. _ājíḥ_, but this could come from *_h$_2$og-i-_ by Brugmann's law. Lat. _ambāgēs_ 'going round, winding', _indāgō_ 'a surrounding and driving of game' also seem to suggest long *-_ā_-; it is possible that this is by analogy with forms like _contāgēs_ 'touch, contact' and _compāgēs_ 'joining together, connection' (Schrijver 1991a: 134).[37] The most simple explanation for _ág_ is that it is derived from an original root noun *_h$_2$ēĝ-_, which may also be the source of Skt. _ājíḥ_. However, it is also possible that _ág_ reflects *_h$_2$ōg-o-_, perhaps a _vr̥ddhi_ derivative from a root noun *_h$_2$oĝ-_ → Skt. _ājíḥ_.

2. OIr. _aue, ue_, MIr. _úa, ó_ (m. _i̯o_-stem) 'grandson, male descendant', Og. _AVI_ (gen. sg.), Gaul. αουα 'granddaughter' are cognate with Hitt. _ḫuḫḫaš_, Lat. _auus_, Arm. _haw_ 'grandfather', OPruss. _awis_, Lith. _avýnas_, OCS. _ujь_ 'uncle on mother's side' < *_h$_2$(e)uh$_2$-o-_. OIr. _aue_ could therefore come directly from *_h$_2$eu̯h$_2$i̯o-_. However, Schrijver (1995: 300–301) compares also W. _wyr_ (m.) 'grandchild' < *_āu̯i̯o-_ (with final -_r_ from words for other familial relationships).[38] He argues that Proto-Celtic *_āu̯i̯o-_ was the reflex of a _vr̥ddhi_-formation built on *_h$_2$eu̯h$_2$(i̯)o-_ 'grandfather' (for the semantics cf. OHG. _swehur_ 'father-in-law' < *_su̯ekuro-_, _swāgur_ 'brother-in-law, man married into the family' < *_su̯ēkuro-_). If this is the case, then OIr. _aue_, W. _wyr_ represent *_h$_2$ēu̯i̯o-_. A problem for Schrijver's hypothesis is that Proto-Irish *-_ău̯ii̯o-_ and *-_āu̯ii̯o-_ seem to have developed differently in Old and Middle Irish. Thus *_au̯sesos_, the genitive singular of _áu_ 'ear', gave *_au̯ii̯os_ > Primitive Irish *_auu̯'ei̯ah_ > Early Old Irish _aue_ > Old Irish *_ue_ > Middle Irish _úae_. On the other hand, *_nāu̯ii̯ās_, the genitive singular of _náu_ 'ship', gave *_nāuu̯ei̯āh_ > Early Old Irish _náue_ > OIr. _noe_ (Uhlich 1995: 17); cf. *_g^{w}rāu̯onos_, gen. sg. of _bráu_ 'quern' > *_brāu̯onah_ > *_brāuu̯on_ > *_bráuon_ > Old Irish _broon_ > _brón_. The evidence is limited, but the development of Early Old Irish _aue_ > OIr. _ue_ > MIr. _úa_ > Late MIr. _oa_ > _ó_ seems to fit the pattern of *-_ău̯V-_ > EOIr. -_auV-_ > MIr. -_úV-_, rather than *-_āu̯V-_ > EOIr. -_auV-_ > OIr. -_oV-_.[39] It is also possible that _wyr_ does not belong here (cf. B. _douaren_ 'descendant, grandchild', of mysterious origin: Schrijver 1995: 301).

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[37] But it is not entirely clear what the analogy involved: mis-segmentation of regular *_com-peh$_2$g-_ and *-_teh$_2$g-_? Or *_Ch$_2$C-_ > *_CăC-_ : _Ceh$_2$C-ēs_ > *_CāC-ēs_ :: *_h$_2$eĝ-e/o-_ > *_ăge/o-_ :: X, where X = _āgēs_?

[38] Note that *-_ău̯i̯o-_ gave MW -_eu_- (Schrijver 1995: 297). For *-_āu̯io-_ cf. MW. _wy_ 'egg' < *_ōu̯i̯o-_.

[39] Although Paul Russell (p.c.) suggests to me that the developments of _aue_ may have been different from the other forms since it is found so often in unstressed position in names, and the unstressed form may even have been generalised.

§ 174. _Evidence for Non-Colouring of_ *_-ē-_ _by Adjacent Laryngeal_

1. OIr. _erbaid_ 'entrusts' < *_erbī-_ is to be connected with MIr. _orb_ 'patrimony; heir' < *_orbo-_, OIr. _orbae_ 'patrimony, heritage' < *_orb_(_i_)_i̯o-_, which are further cognate with Lat. _orbus_ 'deprived of, orphan', Gk. ὀρφανός, Arm. _orb_ 'orphan', Got. _arbi_ 'heir', Skt. _árbhaḥ_ 'small, weak; child'. According to McCone (1999) these forms go back to a root *_h_1erb^h-_, but Weiss (2006) argues that they belong with the Hittite verb _ḫarp-_ 'separate oneself and (re-) associate oneself elsewhere' (IEW 781–782; Melchert 2010), which goes back to a root *_h_3erb^h-_ 'turn'. He explains OIr. _erbaid_ as derived from a lengthened grade noun *_$h_3ērb^h$-o-_ itself derived by _vr̥ddhi_ from an adjective *_h_3erb^h-o-_ (the noun is also attested in Toch. B _yerpe_ 'disc, orb'). Weiss's demonstration of the semantic connection between the Hittite form and _erbaid_ and the words for 'orphan' is very plausible, but the lowering of the first vowel of the derived verb *_ērbī-_ > *_īrbī-_ > *_ĭrbī-_ (Osthoff's law) is problematic, requiring a rule of lowering before a non-palatal sequence *_-RP-_, which is somewhat _ad hoc_, although lowering may have occurred before final unpalatalised *_-r/lt_ (Weiss 2006: 267 fn. 76, referring to McCone 1991b: 67).[40] The derivation of _erbaid_ from an original *_$h_3ērb^h$-o-_ is probable, but a root *_h_1erb^h-_ cannot be altogether ruled out.

2. Gaul. _gniIou_ (1sg.) 'know' < *_gnēi̯e/o-_ (Delamarre 2003: 181),[41] if correctly translated, is formally and semantically identical to OE. _cnāwan_ 'know, perceive'. According to Jasanoff (1988), this reflects a lengthened grade formation derived from *_$ĝneh_3$-_ 'know' (LIV 168–170; see OIr. _gnáth_ p. 79). If this is correct, it suggests that *_$ĝnēh_3$-i̯e/o-_ gave *_gnēi̯e/o-_. Harđarson (1993a: 80–82) considers Germanic *_gnē-_ the result of remodelling after the perfect on the basis of an analogical proportion of the type *_se-zō-_ : *_sē-ja-_ :: *_ke-knō-_ : X, where X is *_knē-ja-_. However, if *_gnē-_ 'know' also appears in Gaulish, this seems unlikely. That _gniIou_ reflects *_$ĝnēh_3$-i̯e/o-_ seems quite plausible, but not completely certain. Zair (2009: 218 fn. 7) suggests the same origin for OIr. _gniid_ 'does, makes' < *_gnīi̯e/o-_, MW. _gweinydaf_ 'serve, wait, minister', MB. _gounez_ (3sg.) 'wins, obtains, conquers, cultivates', MC. _gonetheff_ 'work' < *_u̯o-gnĭi̯e/o-_, but the semantics do not allow for certainty.

3. OIr. _·icc_ (_do·icc_ 'comes'), MW. _reinc_ (3sg.) 'reaches', MB. _rancaff_ 'must' (with prefix *_ro-_) are problematic. McCone (1991a: 2–3; 1991b: 50–52; 1998b:

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[40] On the ordering of *_-ē-_ > *_-ī-_ in Celtic before Osthoff's law see p. 175 fn. 13.

[41] In _neIanmanbe gniIou_ (L-93) 'I do not know them by names'. For Gaulish _-ou_ < *_-ū_ see Schrijver (2005: 56), who, however, translates _gniIou_ as 'make, do'.

468–469, 470–471; following Mayrhofer 1982: 191 fn. 51) argues that _·icc_ comes from *_inke/o-_ (by Osthoff's law) < *_īnke/o-_ < *_h_2ēnk̂-_, cognate with Hitt. _ḫinkzi_ 'apportions' < *_h_2ēnk̂-ti_ (LIV 268; but cf. Kloekhorst 2008: 268–271). The Brittonic stem *_anke/o-_ is attributed by McCone to influence from the verbal noun *_h_2(e)nk̂-o-_ (while W. _rhyngu bodd_ 'please' continues old *_ro-inke/o-_). Such a derivation is semantically difficult: McCone compares OIr. _do·beir_, which means both 'brings' and 'takes', but this does not seem strictly comparable to 'comes' vs. 'apportions'. Indo-European verbs with more similar semantics probably belong to a different root *_$h_2$nek̂-_: Skt. _nákṣati_ 'reaches' < *_$h_2$nek̂-s-e/o-_, Skt. _ā́naṭ_ (aor.) 'has reached' < *_e-$h_2$nek̂-_, Goth. _ganah_ (pret.) 'sufficed' < *_h_2e-$h_2$nok̂-_ (LIV 282–284). If _·icc_ were derived from this root instead, it would require unmotivated _schwebeablaut_ in a primary formation. An alternative reconstruction is given by LIV as *_h_2i-h_2n̥k̂-_, which would require the same replacement of the verbal stem by the verbal noun in British Celtic.

Schumacher (2004: 200–204; following Schrijver 1993: 39–42; 1999: 139) reconstructs a thematised nasal present *_-an-n-k-e/o-_ < *_h_2n̥-n-k-e/o-_, which, it is argued, would give both the Irish and British forms regularly, and which is indirectly attested in Lat. _nanciō_ 'light upon, obtain, meet'. Although it is conceivable that _do·icc_ could reflect *_h_2ēnk̂-_ as supposed by McCone, it is not very likely, and thus cannot be used as evidence for Eichner's law.

4. OIr. _lie_ (m. _nk_-stem) 'stone' has recently been compared to Gk. λᾶας 'stone', and Armenian _leaṙn_ 'stone', reflecting a lengthened grade *_lēh_2-_, with failure of the laryngeal to colour the preceding vowel by Eichner's law (thus Eichner _apud_ Mayrhofer 1986: 133). The stem formations of these words have been somewhat unclear, but λᾶας must reflect *_lās-_, since Cypriot _-la-o_ (gen. sg.) and Myc. _ra-e-ja_ (adj.) 'of stone' rule out *_-i̯-_ and *_-u̯-_ (Rasmussen 1990–1991b [1999]: 398–399). Nikolaev (2010) reconstructs for λᾶας a singulative *_leh_2s-h_2-s_, derived from an old collective of a neuter _s_-stem *_leh_2-es-h_2_ 'mass of stones'. He argues that Arm. _leaṙn_ < *_lēh_2-u̯-r̥-no-_ and OIr. _lie_ < *_lēh_2-u̯-n̥-k-_ both come from an original _r/n_-stem. This is derived from an original _u_-stem *_lē̆h_2-u-_ found in Greek words such as λαιαί < *_lau̯i̯ă_ 'pebbles, stones used as weights', Att. λαύρα 'alley, lane', ἐλεύσθην (aor. pass.) 'was stoned', and perhaps Hitt. _laḫḫura-_ 'sacrificial table'.

However, a preform *_lēh_2-_ > *_lē-_ > Proto-Celtic *_lī-_ is ruled out by _lecaib_ (dat. pl., in the _Táin Bó Froích_; Meid 2009: 35, 104–105), which demonstrates that the vowel in the first syllable must have been short *_-ĕ-_, and also rules out the existence of *_-u̯-_: the pre-syncope versions of this form must have been *_leëgabih_ < *_le(s)n̥k-ob_^{h}_is_.[42] To suppose an original long *-_ī_- < *-_ē_- in the first syllable would require both shortening and lowering: neither is possible, since shortening of long vowels occurred only in hiatus after syncope (GOI 33), and since lowering was only triggered by *-_a_- or *-_o_- in the following syllable (McCone 1996: 110); before *-_en_- (also from *-_an_- < *-_n̥_- before *-_k_- in Irish; McCone 1996: 50–51, 70–79) lowering of a preceding *-_ĭ_- would not have occurred. Furthermore *-_u̯_- cannot be reconstructed either, since intervocalic *-_u̯_- before subsequently syncopated *-_e_- would have been palatalised in Irish, and have formed a diphthong with the preceding vowel to give dat. pl. ^{x}_leícaib_ < *_leu̯'egabih_ < *_leu̯n̥k-ob_^{h}_is_ (Uhlich 1995: 15). In the other forms of this noun, such as nom. sg. _lie_, the -_i_- must be due to raising of *-_ĕ_- in hiatus (McCone 1996: 130).

Consequently, it is not possible to reconstruct a Proto-Celtic preform *_līu̯ank_- < *_lēh_$_2$-_u̯n̥-ko_- for OIr. _lie_, as per Nikolaev. Instead we must start from a form like *_lesank_- (perhaps also *_lepank_-, with loss of intervocalic *-_p_-; see Stifter 2011a: 4–9 for discussion of vowel sequences resulting from loss of *-_p_-), for which at present the etymology must remain uncertain.

§ 175. _Conclusion_

The best Celtic evidence for colouring of *$h_{2/3}$_ē_- or *-_ē_$h_{2/3}$- is § 173.1 OIr. _ág_, if from *h_2_ēĝ_-. § 174.1 OIr. _erbaid_, if derived from *h_3_ērb_^{h}-_o_- points in the other direction. An alternative analysis of OIr. _ág_ can be thought of, but the etymology of OIr. _erbaid_, resting on complex derivational, semantic and phonological developments, is not strong enough on its own to prove the existence of Eichner's law in Celtic.

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[42] This is backed up by the form _legga_ (acc. pl., LL 227 a 33), which is, however, in a rather late text.

CHAPTER SEVEN

LARYNGEALS IN COMPOSITION

Loss of Laryngeals in Compounds

§ 176. *Introduction*

There seems to have been a tendency, in Proto-Indo-European or in the daughter languages, for laryngeals to have been lost without trace in compounds and reduplicated forms. Identifying the precise environment(s) for this loss is very difficult, because compounding and (to a lesser extent) reduplication continued to be productive processes in the Indo-European daughter languages, and because simplex nominal forms and other parts of verbal paradigms provided models for the replacement of compound and reduplicated forms (as noted for Greek by Beekes 1969: 243). Consequently, cases of this kind of laryngeal loss tend to be found in isolated or archaic forms; conversely, apparent failure of this kind of laryngeal loss to occur in compound or reduplicated forms has not tended to be taken as strong counter-evidence to such a loss, unless it can be shown that the forms in which it failed to occur are demonstrably archaic. As a result, precise identification of the environments in which laryngeal loss is identifiable and the extent to which loss in particular environments is language-specific, is lacking. There is surely room for more research in this area.

For the following suggested environments for this type of laryngeal loss, with examples, see Beekes (1969: 242–245; with earlier literature), Mayrhofer (1986: 125, 129, 140, 149–150), Schrijver (1991a: 328–330), Jasanoff (1997: 180–181). The most widely accepted environment is the so-called 'νεογνός rule' (thus e.g. Weiss 2009: 113), whereby laryngeals are lost after syllabic sonorants and before a vowel (i.e. *_-CR̥HV-_); the same rule is often supposed also to have operated after high vowels (i.e. *_-CIHV-_). Examples include *_-ĝn̥h$_1$-o-_ in Gk. νεογνός 'new-born', Lat. _prīuignus_ 'step-son', _benignus_ 'kind', Goth. _niuklahs_ 'unworldly, childish' (with dissimilation of *_-n-_ and the addition of a *_-ko-_ suffix); *_k^{w}e-k^{w}l̥h$_1$-o-_ > Skt. _cakrám_, Gk. κύκλος 'wheel'; Gk. γίγνεται 'is born', Lat. _gignō_ 'beget' < *_ĝi-ĝn̥h$_1$-e/o-_; Skt. _á-bhvaḥ_ 'monstrous' < *_n̥-b^{h}uH-o-_. According to Kümmel (2007: 334–335), the νεογνός rule applied only to *_-h$_1$-_. Although this effect often seems to take place in the second element of the compound, or after the reduplication syllable, there are also examples of it in the first element of the compound, e.g. Skt. _gru-muṣṭíḥ_ ‘heavy handful’ < *_g^wr̥h_2-u-_. If Kümmel is right about the νεογνός rule’s restriction to *_-h_1-_, loss of the laryngeal in the first element of a compound must be considered a different environment.

Other possible environments include after high vowels and before consonants (*_-CIHC-_), and after syllabic sonorants and before consonants (*_-CR̥HC-_), e.g. Skt. _sú-ṣutiḥ_ ‘easy birth’ beside _sū́tiḥ_ ‘birth’ < *_-suH-ti-_, _carkr̥tíḥ_ ‘praising, mention, glory’ beside _kīrtíḥ_ ‘mention, speech, report’ < *_-kr̥H-ti-_[1] (loss in these envionments took place only in Indo-Iranian, according to Mayrhofer 1986: 149–150); after non-syllabic sonorants (Skt. _jajā́na_ (perf.) ‘has begotten’ < *_ĝeĝone_ < *_ĝe-ĝonh_1-e_); between consonants, e.g. Lat. _Cōnsus_ (theonym) < *_kom-$d^h$$h_1$-tu-_ (thus, doubtfully, Weiss 2009: 113), Skt. _devá-ttaḥ_ ‘given by the gods’; word-initially (e.g. Gk. ὑγιής ‘health’ < *_$h_1$su-g^wih_3-ēs_,[2] στεροπή ‘lightning’ < *_$h_2$ster-_). According to Rasmussen (1990–1991a [1999]: 456–457), laryngeals were lost after *_-n̥-_ and before consonants (*_-Cn̥HC-_) in Italic and Celtic (on which see below). It is not clear to what extent laryngeal loss in these environments should be accepted, and if so, whether it should be attributed to Proto-Indo-European itself, or to individual languages or language families.

The loss of the laryngeal in compound and reduplicated environments is often supposed to have something to do with the position of the accent, but it is difficult to formulate rules that do not rely on morphological information (as seen in Mayrhofer’s suggestion that laryngeals were lost in the first element of end-stressed compounds and the second element in the contexts *_-CR̥HV-_ and *_-CIHV-_).

Fritz (1996) takes a completely different approach, arguing that the regular development of *_(-)R̥.HV-_ and *_(-)I.HV-_ sequences in Proto-Indo-European was to *_(-)RV-_, *_(-)IV-_, with loss of the laryngeal between vowels, and resyllabification. Thus, the νεογνός rule would in fact reflect the original development of this sequence, while cases of apparent retention of the syllabic sonorant and high vowel to give other results (e.g. the developments to *_-R̥V-_ > *_-aRV-_ and *_-IV-_ > *_-II̯V-_ seen in Celtic, p. 169 f. and p. 170 ff.) are explained in other ways such as by Sievers-Lindeman’s law, and retention of syllabicity due to the presence of a morpheme or compound boundary

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[1] But _stīrṇáḥ_ ‘strewn’: _á-str̥taḥ_ ‘overcast’ should not be included, because they probably reflect different roots (EWAIA 2.755, 756–757; LIV 597–598, 599–600).

[2] But see Weiss (1994 [1995]) for an alternative etymology.

(thus e.g. *_h_2i̯u-$h_3$on-_ > *_h_2i̯u.on-_ > Skt. _yuvān-_). For a sceptical view of Fritz's approach, with regard to the question of which morpheme boundaries were productive at the time his law took place, see Müller (2007: 138). Fritz's explanation also crucially relies on the assumption that the liquids and nasals took part in Sievers-style variation; although this is often accepted, it is not absolutely certain (e.g. Sihler 2006: 180–182).

It has not proved possible to collect and discuss all the evidence for compound and reduplicated forms originally containing a laryngeal in Celtic. Instead, the forms given here are those in which laryngeal loss in a compound or reduplicated form has been suggested, or is a possible explanation. This evidence will be tested against the various suggested environments for laryngeal loss in Proto-Indo-European and the daughter languages in the order set out above.

§ 177. *_-CR̥HV- and_ *_-CIHV-_ (_The νεογνός Rule_)

1. OIr. _·fúair_ (pret.; _fo·fúair_ 'found') < *_u̯eu̯r-_ is cognate with Gk. εὗρον (aor.) 'found', which comes from *_u̯eu̯r-e/o-_ < *_u̯e-u̯r̥h_1-e/o-_ to the root *_u̯reh_1-_,[3] with loss of the laryngeal in reduplication (thus LIV 698, following Beckwith 1994 [1995]: 24–30). Schumacher (2004: 73, 681–682) objects that no other reduplicated aorist is found in Celtic. However, this is not a strong argument, since reduplicated aorists are uncommon (cf. 409 root-aorists and 177 _s_-aorists reconstructed by LIV 20–21 against 18 reduplicated aorists), and since it would not always be easy to distinguish perfects from reduplicated aorists in Celtic anyway.

Schumacher provides another explanation for _·fúair_ < *_u̯e-u̯r-_ (and OIr. _-geuin_ < *_gegn-_ below). Starting from a perfect formation, he observes that the 1sg. *_u̯e-u̯roh_1-h_2e_ and 3sg. *_u̯e-u̯roh_1-e_ would have given *_u̯eu̯rū_ in Proto-Celtic, and he argues that these were replaced with the usual endings to give *_u̯eu̯ra_ and *_u̯eu̯re_. The model for this change was the roots in *_CeH-_, as in Lep. _TETU_ (3sg.) < *_dedū_ < *_de-doh_3-e_ 'gave' or *_d^he-d^hoh_1-e_ 'set up'. In the 3pl. the form *_$d^{(h)}$e-$d^{(h)}$$h_{(1,3)}$-r̥_[4] would have given *_dedar_, which could be reanalysed as a stem *_ded-_ plus ending *_-ar_, and allowed the reanalysis and remodelling of *_dedū_ to *_ded-a/e_, which is actually attested in Gaul. δεδε (3sg.) 'gave, set up'. From this, the pattern of the verbal root *_dō/ē-_ with perfect stem **ded-* spread to other verbal roots ending in a long vowel such as *u̯rē-* < **u̯reh$_1$-* and **gnō-* < **ĝneh$_3$-*, resulting in the creation of perfects in **u̯eu̯r-* and **gegn-*.

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[3] _Contra_ LIV (698), Arm. _gerem_ 'take prisoner' may not belong here (Praust 2005).

[4] Schumacher takes *_-r̥_ to be the 3pl. perfect ending in Celtic rather than *_-ēr_. On the perfect endings in Celtic, see McCone (2006a: 148–155), and on the 3pl. Jasanoff (2003: 32–34).

In fact, for these verbs, the model of **ded-* is probably not required, since the 3pl. **u̯e-u̯r̥h$_1$-r̥* and **ĝe-ĝn̥h$_3$-r̥* would probably have given **u̯eu̯r̥-r̥* > **u̯eu̯r-r̥* > **u̯eu̯rar* and **gegn̥-r̥* > **gegn-r̥* > **gegnar* respectively (cf. **tr̥h$_2$-n̥t-s* > **trn̥ts* > OIr. *trá*, p. 179).

Since there is evidence from Greek for a reduplicated aorist, it is plausible that *·fúair* comes from **u̯e-u̯r̥h$_1$-e/o-* with laryngeal loss via the νεογνός rule. However, a perfect origin cannot be ruled out.

2. OIr. *-geuin* (pret.; *·aithgeuin* 'knew, knows') < **ati-ge-gn-e*, MW. *atwaen* (pret. 3sg.), MC. *aswon* (3sg.) 'knows' < **ati-u̯o-gn-e*[5] point to a perfect stem **gegn-*. It is not likely that this is due to the νεογνός rule, because the only place where this would apply would be the 2pl. **ĝe-ĝn̥h$_3$-e* (unless the 3pl. ending in Celtic was **-ēr* rather than **-r̥*; there is no direct evidence). The creation of the stem **gegn-* is probably due to remodelling of the divergent 1sg. and 3sg. **gegnū*, as discussed above.

3. Gaul. *-gnos* (p.n. element) comes from **-ĝn̥h$_1$-o-*, with loss of the laryngeal as in Gk. νεογνός, Goth. *niuklahs* 'unworldly, childish', Lat. *prīuignus* 'step-son' (Mayrhofer 1986: 129). Gaul. *-cnos* may come from **-kn̥h$_1$-o-* (see OIr. *cain* p. 91); this is doubted by Delamarre (2003: 177), who sees *-cnos* as a variant of *-gnos*.

4. OIr. *námae* (m. *t*-stem) 'enemy', Gaul. *Namanto-* (p.n. element) is probably an example of the νεογνός rule if it goes back to **n̥-h$_2$m-n̥t-* < **n̥-h$_2$m̥h$_3$-n̥t-*. But it cannot be ruled out that it goes back to **ne-h$_2$emh$_3$-n̥t-* (see p. 178).

5. MIr. *teol* 'theft' is connected by LEIA (T-52) with MIr. *tlenaid* 'takes away, steals' < **telh$_2$-* 'bear, support' (LIV 622–623; Schumacher 2004: 641–642; see MIr. *tláith* p. 81), and reconstructed as **tetlu-*. This would imply **te-tl̥h$_2$-u-*, with loss of laryngeal in a reduplicated form. However, (pseudo-) nasal presents tend to have verbal nouns ending in *-eol* in Irish (cf. MIr. *déol* beside OIr. *denait*, p. 153 and OIr. *céol* 'musical instrument, music' beside *canaid* 'sings') so *teol* could be analogical. Even if it does reflect **te-tlu-*, it could be derived from the *neo-aniṭ* root found in the verb.

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[5] With dereduplication in British; on these forms see Schumacher (2004: 347–352, especially 350–352).

6. OW. _uiidimm_ gl. _lignismus_, MW. _gwydyu_, _gwdif_, W. _gwddyf_ (m.) ‘bill-hook, sickle’, OB. _guedom_ gl. _bidubio_ come from _*u̯idu-bi̯o-_ ‘wood-cutting’ < _*-biHo-_ (_*b^{h}eiH-_ ‘strike’, LIV 72; see OIr. _·bíth_ p. 113). MIr. _fidba_ ‘bill-hook’, Gallo-Lat. _uidubium_ can come from _*-bii̯o-_ or _*-bi̯o-_. Gaul. _onobiia_, if it means ‘thirst-cutting’, might suggest _*-bii̯ā_, but it is very uncertain (Delamarre 2003: 241). Perhaps the British forms in _*-bi̯o-_ < _*b^{h}iH-o-_ may be the result of the νεογνός rule, but in another compound of this root the laryngeal was not lost early: MW. _dyuit_ (m.) ‘grief, sorrow, affliction’ < _*tu-bii̯o-_. According to Schrijver (1995: 285–287), this difference is to be explained by a rule which reduced _*-ii̯V-_ to _*-i̯V-_ in British Celtic after a disyllabic stem. Given the different results of the sequence _*-IH-o-_ in this root, no conclusion can be drawn.

§ 178. _*-CR̥HC-_

1. Gaul. _andognam_ (acc.) ‘indigenous’ < _*h$_{1}$n̥do-ĝn̥h$_{1}$-m_ is cognate with Lat. _indigena_ ‘native’ < _*ĝenh$_{1}$-_ (LIV 163–165; see OIr. _·gainedar_ p. 93). According to Lambert (1994a: 58; followed by Delamarre 2003: 48), this has final _-ăm_ not _-ām_, since it has not undergone the morphological change from _-ām_ to _-im_ characteristic of the _ā_-stems in late Gaulish, and seen in other words on the same inscription. However, the distinction between _*-ăm_ and _*-ām_ in Gaulish is problematic, since long vowels were shortened before nasals in Proto-Celtic (McCone 1996: 61). It could be argued that _*-ām_ was restored in the accusative singular of _ā_-stems by analogy with the rest of the paradigm, while _*-ăm_ was retained in _andognam_ because there were no forms with _*-ā_ in the paradigm, since it was originally a root noun. According to Delamarre (2003: 181), the short _*-ă-_ in forms derived from the zero-grade of _*ĝenh$_{1}$-_ is due to avoidance of homonymy with _*gnā-_ ‘know’ < _*ĝn̥h$_{3}$-_.

2. MIr. _bard_ (m. _o_-stem) ‘poet, rhymester’, MW. _bard_, W. _bardd_ (m.) ‘bard, poet’, MB. _barz_, B. _barzh_ (m.) ‘poet, bard’, OC. _barth_ gl. _mimus_, _scurra_, Gallo-Lat. _bardus_ ‘bard’ < _*bardo-_ may come from _*g^{w}r̥H-d^{h}h$_{1}$o-_ (see p. 82).

3. MW. _gognaw_ (adj.) ‘provoking, exciting’ < _*-gnău̯o-_ contrasts with the long vowel in MW. _gno_ ‘manifest, evident’ < _*gnāu̯o-_ < _*ĝn̥h$_{3}$-u̯o-_ (see MIr. _gnó_ p. 98).

4. OW. _modreped_ (pl.) gl. _materterae_, MW. _modryb_ (f.) ‘aunt’, OB. _motrep_, MB. _mozreb_, B. _moereb_ (f.) ‘aunt’, OC. _modereb_ gl. _matertera_[6] comes from

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[6] The full gloss is _modereb abarh mam_ ‘aunt on the mother’s side’.

**mātrVk^{w}ī.*[7] According to Hamp (1973: 78–79, 85–86), this comes originally from **meh$_2$tr̥-h$_3$k^w-ih$_2$* ‘woman resembling a mother’[8] > **mātr̥-k^{w}ī* > **mātrikī* (not related to Skt. *mātr̥kā* ‘mother, grandmother’ < **meh$_2$tr̥-keh$_2$*). The second part of the compound consists of the zero grade of the root **h$_3$ek^w-* (cf. Gk. ὄσσε ‘eyes’; LIV 297–298; NIL 370–383). Hamp explains the loss of the laryngeal with regard to the non-existence of **h$_3$ek^w-* as an independent root in Celtic, and argues that **-h$_3$k^w-* was consequently remodelled as a suffix **-k^w-*. This is counter-intuitive: a loss of independent **h$_3$k^w-* would have meant that there was no model for remodelling of what was now a non-productive suffix **-h$_3$k^w-* or *-$^{[+\text{long}]}$*k^w-* (as noted by Joseph 1980: 14). Besides, other derivatives of this root did exist in Celtic, e.g. Gaul. *exsops* ‘blind’.

If *modreped* really comes from < **mātr̥-k^{w}ī* < **meh$_2$tr̥-h$_3$k^w-ih$_2$*, it is possible that the laryngeal could have been lost at an early stage, allowing the usual development of **-r̥-* before a plosive. But this cannot be certain, because it is also possible that the development was **meh$_2$tr̥-h$_3$k^w-ih$_2$* > **mātrăk^{w}ī*, in which case *modreped* shows the same development as MW. *gognaw* above, MW. *yngnat* below.

5. MW. *yngnat*, W. *ynad* (m.) ‘magistrate, judge, wise man’, MW. *dirnat*, W. *dirnad* (m.) ‘comprehension, understanding’, MW. *adnabot*, W. *adnabod* (vn.), MB. *aznauout* (inf.) ‘recognise, acknowledge, know’, MB. *haznat*, B. *anat* (adj.) ‘evident, clear’, OIr. *etarcnad* ‘known, recognised’, perhaps Gaul. *Ategnatus* (p.n.) < **-gnăto-* may come from either **ĝn̥h$_3$-to-* or **ĝneh$_3$-to-*; on the basis of the semantics the original past participle **ĝn̥h$_3$-to-* is likely to be the base of at least some of the forms (see p. 77). Since the expected result of **ĝn̥h$_3$-to-* is probably **gnāto-* (see p. 69 ff.), and since the uncompounded form shows a long vowel (OIr *gnáth* p. 79, if not from **ĝneh$_3$-to-*), it is plausible to see the short vowel in these forms as due to the word being in a compound.[9]

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[7] *V* = **-i-*, **-o-*, **-e-*, and perhaps **-a-* (> MW. *-y-* before a labial by *i*-affection, according to Morris Jones 1913: 91; but Schrijver 1995: 258 suggests that the development to *-y-* only occurs in plurals).

[8] Not **mātr-h3okw-*, as reported by NIL (380).

[9] If the shortening is due to being in a compound, this also makes it more likely that these forms reflect **ĝn̥h$_3$-to-* rather than **ĝneh$_3$-to-*, since it does not seem to have been suggested that loss of a laryngeal in a compound ever happened to **-EHC-* sequences.

§ 179. *-_CIHC_-

1. OIr. _enech_ (n. _o_-stem) 'face, front', OW. _enep_ gl. _faciem_, MB. _enep_ (m.) 'face', OC. _eneb_ gl. _pagina_ < *_enĭk^{w}o-_ are, according to Hamp (1973; 1974: 261–268), cognate with Skt. _ánīkam_ 'face, front', Gk. ἐνῑπή 'rebuke, reproof' < *_eni-h$_3$k^{w}o-/eh$_2$_, which is convincing both formally and semantically.[10] The same root *_h$_3$ek^w-_ is present as in OW. _modreped_. As already discussed, Hamp's explanation for the loss of the laryngeal in Celtic compounds from this root is implausible (see p. 260). Apart from supposing laryngeal loss in a compound, it could be explained as an instance of Dybo's rule (p. 132 ff.) or be due to analogy with other compounds formed with *_eni-_, after the loss of initial laryngeals in Celtic (see p. 48 ff.); cf. OIr. _sonairt_ 'strong, firm' < *_so-ner-ti-_ ← *_su-h$_2$ner-ti-_.

§ 180. *-_CHC_-

1. MIr. _deidmea_ (f. gen. sg.) 'law, usage', MW. _dedyf_, W. _deddf_ (f.) 'law', OB. _dedm_* < *_dedmi-_ may come from reduplicated *_d^{h}e-d^{h}h$_1$-mi-_[11] (Thurneysen 1923: 57; see p. 184).

2. OIr. _iress_ (f. _ā_-stem) 'religion, creed; faith, belief' < *_eristā_ is etymologised by Matasović (2009: 128) as from *_peri-d^{h}h$_1$-tā_ (*_d^{h}eh$_1$-_ 'put'; LIV 136–138), but *_peri-sth$_2$-eh$_2$_ is also possible (NIL 637, 645).

3. MIr. _ros_ (m. _o_-stem) 'flax-seed, linseed, any small seed' may come from *_pro-sh$_1$-ti-_ (see p. 190). The loss of the laryngeal may be due to composition, but it may also reflect the regular change *-_C.HP-_ > *-_CP-_ (p. 180 ff.).

§ 181. _Conclusion_

The loss of the laryngeal in compounds in the environment *-_CR̥HV-_ is well attested in other languages, and § 177.3 Gaul. _-gnos_ < *_gn̥h$_1$-o-_ demonstrates it in Celtic. It is possible, but not certain, that § 177.1 OIr. _·fúair_ < *_u̯e-u̯r̥h$_1$-e/o-_ reflects the same rule, which is probably of Proto-Indo-European date, since it is found in many languages.

For *-_CR̥HC-_ sequences, the data is mixed. One form points to a development to *-_CaRC-_ (§ 178.2 MIr. _bard_ < *_g^{w}r̥H-d^{h}h$_1$-o-_), and two more pieces of evidence point to a development _*-CRăC-_: §178.3 MW. _gognaw_ < _*-ĝn̥h$_3$-u̯o-_ and §178.5 MW. _yngnat_ < _*-ĝn̥h$_3$-to-_ (although these both belong to the same root, so may not be considered independent evidence). §178.4 OW. _modreped_ < _*meh$_2$tr̥-h$_3$k^w-ih$_2$_) may point to loss of the laryngeal at Indo-European level, if it reflects an intermediate form _*mātrik^{w}ī_, but _*mātrăk^{w}ī_ is also possible, in which case it may show the same development as _gognaw_ and _yngnat_. This seems to me the most plausible reflex. Although Rasmussen's rule (_*-Cn̥HC-_ > _*-CnăC-_) is dismissed by Isaac (2007a: 28 fn. 52) as _ad hoc_, this is not the case, since both _gognaw_ and _yngnat_ are accompanied by non-compounded forms from the Celtic languages which show long vowels, and which also probably reflect zero grade of the root. The rule can probably be expanded to cover all cases of _*-CR̥HC-_ in compounds. It might be argued that loss of laryngeal in compounds had a different effect on _*-CL̥HC-_ than on _*-CN̥HC-_ sequences, but I do not think it is plausible that this can be the explanation for MIr. _bard_ < _*g^{w}r̥H-d^{h}h$_1$-o-_, since the normal development of _*CL̥HC-_ sequences to _*CLăC-_ shows that the prop vowel that developed in this sequence was to the right of the liquid. Some other explanation is therefore required for this very difficult form.

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[10] Despite Joseph (1980: 14–15), who objects that MW. _wyneb_ (m.) 'face, countenance', which Hamp derives from *_ep-eni-h$_3$k^{w}o-_, ought to mean 'upon the face'. There are various phonological difficulties associated with the Irish and British forms, but these do not affect the plausibility of the etymology. See Isaac (2007a: 49–50).

[11] In laryngealistic notation.

The loss of the laryngeal in _*-CR̥HC-_ sequences in compounds must have taken place at a post-Proto-Indo-European stage when the sequence was phonetically [-CRəHC-] (as noted already by Beekes 1969: 243). An earlier loss would have led to e.g. _*ĝn̥h$_3$-to-_ > _*ĝn̥to-_ > ^{x}_ganto-_. A shared (or parallel) reflex is also found in Lat. _cognitus_ 'known, proved', _agnitus_ 'known, recognised' < _*-gnV̆to-_. For the Latin forms alternative developments are possible, e.g. _*-gn̥h$_3$-eto-_ > _*-gneto-_ by the νεογνός rule, or _*-gn̥h$_3$-eto-_ > _*-genoto-_ > _*-gnito-_ by syncope and vowel weakening (Schrijver 1991a: 199–202; Vine 1998: 37–38), but it is plausible to take it as identical to the Celtic forms < _*-ĝn̥h$_3$-to-_.

There is no good evidence for _*-CIHC-_ in a compound. §180.1 MIr. _deidmea_ < _*d^{h}e-d^{h}h$_1$-mi-_ may suggest loss of laryngeal in _*-CHC-_ in a compound, but more evidence is needed.

It remains unclear why compounding and reduplication should have had an effect on laryngeals. No over-arching explanation in terms of the position of the Indo-European accent has yet been forthcoming. In the case of _*-CR̥HC-_ sequences, an explanation might be sought in terms of the Italic and Celtic accents. It is possible (although by no means certain), that both language families had an initial stress accent.[12] The loss of the laryngeal in the sequence _*-CR̥HC-_ [-CRəHC-] might be due to its post-tonic position.

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[12] For Italic see Weiss (2009: 109–110, esp. fn. 16), for Celtic see Schrijver (1995: 16–22).

§ 182. *Excursus: The Proto-Celtic Desiderative/Future*

The Proto-Celtic desiderative/future suffix was **-āse/o-*, the result of a resegmentation of reduplicated derivatives of the type **Ci-CR̥H-se/o-* (see p. 89 fn. 42). A Proto-Indo-European loss of laryngeals in reduplication would of course make this explanation impossible, since **-CR̥Hs-* would give **-CaRs-* (McCone 1991b: 154), and McCone is consequently sceptical of such a loss. However, if the loss did not take place until a Proto-Celtic (or Italo-Celtic) stage, the expected development would instead be to **-CRăse/o-*. This may have been avoided by replacement of the laryngeal by analogy with the rest of the verbal paradigm, or by restoration of the **-ā-* by analogy with other zero-grade parts of the paradigm.

CHAPTER EIGHT

CONCLUSION

Summary and Conclusions

§ 183. _Results_

The results of the current investigation of the reflexes of the laryngeals in Proto-Celtic are presented here, in the order in which they were discussed.

§ 184. _Chapter II: Word-Initial Laryngeal_

Laryngeals were lost word-initially before a vowel, with colouring of *_h_2eC-_ > *_aC-_, *_h_3eC-_ > *_oC-_, *_h_2oC-_ > *_oC-_ (§ 18–§ 28). In a sequence *_HEHC-_, the medial laryngeal was lost with compensatory lengthening of the preceding vowel; if it was *_-e-_, the vowel was coloured by the neighbouring laryngeals (§ 29–§ 30). Laryngeals were lost without reflex in the sequence *_HIC-_ (§ 31–§ 35). A sequence *_h_2R̥C-_ developed to *_aR̥C-_; in *_h_1R̥C-_ the laryngeal may have been lost early, leading to the usual development of *_R̥C-_ depending on the consonant following the syllabic sonorant (but the evidence is meagre). There is no conclusive evidence for *_h_3R̥C-_ (§ 36–§ 39). The small amount of evidence for *_HR̥HC-_ sequences suggests a possible distinction according to whether the medial laryngeal belonged to the initial or following syllable: it is possible that *_HR̥H.C-_ gave *_aRC-_, while *_HR̥.HC-_ gave *_aRaC-_ (§ 40–§ 45). *_HIHC-_ may have given *_I̯aC-_ § 46–§ 50). Laryngeals before a consonant were lost without reflex (§ 51–§ 55); there is no good evidence for *_HHC-_ (§ 56–§ 59).

§ 185. _Chapter III: Laryngeals in the First Syllable_

A laryngeal gave *_-ă-_ in *_CHC-_ sequences (§ 60–§ 63), as also in *_R̥HC-_ > *_RăC-_ (§ 64–§ 66). *_IHC-_ probably resulted in *_ĪC-_ (§ 67–§ 71). The laryngeals were lost in the sequence *_CHEC-_, with colouring of a following *_-e-_ by *_-h_2-_ and *_-h_3-_ (§ 72–§ 73). A sequence *_CR̥HC(C)-_ gave *_CRăC(C)-_ when the first consonant was not a plosive, and when the laryngeal was followed by a plosive or by two consonants, i.e. when the laryngeal and syllabic sonorant were tautosyllabic. When the initial consonant was a plosive, or when the laryngeal was followed by a single sonorant, the result was *_CRāC_(_C_)- (§ 74–§ 78). Laryngeals were lost before *-_i̯_- in the sequence *_CR̥HI̯_-; before *-_u̯_- it is possible that the same rule applied as for other *_CR̥HC_(_C_)- sequences (§ 79–§ 85). Laryngeals were lost before *-_i̯_- in *_CIHI̯_-sequences, but gave the same result before *-_u̯_- as in other *_CIHC_- sequences, i.e. usually *_CĪu̯_- (§ 86–§ 91). *_CEHC_- sequences gave *_CĒC_-, with colouring of *-_e_- by *-h_2- and *-h_3- (§ 92–§ 97). The regular result of both *_CIHC_- and *_CHIC_- sequences was *_CĪC_- (§ 98–§ 105). Exceptions to this rule may be due to Dybo's rule, which may have caused shortening of long high vowels; it is not clear that this process depended on the position of the Indo-European accent, as usually claimed (§ 106–§ 113). The 'Wetter Regel', which is supposed to have been the cause of short vowels in original *_CEHCC_- and *_CIHCC_- sequences, did not apply in Proto-Celtic when the medial consonants formed an *-_SR_- sequence; it is possible, but not certain, that the 'Wetter Regel' did have an effect with other types of consonant sequence (§ 114–§ 119). In *-_CHCC_- sequences where the laryngeal was not in the onset of the first syllable laryngeals were lost without reflex unless followed by an *-_SR_- sequence; *-_CHSR_- gave *-_CaSR_- (§ 120–§ 123).

§ 186. _Chapter IV: Laryngeals in Non-Initial Syllable_

In *_CEHE_- sequences, the laryngeal was lost (§ 124). *_CR̥HE_- and *_CR̥HI_- gave *_CaRE_- and *_CaRI_- (§ 125–§ 126). The sequence *_CIHE_- resulted in *_CII̯E_- (§ 127–§ 128). *_CEHI_- sequences resulted in the loss of the laryngeal, with colouring of previous *-_e_- by *-h_2- and *-h_3-, and formed a diphthong with the following high vowel (§ 129–§ 130). The sequence *_CEHR̥_- gave *_CER_-; *_CR̥HR̥_- lost the laryngeal and de-syllabified the first sonorant to give *_CRR̥_-. In *_CIHR̥_- the laryngeal was lost and the resulting hiatus filled with a glide to give *_CII̯R̥_- (§ 131–§ 135). A laryngeal between two consonants and not in the onset of the first syllable was lost without reflex when the second consonant was a plosive, and otherwise left *-_a_-: *-_CHP_- > *-_CP_-, but *-_CHR_- > *-_CaR_- (§ 136–§ 139). In the sequence *-_VCHI̯_-, laryngeals were lost before *-_i̯_-, and perhaps also before *-_u̯_- (§ 140–§ 147). It is not clear that *-h_3- led to voicing of a previous voiceless stop; after other consonants and before a vowel laryngeals were lost without reflex other than colouring of an adjacent *-_e_-, with the exception of the sequence *-_EIHV_-, which developed to *-_EI̯I̯V_- (§ 148–§ 152).

§ 187. *Chapter V: Word-Final Laryngeals*

Laryngeals lengthened the preceding vowel in **-IH* (§ 153–§ 155) and **-EH* (§ 156–§ 157) sequences; they may have been lost without reflex in **-PH* sequences, and lost with lengthening of the preceding vowel in **-RH* (§ 158–§ 161).

§ 188. *Chapter VI: Other Environments*

The regular result of **-EI̯HC-* sequences in Proto-Celtic is unclear; it may have depended on the following consonant or consonant group (§ 162–§ 165). There is no good Celtic evidence for the Saussure effect, whereby **-oRHC-* gave **-oRC-* in Proto-Indo-European (§ 166–§ 171). The evidence of Celtic is uncertain with regard to Eichner's law, which claims that **-ē-* was not coloured by laryngeals in Proto-Indo-European (§ 172–§ 175).

§ 189. *Chapter VII: Laryngeals in Composition*

Laryngeals were lost without reflex in Proto-Celtic in compounds in the environment **-CR̥HV-*; *-CR̥HC-* sequences resulted in **-CRăC-*; loss of laryngeals in other environments in compounds remains uncertain (§ 176–§ 182).

§ 190. *Celtic Laryngeals and Syllabification*

Investigation into the reflexes of the laryngeals in Celtic has shown that the position of the laryngeal in the syllable is often very important for its development. There do seem to be some cases where the syllable boundary does not make a difference; thus, for example, laryngeals are often lost before **-i̯-* regardless of whether the sequence **-Hi̯-* is heterosyllabic (**CR̥H.i̯V-*; see p. 89 ff.) or tautosyllabic (**-VCHi̯-*; see p. 201 ff.). However, for others the position of the syllable boundary is extremely important. Thus, interconsonantal laryngeals are lost before tautosyllabic plosives, e.g. **u̯er.Hĝeh*$_2$ > OIr. *ferc*, but not before heterosyllabic ones, e.g. **terh*$_1$*.tro-* > MIr. *tarathar* (p. 180 ff.).

If correctly understood, there is a group of environments in which the laryngeal developments, in addition to being sensitive to their position in the syllable, also prompt us somewhat to alter one of the assumptions about the position of syllable boundaries with which we began this work (p. 7 ff.). This is the idea that all intervocalic sequences of two consonants were treated as heterosyllabic (i.e. as **-C.C-*). With the appropriate disclaimers, given the paucity of the evidence, there are several rules which suggest that in Proto-Celtic, at least, intervocalic sequences of an obstruent followed by a sonorant became tautosyllabic (i.e. *_-.SR-_). This did not apply to sequences with a non-sonorant (including *_-I̯-_) in second position (with the possible exception of *_-sC-_ sequences). Evidence, of varying reliability, for this syllabification consists of: 1) the development of *_HR̥H.CC-_ to *_HR̥CC-_ (OIr. _ainm_ < *_h_$_1$_n̥h_$_3$_-mn-_), but *_HR̥.HR-_ > *_aRaR-_ (*_h_$_1$_r̥h_$_3$_-mo-_ > MW. _araf_); 2) of *_MR̥H.CC-_ > *_MRăCC-_ (MIr. _flann_ < *_u̯l̥h_$_2$_-sno-_), *_MR̥H.P-_ > *_MRăP-_ (OIr. _mrath_ < *_mr̥h_$_2$_.to-_) and conceivably *_MR̥H.u̯-_ > *_MRău̯-_ (MB. _frau_ < *_spr̥H-u̯o-_), but *_MR̥.HR-_ > *_MRāR-_ (OIr. _slán_ < *_sl̥H-no-_); 3) of *_-ĒC.I̯-_ to *_-Ē̆CI̯-_ (OIr. _Sadb_ < *_su̯ād-u̯ā_) but retention of the long vowel in *_-Ē.SR-_ (MW. _hidl_ < *_sē-tlo-_). The last example suggests that this syllabification was maintained until after laryngeals were lost before consonants with compensatory lengthening of the preceding vowels, but the evidence is particularly precarious.

§ 191. _Celtic Evidence for the Phonetics of the Laryngeals_

The Celtic data has very little to provide by way of evidence for the phonetics of the laryngeals. The claim that *_-h_$_3$_-_ caused voicing of preceding *_-p-_, and hence was voiced itself, rests largely on Celtic evidence, but is not certain. If the interpretation proposed here is accepted, the combined evidence of the rules *_HR̥H.-_ > *_HR̥-_ and *_MR̥H._ > *_MRă-_ show that all the laryngeals were non-plosives (for *_-h_$_1$_-_ the evidence consists only of OIr. _ainm_ < *_h_$_1$_n̥h_$_3$_-mn-_), and at least *_-h_$_2$_-_ and *_-h_$_3$_-_ may have fallen together as [h].

§ 192. _Italo-Celtic_

It has long been argued that the Italic and Celtic language families are particularly closely related, being descended from a single proto-language usually called Italo-Celtic; for discussion see e.g. Watkins (1966b), Cowgill (1970), Jasanoff (1994 and 1997). Laryngeal reflexes have been considered as part of the evidence for the Italo-Celtic language family (e.g. Schrijver 1991a: 415–417, and _passim_).[1] Ringe (1988) is doubtful about Italo-Celtic on this basis, but for an inclusion of laryngeals in a relative chronology of Italo-Celtic see Schrijver (2006). Apparent examples of shared laryngeal developments between Italic and Celtic are discussed here; the Italic developments are taken from Schrijver (1991a; henceforth 'Schrijver').

Some of the rules involving laryngeals in Celtic are likely to be of Proto-Indo-European date (or at the latest after the split of Anatolian), and therefore provide no evidence: these include the metathesis of *CHIC- to *CIHC-, Eichner's law, *-VCHi̯- > *-VCi̯- (Pinault's law), the Saussure effect, *-ERH > *-ĒR, *CIHV- > *CII̯V-, *-CR̥/IHV- > *-CR/IV- in compounds, colouring of *-e- by laryngeals, loss of laryngeals after and before low vowels, *CR̥HV- > *CR̥V-.

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[1] But many of the examples given by Schrijver are not strictly laryngeal reflexes _per se_.

The following rules which took place in Celtic are not probative of an Italo-Celtic connection, because they are also shared with other languages (see p. 11 ff. for laryngeal developments in other languages):

1. *CR̥HiV- > *CR̥i̯V-, cf. Lat. *cariēs* 'rotting (of wood)' < *k̂r̥h$_2$-i̯ē- (Schrijver 292–293).[2] Also in Greek, perhaps Sanskrit; see p. 89.
2. *HI̯V- > *I̯V-, cf. Lat. *iuuencus* 'calf' < *h$_2$i̯u-h$_{(3)}$n̥-ko- (Schrijver 75–76). Also in Indo-Iranian, Germanic, Armenian, Albanian, Tocharian.
3. *R̥HC- > *RăC-, cf. Lat. *lăbāre* 'slip, fall, trip' (Schrijver 161–172). Also in Germanic (Beekes 1988a). Greek may also show the same development if the rule is really *R̥HC- > *RHC- [RHəC-], followed by *CHC- > *CăC- in Celtic, Italic and Germanic.
4. *CHC- > *CaC-, cf. Lat. *pater* 'father' < *ph$_2$ter- (Schrijver 85–105). Also in Germanic, Tocharian, Armenian, Albanian. Laryngeals also produced vocalic reflexes in Greek and Indo-Iranian.
5. *HIC- > *IC-, cf. Lat. *ictus* 'wounded' < *h$_2$ik̂-to- (Schrijver 73–75, 76). Also in Germanic, Indo-Iranian, Tocharian, Albanian.
6. *(-)CHV- > (-)CV-, cf. Lat. *erus* 'master' < *h$_1$esH-o- (Schrijver 109–111). Also in all Indo-European languages (though some languages show innovations such as aspiration before *-h$_2$-, sonorant gemination etc.).
7. *CEHR̥- gave *CER-, cf. Lat. *uentus* 'wind' < *h$_2$u̯eh$_1$-n̥t-o- (Schrijver 159–160). Since the details of the development are unclear in both Italic and Celtic, this cannot be used as evidence; whatever the correct formulation for Celtic the development is likely to be parallel to the development of this sequence in either Germanic or Indo-Iranian.
8. *CIHR̥- > *CII̯R̥-, cf. Lat. *iuuencus* 'calf' < *h$_2$i̯u-h$_{(3)}$n̥-ko- (Schrijver 321–322). Also in Sanskrit (cf. *yuvaśaḥ* 'young').
9. *CEHI- > *CEI-, cf. Lat. *caulis* 'stem, plant, cabbage' < *keh$_2$u-lo- (Schrijver 263–271). Also in all other non-Anatolian languages.
10. *CEHE- > *CEE-, cf. Lat. *flōs* 'flower' < *b^{h}leh$_3$-ōs (Schrijver 154–159). Also in all other non-Anatolian languages.

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[2] Although Italic and Celtic also share the subsequent development to *CaRi̯V-, this is the usual development for Celtic of *-R̥- when not before a stop or *-m-, so it is not evidence for Italo-Celtic.

11. **-IH* > **-Ī*, cf. Lat. *quī* ‘how, why’ < **k^{w}i-h$_1$* (Schrijver 81–84). Also in Indo-Iranian, Germanic, Albanian.
12. **-EH* > **-Ē*, cf. Lat. *dē* ‘from’ < **deh$_1$* (Schrijver 81). Also in all Indo-European languages.
13. Dybo’s rule took place also in Germanic.

Two apparently similar developments in Celtic and Latin need not have come about in the same way:

14. **#R̥HR̥-* > **RăR-* in OIr. *méit* < **m̥h$_1$-n̥t-ih$_2$* may be due to (analogical) loss of syllabicity of the initial **m̥-*, whence **mh$_1$n̥tih$_2$* > **măntī*; or it may be the result of **m̥h$_1$-n̥t-ih$_2$* > **m̥n̥tih$_2$* > **mn̥tih$_2$* > **măntī*. It need not be the result of the same rule which gave Lat. *mandere* ‘devour, chew, eat’ < **m̥h$_2$-n-d^h-* (Schrijver 222).
15. **CR̥HR̥-* > **CRă̄R-* in OIr. *trá* < **tr̥h$_2$-n̥t-s* may be due to **tr̥h$_2$-n̥t-s* > **tr̥n̥ts* > **trn̥ts* > **trants*. Lat. *trāns* ‘past, over’ must be due to a different rule (Schrijver 223–224), since **trn̥ts* would have given Lat. ^{x}*trēns*. Loss of laryngeals between vocalic segments is regular in most Indo-European languages.

The following rules are too uncertain to be used as evidence:

16. **HR̥HR-* > **aRaR-*, cf. Lat. *armus* ‘arm’ < **h$_2$r̥H-mo-* (?). According to Schrijver (304–314), the regular result of **HR̥HC-* in Latin is **RăC-*. However, this depends on the assumption that all roots beginning with **r-* were preceded by a laryngeal. This is not accepted here (see p. 9 f.), so a development **HR̥HC-* > **aRaC-* is possible. But there is no good evidence.
17. **HIHC-* > **I̯aC-*, cf. Lat. *uacuus* ‘empty’ < **h$_1$uh$_2$-k-u̯o-* (Schrijver 163, 307–309, 318).
18. **-CHC-* > **-CC-* in compounds, cf. Lat. *uicissim* ‘mutually’ < **u̯iki-dh$_3$-ti-* (?) (Schrijver 328–330). Also in Indo-Iranian (cf. Skt. *devā́ttaḥ* ‘given by the gods’).

The only plausible example of a shared innovation with regard to laryngeal developments in Italic and Celtic is therefore:

19. **-CR̥HC-* > **-CRăC-* in compounds, cf. Lat. *cognitus* ‘known, proved’ (Schrijver 199–202).

The Celtic rule **CR̥HC-* > **CRāC-* and the Italic rule **CR̥HC-* > **CRāC-* are a striking isogloss, as noted by Ringe (1988: 422–423) and Schrijver (2006: 50). However, as Ringe points out, the development of **CR̥HC-* to **CRĒC-* is paralleled in Greek, where the reflex of the cluster was coloured according to the nature of the laryngeal (e.g. στρωτός 'spread' < *_str̥h_3-to-_). So such a development may have occurred independently in the individual languages, and this is suggested by the necessity of placing the rule *_MR̥HP/CC-_ > *_MRăP/CC-_ before *_CR̥HC-_ > *_CRāC-_. That *_MR̥HP/CC-_ > *_MRăP/CC-_ is purely Celtic is shown by the fact that it occurs after *_-p-_ > *_-φ-_, and cf. Lat. _rādix_ 'root' < *_u̯r̥h_2d-_. If one denied the existence of a rule *_MR̥HCC-_ > *_MRăCC-_, and took it instead to reflect a rule *_CR̥HCC-_ > *_CRăCC-_ (there is no evidence against this; see p. 84ff.), it would be possible to compare it to the similar rule that produced Lat. _glăber_ 'smooth' < *_g^hl̥h_2d^h-ro-_ (Schrijver 184–191). However, this cannot be a shared rule, since the Latin rule applies only to *_CR̥HPC-_ (cf. _crābrō_ 'hornet' < *_k̂r̥Hsron-_; Schrijver 176), while the Celtic rule applies also to *_CR̥HsC-_ (cf. OIr. _rann_ 'share, part' < *_pr̥h_3-sneh_2_, p. 76). It would be possible, but not necessary, to assume that the phonetic realisation of /CR̥HC-/ as [CRəHC-] was an Italo-Celtic innovation (Schrijver 417–418), with subsequent developments in the individual languages.

The development *_-CR̥HC-_ > *_-CRăC-_ in compounds is the only Celtic change which can be shown to be shared only with Italic (and for Italic there are other possible explanations). Consequently, I conclude that the reflexes of the Proto-Indo-European laryngeals in Celtic do not provide any strong evidence for an Italo-Celtic subgroup (but they do not provide evidence against it).

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