12 The Celtic Languages

Patrick Sims-Williams

Introduction
The surviving Celtic languages fall into two groups: (a) the Brythonic (or Brittonic or British) group; (b) the Gaelic (or Goidelic or Irish) group. The two are very distinct and may have been mutually unintelligible for as long as two millennia. To the Brythonic group belong Welsh, spoken widely in Wales, and Breton, spoken in the west of Brittany. Cornish, the language of Cornwall, which was very similar to Breton, died out as a natural language in the eighteenth century. To the Gaelic group belong Irish (or Irish Gaelic), spoken mainly in the west of Ireland, and Scottish Gaelic, spoken mainly in the west of Scotland. Manx, the Gaelic language of the Isle of Man, died out as a natural language in the twentieth century. Celtic languages are also spoken in the Americas, as a result of the modern diaspora of Celtic-speaking peoples, so that, for example, there are Welsh/Spanish bilinguals in Patagonia in Argentina, and Scottish Gaelic/English bilinguals in Nova Scotia in Canada.

All these surviving Celtic languages (including Breton!) are known collectively as Insular Celtic languages, as opposed to the ancient Continental Celtic languages, e.g. Gaulish, Galatian, Celtiberian, etc., which were all dead by AD 500 and mostly much earlier. The term ‘Insular’ refers to the two islands of Ireland and Britain. From these the Gaelic and Brythonic languages spread: in about the fifth century AD Scotland was settled by emigrants from Ireland (the Scotti), while Armorica was settled by emigrants from southern Britain, becoming known as Brittany (Breton Breiz < Brettia). The theory that the Breton language includes a substratum of indigenous Armorican Celtic is unproven but not impossible.

The Brythonic dialects began to diverge into West British (> Welsh) and South-West British (> Cornish and Breton) in about the fifth century AD, but probably remained mutually intelligible for several centuries. The Gaelic dialects began to diverge in about the tenth century AD, but there was a common literary language to the end of the Middle Ages, and even today Irish and Scottish Gaelic are much more similar than are Breton and Welsh, which have long been mutually unintelligible. The geographical reason is obvious: there has always been easy travel between Scotland and northern Ireland. Another factor is that Welsh has been in contact with English, whereas Breton has been in contact with French. These contacts have influenced the syntax,
morphology and phonology of the languages; for example, there are nasal vowels in Breton and French, but not in Welsh and English.

Within most individual surviving languages there are marked dialectal differences, so that Breton speakers from north and south may find it easier to communicate in French, while Gaelic speakers from north and south may prefer to talk English together. Nearly all adult Celtic speakers are bilingual.

A general impression of the divergence of the Celtic languages may be gained from comparing the ordinal numerals in Gaulish (Schmidt 1983: 81, Lambert 1994: 131, McCone 1994: 208) with those in Old Irish (OIr.) and Middle Welsh (MW):

Table 12.1 Comparison of the ordinal numerals

<table>
<thead>
<tr>
<th>Gaulish (first century AD)</th>
<th>Old Irish (eighth century)</th>
<th>Middle Welsh (thirteenth century)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cintuxo(s)</td>
<td>cétn(a)ε</td>
<td>kyntaf</td>
</tr>
<tr>
<td>2 al(l)os</td>
<td>tán(ι)ise, aile</td>
<td>eil</td>
</tr>
<tr>
<td>3 trito(s), tr(iti)os</td>
<td>tris</td>
<td>tryd, f. tryded</td>
</tr>
<tr>
<td>4 petuar(ios)</td>
<td>cethramad</td>
<td>pedwyr, f. pedwared</td>
</tr>
<tr>
<td>5 pinpetos</td>
<td>cóiced</td>
<td>pymhet</td>
</tr>
<tr>
<td>6 suexos</td>
<td>se(i)ssed</td>
<td>chwech</td>
</tr>
<tr>
<td>7 sextametos</td>
<td>sechtmad</td>
<td>seithvet</td>
</tr>
<tr>
<td>8 oxumeto(s)</td>
<td>ochtmad</td>
<td>wythvet</td>
</tr>
<tr>
<td>9 namet(os)</td>
<td>nómad</td>
<td>nawvet</td>
</tr>
<tr>
<td>10 decametos</td>
<td>dechmad</td>
<td>decvet</td>
</tr>
</tbody>
</table>

Celtic

The term ‘Celtic’, as applied to the Insular Celtic-speaking peoples and their languages, is a modern one. These peoples did not refer to themselves and their languages as ‘Celtic’ until recently. For example, the medieval Irishmen were Goidil (an opprobrious name derived from Brythonic cf. W. gwýdd ‘wild’) and their language was Goídelach, and medieval Welshmen regarded themselves as Brython (< Lat. Brittones) or Cymry (< *kom-brogi ‘co-countrymen’) and their language was Cymraeg. (The Welsh themselves do not use the English name Welsh < Old Eng. w(e)alh ‘foreigner, or slave, mostly speaking a Romance or Gallo-Brythonic language’. This may derive ultimately from the Continental ethnic name Volcae.) There is no evidence that medieval Brythonic and Gaelic speakers recognized their special linguistic kinship; this was discovered by early comparative philologists such as the Welshman, Edward Lhuyd (in his Archaeologia Britannica, 1707). The modern Romantic idea of a pan-Celtic ethnic unity and ‘Celtic national character’ has had some influence even in the Celtic-speaking countries, but really derives from foreign works such as Ernest Renan’s La Poésie des races celtiques (1854) and Matthew Arnold’s The Study of Celtic Literature (1866).
The linguistic term ‘Celtic’ derives from the usage of ancient and early medieval Greek and Latin writers, who only use it of Continental Celtic languages; for example, as late as the ninth century Heiric of Auxerre, *Vita S. Germani* I.353, explains the place-name *Augustidunum* as meaning ‘Augusti mons’ in *Celtica lingua*. *Celtica lingua*, in fact, seems to have been equivalent to *Gallica lingua*, the term used, for example, in the sixth century by Venantius Fortunatus, who explained the old Gaulish place-name *Vernemetis* as ‘fanum ingens’ (great temple) (*Carmina* I.ix.9–10). Because close ethnic and linguistic similarities between Gaul and Britain had been noted by writers from Tacitus (*Agricola*, 11) down to the Renaissance, it seemed reasonable to early modern scholars to apply the term ‘Celtic’ to Brythonic as well. Thence it was extended to the languages of Ireland and Scotland, on comparative philological grounds, even though the Insular Celtic languages may never have been called ‘Celtic’ in Antiquity.

Despite its dubious origin, the term ‘Celtic’ remains a useful label for a distinct family of IE languages. The phonological and lexical similarities between Gaulish, Brythonic and Gaelic are illustrated by the above forms *Augustidunum* (i.e. Gaulish *-dünon*) and *Vernemetis* (i.e. Gaulish *Wer-nemeton*). With the first compare OIr. *dín* ‘fort’, Old Breton *din* gl. ‘arx’, Cornish *dyn*, OW *din* (note /u:/ > /y:/ > /i:/ in Brythonic). These Celtic cognates are distinct from the Germanic cognates such as Engl. *tūn* (> Modern Eng. *town*) in not showing the effect of Grimm’s Law (/d/ > /t/; see Chapter 13, *Consonants*, pp. 391–5). With the intensive prefix *Ver-* ‘ingens’ compare OIr. *for* < *wor-* < *wer-* and OWCB *guor-* < *wor-* < *wer-* (Subdivision, pp. 352–3). These cognate forms differ from IE cognates such as Gk *hyper* in showing the well-known Common Celtic loss of IE /p/, i.e. *uper* > *wer-. Lastly, Gaul. *nemeton* ‘fanum’ is probably related to Lat. *nemus*, Gk *nēmos* ‘grove’, but the dental formation is only paralleled within Celtic, for example, OIr. *nemed* [nē'meθ] (where μ represents a nasal bilabial fricative and cf. p. 362) gl. *sacellum* < *neuēpan* < *nemeton*, and OBr. personal names in -nemet < South-West British *-neuedon* and Old Welsh ones in -nimet < West British *-niucedon*, both < Early British *nemeton*. This formation is already seen in the Celtic name *Nemetios* in an Etruscan inscription of the fifth century BC at Genoa: *MI NEMETIEΣ* ‘I am [the tomb] of Nemetios’ (de Simone 1980).

**Origins**

The original ‘homeland’ of the Celtic speakers is unknown – but in any case the simplistic concept of a ‘homeland’ is of limited validity, both in terms of ethnegenesis and in terms of language origins: a people may comprise diverse ethnic elements, and a language may derive from various sources (e.g. the English are ethnically both Celtic and Germanic, and the IE element in
English comes via Latin and French as well as from Germanic). There are three main approaches to the problem.

Archaeologists have often associated Celtic speech with either the so-called Hallstatt Iron Age Culture or the later, so-called La Tène, Iron Age Culture (or with both); see, for example, the following maps (Figures 12.1, 12.2) from a classic work on the Celts (Powell 1980: 48, 115; cf. Mallory 1989: 96-107).

While it is likely that Celtic speakers were found in these areas, as in later centuries, we cannot equate language with material remains: there may have been non-Celtic speakers within these areas and Celtic speakers outside them. Hence we should not deduce from these maps that, for example, Celtic was spoken in Spain during the Hallstatt period, but did not reach Ireland until the late La Tène period. The fact is that we do not know for certain when Celtic was first spoken in Britain and Ireland (cf. Evans 1988). Even the extreme view is possible, that a form of Indo-European was already spoken in northwest Europe by 4000 BC and gradually developed into Celtic in situ (Renfrew 1987: 249; cf. Meid 1989; Mallory 1989: 274), provided that (it is a massive proviso) we can believe that communications over the four millennia BC.
would have allowed many parallel developments to take place in the Late IE and Early Celtic dialects. In short, archaeology cannot locate the first speakers of Celtic.

A second approach to the problem is to examine the references to Keltoi, Celtae, Galatae, etc. by Greek and Latin writers. There are several problems here: (a) these ethnic labels, which are of uncertain etymology (Evans 1967: 332–3), may not always correspond to our modern linguistic use of the term Celtic (see pp. 346–7 above). (b) Mediterranean observers may not have distinguished clearly between barbarian peoples such as Celtae and Germani, and probably simplified the true situation, especially at first (just as even today the French tend apply the term Anglais to all the inhabitants of Britain). (c) There are very few references to ‘Celts’ before 400 bc, the period when their violent expansion into Italy, the Balkans, Greece and Turkey began to bring them to the serious attention of Mediterranean writers. Earlier Greek writers associate them variously with Spain (the Marseilles periplus in the sixth century bc, if correctly reported in Avienus’ Ora maritima), with the hinterland of Marseilles (Massilia) and with Nyrax = (?) Noreia in Austria.
(Hecataeus of Miletus, c. 500), and with the far west of Europe, including the source of the Danube (!) in the Pyrene = (?) Pyrenees (Herodotus, c. 450). (See Powell 1980: 11–15; Schmidt 1986a: 15; Tovar 1986: 79–80.) Obviously these Greek writers were chiefly familiar with the Celts nearest to them; but there may well have been peoples calling themselves ‘Celts’, or who were called ‘Celts’ by others, in northern Europe too. As we cannot prove this, however, the early ethnographical testimonies are of limited help in defining the ‘Celtic’ area of Europe before 400 BC. It is probably significant, however, that Avienus’ names for the inhabitants of Ireland (Hierni, see Consonantism, p. 357) and Britain (Albiones cf. MW elvyd ‘world’ < *albjo-) have specifically Celtic etymologies (Koch 1990; Meid 1990). We cannot be sure, however, that these names originated in the British Isles.

The third approach to the problem is to examine the distribution of apparently Celtic personal, place- and ethnic names and that of Celtic-language inscriptions, coin legends, graffiti and so on. Here, too, there are insuperable obstacles: (a) such data are of course chiefly recorded in the vicinity of Mediterranean cultures, where writing systems developed; and (b) they mostly belong to the period shortly before the Christian era or still later, that is, too late to shed light on the areas in which Celtic speech originated. (On the orthographies of the Celtic languages see Russell 1995: 197–230.)

**Position within IE**

The position of Celtic among the IE languages has been approached in various ways during the twentieth century (cf. Schmidt 1979: 197). (1) Pokorny, Wagner, and other emphasized Celtic’s divergence from the IE model, and explored the possibilities of substratum or ‘areal’ influences from non-IE languages, for example, Semitic and Hamitic, mostly on the vague basis of typology (see Greene 1966; Schmidt 1986b: 209). Regrettably, too little is known about the early history of the non-IE languages with which Celtic-speakers were in contact, for example, Pictish in Scotland (Jackson 1980) or Basque in Spain. (2) In reacting to this trend, Dillon, Watkins, Meid and others stressed the degree to which Celtic could be explained by ‘forward reconstruction’ from Indo-European (C. Watkins 1962: 7); but at the same time they regarded Celtic as particularly archaic, preserving hypothetical IE features lost in other less ‘marginal’ IE dialects (e.g. the original distribution of primary and secondary verbal endings, Personal Endings, pp. 369–70). (3) Reacting in turn to this, scholars such as Rix and Cowgill have argued that the peculiarities of Celtic can mostly be explained as internal developments and do not require significant modification of the traditional IE model reconstructed on the basis of Indo-Iranian and Greek (see McCone 1986: 222–3). (4) Other linguists still insist ‘on the high importance of Old Irish and other genetically western branches for the reconstruction of proto-Indo-
European' (Hamp 1987). Probably there is truth in all these approaches, although inevitably the third has the best chance of leading to testable conclusions.

Celtic cannot be grouped with any other branch in an IE subdialect. For a while the possibility of 'Italo-Celtic' unity seemed tempting, but is now out of favour (see C. Watkins 1966; Schmidt 1991). Some of the similarities, such as the retention of the mediopassive in -r (shared with Hittite and Tocharian), can be regarded as shared archaisms. Others, such as the apparent equivalence of the Latin future in -bo and the Old Irish f-future, may be illusory (Future Stem, p. 372). Others, such as the o-stem genitive singular in -i (also in Messapic, but not found in Celtiberian (p. 355) or Osco-Umbrian), and superlatives of the type Oscan nessimas 'proximae': Gaulish neddamon (gen. pl.), OIr. nessam, OBr. nesham 'nearest', may be due to contamination over the long period during which Italic and Celtic speakers lived side by side. (In fact, the Italic influence on Celtic has never ceased, owing to continual borrowings from Latin, which have had a fundamental influence on Celtic word formation, as well as supplying many loan words.) The lack of significant Italo-Celtic phonological developments is a strong argument against the Italo-Celtic theory.

There is even less evidence for any deep connection between early Celtic and Germanic, despite the fact that they were spoken in close proximity by the time of Julius Caesar and Tacitus. There are no shared innovations in phonology and morphology, and the number of significant lexical correspondences was formerly exaggerated (see Campanile 1970; Evans 1981; Polomé 1983; Schmidt 1984; 1986b: 205–6). According to the minimal approach of Evans (1981: 248), only about a dozen early Germanic words are certainly borrowed from Celtic, for example, Goth reiks 'ruler': Gaul. -rīx < IE *rēgīs (cf. Chapter 1); Goth. eisarn 'iron': Gaul. Isarnus (personal name), OIr. iarn, W haearn (< *(h)a(h)arn-) < *isarno-; OHG ledar 'leather': OIr. lethar, W lledr < Celtic *letero- < IE *ple-tero- (cf. Lat. pellis, etc.). The Insular Celtic languages were, of course, influenced by Germanic through English at a later stage, and there is also a slight Old Norse element.

The fact is that Celtic shares some isoglosses with almost all other IE languages, and these can be selected to support many different theories (cf. Schmidt 1985, 1986b: 202–6; Stalmaszczuk and Witczak 1995). Similarly, scholars wishing to stress the peripheral and/or archaic nature of Celtic can and have noticed certain remarkable retentions, for example, masculine and feminine forms of the numerals 'three' and 'four' in Modern W: tri chi 'three dogs', tair cath 'three cats'; pedwar ci 'four dogs', pedfair cath 'four cats'. Generalizations about the affiliations of Celtic and about its archaic or innovative tendencies are usually subjective, lacking a statistical basis. Statistical attempts to compare the IE languages on the basis of 'core vocabulary' (Elsie 1990: 318) or of occurrences under Pokorny's roots (Bird 1982: 119–20) are open to objections, but do agree on Celtic's closeness to Germanic and (to a lesser extent) to Latin/Italic.
Some form of the hypothesis of ‘Late Western Indo-European’ (Meid 1968: 53) could explain this lexical convergence.

Subdivision
The internal subdivision of the Celtic languages has not yet been agreed by scholars; either the data are inadequate or the reality is more complex than a simple genetic model would allow.

A traditional division distinguishes ‘P Celtic’, in which IE $k^w > p$, and ‘Q Celtic’, in which $k^w$ remained: Gaelic and Celtiberian are Q Celtic, whereas Brythonic, Lepontic and most (but not all) Gaulish material is P Celtic. In view of the originally allophonic nature of the $k^w/p$ alternation in Celtic (Consonantism, p. 358), most linguists would now agree that ‘the “isogloss” between P-Celtic and Q-Celtic is structurally trivial’ (C. Watkins 1966: 32 n. 7, following Hamp 1958: 211). Nevertheless, the P/Q division has had a great influence on archaeological speculation, and ‘P’ and ‘Q’ remain useful labels for the important and valid distinction between Brythonic (or possibly ‘Gallo-Brythonic’) and Gaelic.

Some linguists use the term ‘Insular Celtic’ (see Introduction, p. 345) in a more than geographical sense, emphasizing a special relationship between Gaelic and Brythonic (Greene 1966; McCone 1986: 262; cf. Evans 1988: 219). It is true that these groups share certain important developments – such as the development of morphophonemic mutations of initial consonants (Consonantism, p. 359) and the system of absolute and conjunct verbal endings (Personal Endings, pp. 369–70) – but it could be argued that these developments might also have occurred in Gaulish if this were attested after AD 500 (Sims-Williams 1984: 147–8). Logically, it is impossible to establish a genetic relationship between two dialects on the basis of a shared innovation occurring after all other dialects have died out. An opposing approach, which still leads to the same negative conclusion, is to argue that a feature like the absolute/conjunct system occurs in Insular Celtic but not (apparently) in Continental Celtic because the Continental dialects were less archaic, having drifted towards Greek and Latin or even Late IE innovations (Meid 1986: 120–1). The fundamental problem, however, is the chronological disjuncture between our evidence of Insular and Continental Celtic. A single example illustrates this. We noted above (Introduction, p. 347) that *wer (< *uper) became *wor in Brythonic and Gaelic, whereas Ver- is attested in Gaulish. Is this innovation an Insular Celtic isogloss (Schrijver 1995: 129, 464)? The change *wer > *wor (due to influence of *wo < *upo ‘under’ or simply to rounding after /w/, cf. Evans 1967: 279) must in fact be late in Brythonic, since in 725 Bede, Chronica maiora 434, records the name of a fifth-century Briton as Uertigernus (> later Uortigern, Gwrtheyrn). As the change *wer > *wor did not occur before the fifth century AD in Brythonic, it is possible that it would also have occurred in fifth-century Gaulish as well, if this was
attested – for there is evidence of shared phonetic developments between British and Late Gaulish (Fleuriot 1978). Moreover, /wer/ > /wor/ might occur quite independently; for example, there is evidence for it in Spain (Tovar 1986: 89).

The term ‘Gallo-Brythonic’ emphasizes the similarities in language (e.g. name formations) between Gaulish and British which were already noted by ancient writers (Introduction, p. 347). It is debatable whether these similarities are due to the many ethnic movements across the English Channel (already mentioned by Julius Caesar) or go back to a genuine ‘Gallo-Brythonic’ dialect of Celtic, genetically distinct from Gaelic, Celtiberian, Lepontic, and so on (cf. Evans 1988: 220; Fleuriot 1988; Lambert 1994: 17–19; Schrijver 1995: 463–5).

The most ambitious attempt at a Celtic family tree (Schmidt 1988: 235) combines the ideas of ‘P Celtic’ and ‘Gallo-Brythonic’ with a distinction between an ‘em/en-language’ (i.e. Gaelic), which diverged very early, and the ‘am/an-languages’ (i.e. Celtiberian and most or all the P Celtic languages). This distinction, which has not convinced everyone (e.g. Tovar 1986: 84 n. 3; Evans 1983: 29–31; Mccone 1991a: 22, 48–50, 161), is based on the treatment of IE /ŋ/ and /ŋ/ in initial position and before plosives, e.g. IE *mhbhi ‘about’ > Celtiberian amPi-, Gaul. ambi-, W am: OIr. imb (see further De Bernardo Stempel 1987: 38, 51, 121). A secondary Gaelic development of /-an/ > /-en/ has been suggested (Cowgill 1975: 49), and some scholars postulate a Proto-Celtic phoneme /æ/ before nasals (e.g. Hamp 1965: 225, Joseph 1990: 126 n. 10). Mccone (1991b) argues convincingly that /ŋ/, /ŋ/ gave CC /am, an/ and that raising of the /a/ to /e/ or /i/ occurred in Primitive Irish (cf. Schrijver 1993).

**Documentation**

The earliest connected written material in Celtic languages comes, as would be expected, from the Mediterranean world – Italy, France and Spain – in the second half of the first millennium BC (possibly slightly earlier in the case of some north Italian inscriptions: Russell 1995: 5, 205, 229; Schmidt 1995: 252). For other areas at this period there are only place-, personal and ethnic names (e.g. Billy 1993), but even these are of some value. For example, judging by the onomastic evidence, the language of the Galatians in Asia Minor was similar to Gaulish (Mitchell 1993; Schmidt 1994). Again, there is obvious Celtic material in the ‘Thracian’ onomastic corpus (Orel 1987; cf. Köderitzsch 1993). Here, however, I shall concentrate on the Celtic languages from which more than names and odd words are known (see also Eska and Evans 1993).

**Lepontic** is the not uncontroversial name given to the language of inscriptions first found within a 50 km radius of Lugano, in north-west Italy and Switzerland (Lejeune 1970). They date from at least the fourth century (probably earlier) to the first century BC and are written in the Lugano alphabet.
This alphabet does not distinguish between /p t k/ and /b d g/ and avoids double letters; for example, the Lepontic personal name ANOKOPOKIOS corresponds to Gaulish Andocombogios. Here /nd/ > /nn/ is a Lepontic peculiarity, but the suppression of the nasal in KO(m)P may be purely graphic. Like Gaulish (Consonantism, p. 358), Lepontic distinguishes between two sibilants, both seen in ISOS[*ilsos] < *istos ‘that (man)’ in an inscription from Vergiate, now in the archaeological museum in Milan (Lejeune 1970: 444–52): PELKUI PRUIAM TEU KARITE I$OS KALITE PALAM = ? Belgui bruwyam Dëwû garite, i’sos kalite palam = ?‘Dëwû enclosed the construction for Belgos; he erected the stone.’ The word for ‘construction’, accusative of *bruwyä, recalls Gaulish brîvā ‘bridge’ < *bhřwā, but the closest cognates are in Germanic, for example Old Saxon bruggia ‘bridge’ < *bhruw-jo-. The word possibly meaning ‘stone’, palä, which is common in Lepontic inscriptions, is of unknown etymology. The verbal stem *gar- may derive < *gr-: IE *gher- ‘to enclose’, as in OIr. gort ‘field’, W garth ‘enclosure’ (but cf. Hamp 1991); and *kal- may derive < *kl-: IE *kelH- ‘to raise, rise’, cf. Gaul. celicnon ‘building’, Lat. collis, OEng. hyll ‘hill’, and possibly Celtî ‘?exalted ones’. The dental preterites are obscure (cf. Schmidt 1990: 596, Eska 1990a, Eska and Evans 1993: 37, 42, 46), but seem to be confirmed by the Gaulish verbs KarniTu (3 sg.), KarniTus (3 pl.) found farther south in Gaulish inscriptions in Lugano script at Todi and at San Bernadino di Briona (unless KarniTus = karnintus cf. Lambert 1994: 64, 73; De Hoz 1995). In the Todi inscription, which is bilingual, KarniTu corresponds to LOCAVI ET STATVI.

Celtiberian is the only Hispano-Celtic language known from inscriptions as well as proper names. (The Celtic nature of Lusitanian is dubious.) The ‘Celtiberian’ inscriptions come from north-eastern Spain, in exactly the same region that the Celtiberi are located by ancient writers (De Hoz 1988). The earlier inscriptions, such as the best known of the two from Botorrita 20 km south of Zaragoza (c. 100 BC), are written in the native Iberian script (Eska 1989, Eichner 1989: 23–55, Meid 1994a). This did not distinguish voiced and voiceless stops, like the Lugano alphabet, and it had the added ambiguity of using syllabic characters for these sounds (Pa, Ca, Ta, Pe, Ce, Te, etc.); e.g. the Ti symbol could denote /ti/, /di/, /t/ or /d/. Its s = /s/, but s = /z/ or /s/ by lenition of *s and *d (Villar 1995). Later inscriptions are in the Roman alphabet, like the following of the first or second century AD from Peñalba de Villastar (Ködderitzsch 1985; cf. Eska 1990b; Villar 1991; Meid 1994a and 1994b): ENIOROSEI VTA TIGINO TIATNEI ERECAIAS TO LUVGEI ARAIANOM COMEIMV ENIOROSEI EQVEISVQUE OGRIS OLOGAS TOGIAS SISTAT LVGVEI TIASO TOGIAS = ? ‘To Enior(o)sis and to Tiatü of Tiginos we bestow furrows, and to Lugus the protections of the fertile-land, to Lugus the protections of the scorched-land.’ If the etymologies are correct (Meid’s interpretation is completely different from Ködderitzsch’s), notable phonological points here include:
1 the loss of /p/ in (a) er(e)caia- ‘furrow’ < IE *perk- (cf. W rhych, Lat. porca, Eng. furrow); in (b) ol(o)ga- ‘fertile-land’ < *IE polg(h)ā, *polkā (cf. Gallo-Latin ola > Fr. ouche, Eng. fallow > Gc *falgð); and in (c) tiaso ‘burnt land’ < *teposo- (cf. OIr. tē ‘hot’ < *tepe-, Lat. tepes);

2 the retention of IE /kw/ in -que ‘and’ (Lepontic -pe, arch. OIr. -ch);

3 the apparent (orthographical?) retention of IE /ej/ in com-(m)ei-mu ‘we bestow’ < IE *mej- (cf. Skt māyate ‘exchanges’, Lat. minus < *moj-nes-, OIr. moín ‘treasure’ < *moj-ni-, MW mwyn ‘value’ < *mej-no-);

4 the retention of final /m/ (not > /n/) in the acc. sg. ar(a)ianom ‘field’ (for the stem cf. OIr. airim, MW arda ‘I plough’ < *arjomi);

5 in sistat ‘puts’ < *sistati the apocope of -i, as in Lat. sistit (Personal Endings, pp. 368–9).


Gaulish inscriptions begin in about the third century BC, but the bulk of material comes from the first century BC and the first century AD (Lambert 1994). The earlier material is mostly written in Greek script, with a few texts in the Lugano script from Cisalpine Gaul. The later material is mostly in Roman letters. To the inscriptions on stone which have long been known can now be added important long texts on metal plates, notably from Chamalières and Larzac; these are transforming, and confusing, understanding of the Gaulish language(s). The following example of Gaulish is a stone inscription from Alise-Sainte-Reine (first century BC): MARTIALIS DANNOTALI IEVRV VCETE SOSIN CELICNON ETIC GOBEBDI DVGIONTIIO VCETIN IN ALISHA (Lambert 1994: 98–101; differently Szemerényi 1995) ‘Martialis [son] of Dannotalos offered to [the god] Ucuetis this edifice, and to the smiths who honour (?) Ucuetis in Alisia’. Note here -e < *-ei in the dative Ucuetet and -n < *-m in the acc. sg. celicnon (the source of Goth. kelikn ‘tower’). Morphological points of interest include genitive singular in -i in Dannotali, dative (or instrumental?) plural in -bi in gobebit, third-person singularpreterite in -u (cf. Lepontic), and indeclinable relative particle *jo in dugiointi-io (Pronouns, p. 366).

British and its successors, Primitive Welsh, Primitive Cornish and Primitive Breton, are known only from proper names in inscriptions and Latin texts, which provide, nevertheless, detailed information about phonological developments (Jackson 1953; Sims-Williams 1990, 1991). From c. AD 800 onwards we have manuscript glosses, memoranda, and so on in Old Welsh, Old Cornish and Old Breton. (In addition some Welsh poetry may be as early as the sixth century, although transmitted in late manuscripts.) The orthography of Old Welsh, Old Cornish and Old Breton is based on a pronunciation of Latin found in Britain, the main feature of which was that mediially Latin consonants underwent the native sound change called ‘lenition’ (Consonantism, p. 360),
356 THE CELTIC LANGUAGES

so that Latin words like medicus, decimatus were pronounced [mēðiɡəh], [degiɑɾdah]. Consequently similar values were assigned to letters in writing OWCB; for example [deɡɥɛd] (‘tenth’ < *dekametos (see Table 12.1 on p. 346)) would be written decmet.

*Primitive Irish* (McCone 1994) is known from proper names in inscriptions and Latin texts. Most Irish inscriptions of the fifth, sixth and seventh centuries AD are in the Ogam (or Ogham) alphabet (McManus 1991, Sims-Williams 1992, 1993, Ziegler 1994). This is well suited to carving on wood and stone, since only straight strokes are used, e.g. //// = /k/*\l/, //// = /k/. The phonology of the earliest Ogam inscriptions is archaic, for example, distinguishing between /k/ and /k*/ and (probably) between /ɡ/ and /ɡ*/\l/, and showing the old case endings. The earliest extant manuscripts containing *Old Irish* (glosses and short texts) are eighth century, but it is probable that some texts extant in late manuscripts were written down towards the end of the sixth century. Most Old Irish material is written in an orthography based on the British pronunciation of Latin described above (for exceptions see Harvey 1989; Russell 1995: 224); hence medial and final [b d g] are written p t c, and medial and final [β δ γ μ] are written b d g m. Medially and finally double consonants may be used to avoid ambiguity, e.g. [b] may be written bb and [k] may be written cc. Palatalized consonants are indicated by flanking vowels, e.g. macc [mak], maicc [makj], beirid [bɛɾiadata], feraib [fɛɾaib]. In modern edited texts, diphthongs are generally distinguished by placing the length mark on the i; e.g. ai and ui are diphthongs, but ái and ői denote [ai] and [u:] followed by palatalized consonants (in the phonetic transcription ʃ marks a palatalized consonant, as in OIr. [nɛɾәdә], *Introduction*, p. 347).

The Phonology of Common Celtic (cc)
The following features would generally be accepted as defining ‘Celtic’. For ease in consulting handbooks (e.g. Lewis and Pedersen 1961), I give IE sounds in their traditional reconstructions without prejudice to the actual phonetic reality of /b\h/, /\a/, etc. Also not much attention is paid to laryngeals, for which Celtic provides little independent evidence (cf. Hamp 1965; Joseph 1982; Ringe 1988; Lindeman 1988, 1989: 291–3; McCone 1994: 71–3). Almost nothing certain is known about the fate of the IE free accent in Celtic nor about the development of the very different initial and penultimate stress accents of Gaelic and Brythonic respectively (cf. Koch 1987). There is already evidence for penultimate accentuation in Continental Celtic (De Bernardo Stempel 1995).

Vocalism
The IE short vowels /i e o u/ remained in Common Celtic, and /ae/ (= /H/) > /al/, e.g. *paɾɛɾ > Gaul. ətir (Larzac inscription), OIr. aθair ‘father’ [aθɛɾ]. The IE long vowels /iː aː uː/ remained in Common Celtic but IE leːːf > liː, e.g. *rəɣs (: Lat. rex) > Gaul. -riːx, OIr. rí, W rhi, and IE loː > laː, e.g.

<table>
<thead>
<tr>
<th>í</th>
<th>ü</th>
<th>ü</th>
</tr>
</thead>
<tbody>
<tr>
<td>ē</td>
<td>ō</td>
<td>ā</td>
</tr>
</tbody>
</table>

was filled by the development /ei/ > /eː/ (cf. Gk *steikhein* ‘to walk’: Early OIr. -tēgot [tʰeːɡːoː] ‘they go’ = Later OIr. -tíagat [tʰiːɡːɔːd]; but /ei/ > /eː/ may not have been completed in Common Celtic. (See p. 355 for Celtiberian *ei*, and note dative -ei in Lepontic as well.) The other gap was filled in Gaelic by /eu au ou/ > /oː/ (later alternating with /uː/) and in Brythonic by /eu ou/ > /oː/ (later > /tː/); but in Common Celtic /eu ou/ remained diphthongs, as did /ai/ and /oi/. There was, however, an early tendency, seen already in Lepontic and Gaulish, for /eu/ > /ou/, e.g. *teutā* ‘people’ > *toua* (> OIr. *túath* [tuː], MW *tu*: [tʰuːd]).

The semi-vowels /w/ and /j/ remained in Common Celtic, and indeed survive to this day in Welsh. Vocalic /ŋ, ŋ, ŋ, ʎ/ developed as vowel + consonant (/am, em, an, en, ar, al/) or consonant + vowel (/ri, li/), depending on context (see De Bernardo Stempel 1987; McCona 1991a: 15-19); there is often apparent divergence between /em en/ in Gaelic and /am, an/ elsewhere (Subdivision, p. 353). The so-called ‘long resonants’, that is, vocalic /m, n, r, 1/ + laryngeal /H/, developed mostly as /maː, naː, raː, laː/, e.g. IE *ǵṛH-no- > OIr. *grän*, W *grawn* ‘grain’ (: Lat. *granum*). The derivation of reflexes with short /a/ is debated: for example, does OIr. *tarathar*, W *taradr* ‘auger’ < *tara-tro-n* come from *tṛH-*, or is *tara-* due to vowel harmony in *tera-tro-n* coming from *terH-? The latter is probable. (See Joseph 1982; De Bernardo Stempel 1987: 43-5; Lindeman 1988; Schrijver 1995: 87.)

**Consonantism**

/l/, n, r, l, s/ remained basically unchanged. Final -m became -n in most Celtic languages, but not in Lepontic, Celtiberian (pp. 354–5) and some Gaulish. As in other IE languages, /s/ had an allophone [z]; this is not differentiated from S in Continental Celtic writings, but in Insular Celtic [z] > [ð], e.g. Gaul. *TASGO-*: Ir. *Tadg* (personal name). As in Armenian, IE /p/ was completely lost (perhaps via /f/); it had already been reduced to /h/ or /zero/ when classical writers borrowed the names of Ireland (Origins, p. 350: Skt *pīvarī*, Gk *pieira* ‘fat, rich’) and of the Hercynia silva in central Germany (: IE *perkwus* ‘oak’, cf. Evans 1979: 531–2). Among the plosives there is no trace
of an original palatal series (Gaelic palatalization arose much later, p. 362), and the only trace of the aspirate/unaspirate distinction is between the labiovelars /gw/ > CC /b/ and /gwh/ > CC /gw/ (Cowgill 1980; Sims-Williams 1981, 1995). For IE /gwh/ note OIr. béo, W byw ‘living’: Lat. uūus; OIr. imb ‘butter’: Lat. unguen; the only certain exception is before /j/ which delabialized /gwh/, e.g. OIr. nigid [nɪðɪd] ‘washes’ < *nigʷ-je-ti and W giǎu ‘sinews’: Ved. j(i)yā- ‘bowstring’, Avest. jiīā- ‘bowstring, sinew’, Gk bios ‘bow’. By the time of Old Irish, /gwh/ was delabialized, but there is probably an old symbol for /gwh/ in the Ogam alphabet (p. 356). In Brythonic, initial /gwh-/> /gw-/, probably directly and not via /w-/> in view of the early Welsh inscription GVANI which predates the general change of IE /w-/> W /gw-/> (Sims-Williams 1995). In Gaulish /gwh-/> /w-/> is possible, if the first singular verb uediumi (? uediu mi) in the Chamalières inscription is cognate with W gweddi ‘prayer’, OIr. guide ‘prayer’ < ?*gʷedjā, Gk pothēō ‘I wish’, Avest. jaidiia- etc. (Cowgill 1980). The fate of non-initial /gwh/< /gwh/ is debated; the Welsh words nyf ‘snow’ and deifio ‘to bum’ (f= [v]) are probably wrongly cited in the handbooks as reflexes of IE intervocalic /gwh/ (Sims-Williams 1995).

The above data are best explained by the following chronology (cf. Sims-Williams 1981: 227): starting from the system

<table>
<thead>
<tr>
<th>(p)</th>
<th>t</th>
<th>k</th>
<th>kw</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>d</td>
<td>g</td>
<td>(gʷ)</td>
</tr>
<tr>
<td>bʰ</td>
<td>dʰ</td>
<td>gʰ</td>
<td>gʷʰ</td>
</tr>
</tbody>
</table>

Common Celtic merged /gʷ/ and /b/ as /b/. Then de-aspiration, occurring throughout the system (bʰ) > /b/, /dʰ/ > /d/, etc.), created a new /gʷʰ/ < /gʷʰ/. The relative chronology of /p/> /zero/ is uncertain, but it was the gap in the system resulting from the loss of /p₁/ which made possible the allophonic alternation between ‘Q Celtic’ with [kʷ] and ‘P Celtic’ with [p₂] < [kʷ] (Subdivision, p. 352):

<table>
<thead>
<tr>
<th>[p₂]</th>
<th>t</th>
<th>k</th>
<th>[kʷ]</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>d</td>
<td>g</td>
<td>gʷ²</td>
</tr>
</tbody>
</table>

The most interesting combinatorial change among the consonants was the development of a new dental phoneme, written δδ, ss, and so on, in Gaulish (and apparently with special symbols in Lepontic, p. 354), from /d/ + /t/, /h/ + /t/, /t/ + /s/, etc. (Evans 1967: 410–20). Note also a general development of /xt/ < /pt, kt/. Structurally, a more important development was the widespread rise – as in Germanic – of intervocalic geminate consonants contrasting with single consonants in the same position (Kuryłowicz 1960: 259–73, De Bernardo
Such geminates are often shown in Gaulish, but are excluded by the scripts used for Lepontic and Celtiberian. In Insular Celtic geminates developed differently from single consonants, for example, OIr. *maicc [makj] ‘of a son’ < Ogam MAQQI = *mak*kw*i, but MW meib ‘sons’ < *mapi < *mak*i; the single /p/ is ‘lenited’ (i.e. voiced) but the geminate /kwkw/ is simplified. In addition to the phonemic distinction between /VCV/ and /VCCV/, there arose, probably already in Common Celtic, an allophonic distribution of [C] and [CC] in other environments (Harvey 1984). The evidence for this comes partly from the phonemicization of reflexes of these allophones in Insular Celtic (Consonantism, p. 360; p. 362), partly from the analogy of Romance, which may reflect Celtic substratum influence here (Martinet 1952; cf. Villar 1995). Ultimately, this was of great importance in external sandhi, giving rise to the Insular Celtic system of initial mutations (Russell 1995: 231–57). For example, *esjo kattos ‘his cat’ > OIr. a chatt [xa:at] (lenition), MW y gath [i ga:J] (lenition), but *esjás kkatus ‘her battle’ > OIr. a cath [xa:p] (no mutation), MW y chat [i xa:d] (spirant mutation). A further set of mutations was produced after old nasals (Consonantism, pp. 361–2), e.g. OIr. a catt [o gat] ‘their cat’, MW ygg cath [o: ja:p] ‘my cat’. These initial mutations, which began as sandhi phenomena (cf. Chapter 4, Sanskrit Phonology, p. 107), were grammaticalized in Insular Celtic, for example, as markers of relative clauses (Ó hUiginn 1986).

The Phonology of Early Brythonic

The accent in British fell on the penultimate syllable, which became the ultimate syllable after the loss of final syllables c. 500. A full range of vowels was therefore preserved in the final syllables of OWCB words, whereas pretonic vowels tended to have been shortened, reduced, or syncopated. (Much later, in about the eleventh century, the accent shifted from the ultimate to its present position on the penult, except in the Vannetais dialect of Breton.) Schrijver (1995) is the most up to date handbook.

Vocalism

Indo-European vowel quantity was at first retained, but by the sixth century a new quantity system applied automatically even in stressed syllables; according to this, Primitive Welsh, Cornish and Breton vowels were short in [VCC] syllables and long in [V(C)] syllables (Sims-Williams 1990: 250–60). In stressed syllables, the Common Celtic vowels and diphthongs developed mainly as follows:

/i/ > Pr. W /i(ː)/ (written <y> in later W), Pr. Cornish, Pr. Breton /i(ː)/
/e/ > Pr. WCB /e(ː)/
/a/ > Pr. WCB /a(ː)/
/o/ > Pr. WCB /o(ː)/
/u/ > Pr. WCB /u(ː)/ (later written <w> in Welsh, <ou> in Cornish and Breton)
/ɪː/ (<IE /i/ and /u/ in stressed; <ei> in Cornish and Breton) > Pr. WCB /i(ː)/
/eː/ (<IE /e/ and /eː/ in stressed) > Pr. WCB /ui/
/a:/ (< IE /a:/ and /o:/) > British /ɔ:/ > Pr. W /au/, Pr. CB /œ(:)/
/ʊ:/ (< IE /u:/ and /-o:/) > British /u:/ > Pr. WCB /i(:)/
/au/ > British /ɔ:/ > Pr. W. /au/, Pr. CB /œ(:)/ (see Schrijver 1995: 195)
/ou/ (< /ou/ and /eu/) > British /o:/ > /u:/ > Pr. WCB /œ(:)/
/ai/ > British /æ:/ > Pr. WCB /œj/
/oi/ > British /ɔ:/ > Pr. WCB /œ(:)/

The semi-vowel /w/ had become /gw/ in absolute anlaut by the time of the earliest OWCB (c. 800). Medial /j/ sometimes developed to /ð/.

**Consonantism**

/s/ tended to become /h/ or /j/ or to disappear. /z/ became /ð/ and /s/ was vocalized as /j/. (On /gʷ/ see p. 358 above.) Most other consonants suffered the change known as ‘lenition’ in positions where their weaker allophones occurred (cf. p. 359), and there was later a tendency for unlenited voiceless consonants to be spirantized (except in absolute anlaut):

<table>
<thead>
<tr>
<th>[pp]</th>
<th>&gt;</th>
<th>[p]</th>
<th>&gt;</th>
<th>[f]</th>
<th>(Spirantization)</th>
</tr>
</thead>
<tbody>
<tr>
<td>[p]</td>
<td>&gt;</td>
<td>[b]</td>
<td>&gt;</td>
<td>[β]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[tt]</td>
<td>&gt;</td>
<td>[t]</td>
<td>&gt;</td>
<td>[p]</td>
<td>(Spirantization)</td>
</tr>
<tr>
<td>[t]</td>
<td>&gt;</td>
<td>[d]</td>
<td>&gt;</td>
<td>[k]</td>
<td>(Spirantization)</td>
</tr>
<tr>
<td>[kk]</td>
<td>&gt;</td>
<td>[k]</td>
<td>&gt;</td>
<td>[x]</td>
<td>(Spirantization)</td>
</tr>
<tr>
<td>[k]</td>
<td>&gt;</td>
<td>[g]</td>
<td>&gt;</td>
<td>[γ]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[bb]</td>
<td>&gt;</td>
<td>[b]</td>
<td>&gt;</td>
<td>[β]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[b]</td>
<td>&gt;</td>
<td>[β]</td>
<td>&gt;</td>
<td>[β]</td>
<td>([β] later &gt; [v])</td>
</tr>
<tr>
<td>[dd]</td>
<td>&gt;</td>
<td>[d]</td>
<td>&gt;</td>
<td>[δ]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[d]</td>
<td>&gt;</td>
<td>[δ]</td>
<td>&gt;</td>
<td>[x]</td>
<td>(Spirantization)</td>
</tr>
<tr>
<td>[gg]</td>
<td>&gt;</td>
<td>[g]</td>
<td>&gt;</td>
<td>[γ]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[g]</td>
<td>&gt;</td>
<td>[γ]</td>
<td>&gt;</td>
<td>[γ]</td>
<td>([γ] later lost, or &gt; [j] or [w])</td>
</tr>
<tr>
<td>[mm]</td>
<td>&gt;</td>
<td>[m]</td>
<td>&gt;</td>
<td>[μ]</td>
<td>(Lenition)</td>
</tr>
<tr>
<td>[m]</td>
<td>&gt;</td>
<td>[μ]</td>
<td>&gt;</td>
<td>[w]</td>
<td>(Lenition)</td>
</tr>
</tbody>
</table>

These changes probably took place in three stages: (a) spirantization of /b, d, g/, /gʷ, m/ (before c. AD 400?); (b) voicing of /p, t, k/ (fifth century?); (c) spirantization of /p₂, t₂, k₂/ (sixth century?) (see Sims-Williams 1990 cf. Russell 1995: 245). Since they occurred in external sandhi, they led to ‘lenition’ (e.g. /k ~ g/) and ‘spirantization’ (e.g. /k ~ x/) as initial mutations (p. 359). The above simplifications of double consonants (except [mm], which followed the pattern of [nn]) were completed before the advent of the new quantity system (Vocalism, p. 359), hence, for example, W crēd ‘belief’ < *křēdd- (versus mām(m) ‘mother’ < *māmm-).

**The Phonology of Gaelic**

The accent in Gaelic fell on the initial syllable of stressed words. A full range of vowels was therefore preserved in this syllable, whereas post-tonic vowels
tended to be shortened, reduced, or syncopated. For example, in Old Irish there were only two short vowels in closed unstressed syllables, [a] and [ö] (although the spelling system seems to disguise this). Because Brythonic stress developed very differently (p. 359), the evidence of the two branches is of complementary importance in reconstruction.

**Vocalism**

Indo-European vowel quantity was retained in stressed syllables; in unstressed syllables long vowels were shortened in Primitive Irish, except in final syllables before final /h/ < /p δ x s/, and even in these syllables the vowel was eventually shortened, e.g. Celtic *teutās ‘tribes’ > Pr. Ir. *tōpāh > OIr. tuatha [tuəpə]. In stressed syllables, the Common Celtic vowels and diphthongs developed mainly as follows:

/i/ > OIr. /i/ (if not lowered to /e/ by following low vowel)
/e/ > OIr. /e/ (if not raised to /i/ by following high vowel)
/a/ > OIr. /a/
/o/ > OIr. /o/ (if not raised to /u/ by following high vowel)
/u/ > OIr. /u/ (if not lowered to /o/ by following low vowel)
/ɪː/ (< IE /eː/ and /iː/) > OIr. /iː/
/ɛː/ (< /ei/) > OIr. /ɛː/ alternating with /iː/ (written <i>ा>)
/ɑː/ (< IE /aː/ and /oː/) > OIr. /ɑː/
/ʊː/ (< IE /uː/ and /-oː/) > OIr. /ʊː/
/au/ > OIr. /oːl/ alternating with /uːl/ (written <u>ा>)
/ou/ (< /ou< and /eu<) > OIr. /oːl/ alternating with /uːl/ (written <u>ा>)
/ai/ and /oi/, though still distinct in most Ogam inscriptions, merged in OIr. as a diphthong of uncertain value (/oːl?/), written <ae>, <ai>, <oe>, <oi>.

The semi-vowel /w/ became /l/ in absolute anlaut and /v/ after nasals, for example, *wiros > fer ‘man’, *banwos > banb [banb] ‘pig’ (: Gaul. Banuus, W banw); in other positions /w/ was lost, as was /l/, e.g. *jowankos (: W ieuanc) > *(j)o(w)egah > OIr. oac [oəg] ‘young’.

**Consonantism**

/l/ tended to become /h/ or to disappear. /s/ became /h/, but /x/, written <ch>, remained in Old Irish. In the Ogam inscriptions /kw/ and (probably) /gw/ were still distinct from /k/ and /g/, but they had been delabialized by the Old Irish period. Even before the Ogam inscriptions the combinations /nt, nk, nkʷ, ns/ had become /dd, gg, gʷgʷ, ss/, with compensatory lengthening of a preceding /a/ or /e/ to /ɛː/, e.g. *sentus (: Breton hent, OHG sind ‘road’) > */seːdus/ > OIr. sét [sɛːd] ‘road’ (cf. Ogam personal name SEDANI > OIr. Sét(a)i); *kʷenkʷe (: Latin quinque) > /kʷɛːɡʷɛː/ > /kɔːɡʲɛːl/ > cőic [koːg] ‘five’ (the rounding was due to the labiovelars); *Br(i)g(a)ntT (: Skt bṛhati f. ‘exalted one’) > /bɾiɡiːdːiː/ > /bɾiːɡiːdːiː > Brigit [bɾiɡiːɡdːiː] (personal name). These changes after nasals also took place in external sandhi, giving rise to the initial
nasal mutation, e.g. gen. pl. *wiran trumman > *wira ddrumman > OIr. fer tromm [f'ler drom] ‘of heavy men’. (This mutation was not usually shown in writing.) As in Brythonic, most consonants underwent ‘lenition’ in positions where their weaker allophones occurred (cf. p. 359), but lenition of /t/ and /k/ took a different form in Gaelic:

\[
\begin{array}{c|c|c|c}
\text{original} & \text{lenited} & \text{change} & \text{notes} \\
\hline
[t] & [t] & & (Lenition) \\
[t] & [\beta] & & (Lenition) \\
[kk] & [k] & & (Lenition) \\
[k] & [x] & & (Lenition) \\
[bb] & [b] & & (Lenition) \\
[b] & [\beta] & & (Lenition) \\
[dd] & [d] & & (Lenition) \\
[d] & [\delta] & & (Lenition) \\
[gg] & [g] & & (Lenition) \\
[g] & [x] & & (Lenition) \\
[mm] & [m] & & (Lenition) \\
[m] & [\mu] & & (Lenition) \\
\end{array}
\]

Gaelic lenition probably took place in two stages: (a) spirantization of /b, d g(\text{w}), m/; (b) spirantization of /t k k(\text{w})/; they cannot be dated precisely, but (b) occurred later than the (fifth-century?) voicing of /p t k/ in British (see Sims-Williams 1990: 233; McCone 1994: 74). In external sandhi, lenition resulted in an initial mutation (Consonantism, p. 359). Internally, lenited consonants were often lost with compensatory lengthening, for example, Ogam SAGRAGNI (gen. sg.) > OIr. Sárdín [sarr:an]; Pr. Ir. *epn- (: W edn < *petnos) > OIr. én ‘bird’. Note that this gave rise to new long vowels in unstressed syllables. Phonemically, the most important other change was the growth of palatalized consonants before front vowels in certain environments (Greene 1973), e.g. *aljos (: Lat. alius, MW eil) > Pr. Ir. *aljijah > *aljejah > OIr. aile [alje] ‘other’. Contrast *kaletos (: W caled ‘hard’) > Pr. Ir. *kalepah > OIr. calad [kalad] ‘hard’, and note that palatalization had become phonemic at the point when [aljejeh] was opposed to [kaleh]. All consonants could be palatalized. On the spelling of palatalized consonants see Old Irish, p. 356.

The typical development of consonants in Insular Celtic can be exemplified by IE *t and *th as follows: IE *t, *th > Celtic /t/; Celtic /t/ allophonically = [tt] and [t]; in Brythonic [tt] > /t/ (absolute anlaut) and /p/ (elsewhere), but [t] > /d/; in Gaelic [tt] > /t/ and /h/, but [t] > /p/ and /b/.

The Morphology of Common Celtic

This cannot be fully recovered, since the Continental Celtic evidence is incomplete and the Insular Celtic languages seem to derive from different
dialects and to have selected differently from the morphs available in the parent language.

In nominal morphology the threefold distinctions in gender (masculine, feminine, neuter) and number (singular, plural, dual) survived from late Indo-European. The neuter was lost in Middle Irish and only traces remain in Brythonic. The dual is always reinforced by the numeral dá ‘two’ in Old Irish and is merely residual in Brythonic, where it is formally identical with singular or plural, for example, W y gafl ‘the fork’ (< *sindoš gablos), y geifl ‘the forks’, Yr Eifl (mountain-name) ‘the (two) forks’: the last two forms imply *sindoš gabló (not dual **sindoū gablóu), but whereas the masculine plural has dropped lenition by analogy with non-lenition after the feminine plural article y < *sindoš, the lenition remains in the dual. This is an illustration of ‘the eviction or replacement of a morph by a new morph only in the former’s primary or secondary function’ (Kuryłowicz 1964: 14).

The number of cases is reduced to five in Old Irish, with a ‘dative’ case subsuming the functions of the dative, ablative, locative and instrumental. (Some of these distinctions remain in Celtiberian and Gaulish.) Owing to syncretism, the endings of the ‘dative’ may derive not only from the IE dative, but also from the IE ablative, locative, or instrumental. In Insular Celtic, inflected forms began to be ‘hypercharacterized’ (Schmidt 1974), owing to the functions of the case endings being increasingly subsumed by fixed syntactic structures such as preposition + noun, VSO word order (Syntax, p. 374), noun + dependent genitive (in prose texts), noun + qualifying adjective. It is not surprising, then, that case endings were often allowed to remain ambiguous in Old Irish and disappeared altogether in Brythonic, apart from a few fossils, for example, the dative of penn ‘head’ (o-stem) in MW erbyn ‘against, to meet’ < *are pennū = OIr. ar chiunn (+ gen.) ‘id.’ < *are kʰemnū. In Brythonic, nouns (and some adjectives) have only singular and plural. Some plurals are historical, for example, MW mab ‘son’, pl. meib (form used after numerals) < *mapos, -i (cf. OIr. macc, pl. maicc), but many are analogical, e.g. meib(i)on ‘sons’, with -(i)on from the old n-stem pl. -*ones. Ahistorical plurals were inevitable in Brythonic wherever there would have been no distinction of number; for example, *donjos, pl. *donjī ‘man’ (< *gdonjos: Gk khthonios, Word Formation, p. 373) gave duine, pl. duini in Old Irish, but dyn, pl. **dyn → dynion in Welsh; plural dyn only survived after numerals, where it came to be regarded as singular. Many Brythonic plurals were old collectives, which may account for the use of singular verbs with plural subjects in Welsh.

The case system survived the loss of final syllables in Old Irish because the latter left traces in vowel affection, palatalization and following mutations. The paradigm of the masculine o-stem *wiros ‘man’ (: Latin vir) illustrates this. (L = + lenition, N = + nasal mutation.) Parallel endings are given here (and for a-stems below) from Gaulish, Lepontic, and Celtiberian (Evans 1967: 420–6; Lejeune 1970: 467; 1985a, 137–8; 1985b; Tovar 1986: 91–2;
Table 12.2 Nominal stems in -o-  

<table>
<thead>
<tr>
<th>Case</th>
<th>Stem</th>
<th>Derived Form</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Singular</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voc. fir</td>
<td>[-r']</td>
<td>&lt; *wire</td>
<td>cf. Gaul. -ê(?)</td>
</tr>
<tr>
<td>Gen. fir</td>
<td>[-r']</td>
<td>&lt; *wirî</td>
<td>cf. Gaul. -î, Lep. -î, -öso, -û, CI -ô</td>
</tr>
<tr>
<td>Dat. fiur</td>
<td>[-r]</td>
<td>&lt; *wirû</td>
<td>cf. Gaul. -û, -û; Lep. -ûi, CI -ûi, -ei (loc.), -us (abl.)</td>
</tr>
<tr>
<td><strong>Plural</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voc. firu</td>
<td>[-ru]</td>
<td>&lt; *wirûs</td>
<td>cf. Gaul. -ôs, -ûs, CI -ûs(?)</td>
</tr>
<tr>
<td>Acc. firu</td>
<td>[-ru]</td>
<td>&lt; *wirû(n)s</td>
<td>cf. Gaul. -ôs, -ûs, CI -ûs(?)</td>
</tr>
<tr>
<td>Gen. fer</td>
<td>[-r]</td>
<td>&lt; *wirôn</td>
<td>cf. Gaul. -ôn, CI -ûm</td>
</tr>
<tr>
<td>Dat. feraib</td>
<td>[-roþi']</td>
<td>&lt; *wirobis</td>
<td>cf. Gaul. -obo, Lep. -oPos, CI -uPos,</td>
</tr>
</tbody>
</table>


The dative singular -û(i) may derive from the IE dative *-ôi, instrumental *-ô or ablative *-ôd. The old nominative/vocative plural *-ôs > *-ûs has been replaced by *-î (< pronominal *-ôi?) in the nominative but survives in its secondary function as vocative. The Old Irish palatalization in the dative plural points to *-b(h)is, an instrumental ending; cf. Gaul. gopedbi (p. 355). The genitive plural ferN points to *-ôm, not **-wra < *-öm; possibly all long vowels before final nasal were shortened very early in Celtic, before the five long vowels were reduced to three (Cowgill 1975: 49; Jasanoff 1989: 139), although Cl -ôm (if = /ûm/ < /ôm/) may tell against this (cf. Evans 1983: 34).

The Old Irish a-stem is also quite well paralleled in Continental Celtic (see Table 12.3). The most problematic Old Irish ending here is the accusative singular with palatalized -th. Possibly the development was *-âm > *-äm (cf. above) > *-ên causing palatalization (cf. Subdivision, p. 353). Alternatively, the Irish a-stems may have borrowed *-ên (< *-ê) from the consonantal stems, while late Gaulish borrowed -im from the i-stems. There is clear indication of syncretism in the genitive singular, where both Irish and Late Gaulish have replaced *-âs with *(i)âs, the pronominal and jâ-stem ending (cf. Lat. pater familiâs), which developed via Ogam -EAS to OIr. -e. The original *-âs was retained in the irregular paradigm of OIr. ben ‘woman’. This also preserved an old ablaut pattern, for example, nominative/vocative/accusative plural mnà (= Gaul. mnâs < *bnâs) and genitive plural banN (< *banom cf. Gaul. bnanom = *?bn-änom or < *?banom, De Bernardo Stempel 1987: 83, 1995: 27). The singular is as follows:
Table 12.3 Nominal stems in -ā-

<table>
<thead>
<tr>
<th>Case</th>
<th>Form</th>
<th>Acc.</th>
<th>Gen.</th>
<th>Dat.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-ā, Cl</td>
</tr>
<tr>
<td>Voc.</td>
<td>tūathL</td>
<td>&lt; *teutā</td>
<td>cf. Gaul.</td>
<td>-ā</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-ām, Cl</td>
</tr>
<tr>
<td>Gen.</td>
<td>tūaithe</td>
<td>&lt; *teut(i)jās</td>
<td>cf. Gaul.</td>
<td>-ās, -iās, Cl-ās</td>
</tr>
<tr>
<td>Dat.</td>
<td>tūainL</td>
<td>&lt; *teutī</td>
<td>cf. Gaul.</td>
<td>-ai, -i, Lep.-at, Cl-ai</td>
</tr>
</tbody>
</table>

Plural

<table>
<thead>
<tr>
<th>Case</th>
<th>Form</th>
<th>Acc.</th>
<th>Gen.</th>
<th>Dat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom./Voc.</td>
<td>tūatha</td>
<td>&lt; *teutās</td>
<td>cf. Gaul.</td>
<td>-ās (?, Cl-ās)</td>
</tr>
<tr>
<td>Acc.</td>
<td>tūatha</td>
<td>&lt; *teutā(n)s</td>
<td>cf. Gaul.</td>
<td>-ās, Cl-ās</td>
</tr>
<tr>
<td>Gen.</td>
<td>tuathN</td>
<td>&lt; *teutōn</td>
<td>cf. Gaul.</td>
<td>-ānom, Cl-?-āūm</td>
</tr>
<tr>
<td>Dat.</td>
<td>tuathaib</td>
<td>&lt; *teutābis</td>
<td>cf. Gaul.</td>
<td>-ābo, -ābi</td>
</tr>
</tbody>
</table>

Nom.  benL  < *bena  < *bena  < *gʷénH₂
Acc.  beinN  < *benān?  < *benam  < *gʷénH₂m
Gen.  mnā    < *mnās   < *bnās   < *gʷnéH₃s
Dat.  mnāib  < *mnāi   < *bnāi   < *gʷnéH₂(e)i

In Old Irish there is also beN ‘woman’, and it has been suggested that this derives < *ben < *gʷên < *gʷēn < *gʷénH₂, whereas ben < *benā (or *benā) is analogical (Jasanoff 1989). This depends, however, on the correctness of the doctrines that IE /-VRH/ > IE /-V:R/, and that CC Nil > CC Nil before -l and /-n/ (p. 364).

The only other Old Irish paradigm which may preserve ablaut in the oblique cases is the n-stem cu (= Brythonic ki < *kū), in which oblique con- may partly continue *kwon- and may partly represent the weak grade *kun- with regular lowering of /u/ before following /l/ (see Joseph 1990 and Table 12.4).

Most other Indo-European declensional classes, for example, i-stems, u-stems, various consonantal stems, and even heteroclitic r-/n- stems (Lambert 1979), are represented in Insular Celtic, but much less completely on the Continent; for reasons of space they are omitted here. Adjectives belong to a more restricted range of declensions, mostly vocalic stems. Celtic retained the IE degrees of comparison – the comparative, mostly in -(i)u in OIr. < *-jōs, e.g. siniu ‘older’ (: Lat. senior), also residually in Brythonic, e.g. W hyn ‘older’ < *senjōs (De Bernardo Stempel 1989), and the superlative, in -em, -am in Old Irish, -sam in Old Welsh, < *-isamo/ā (Gaul. Marti Rigisamo, cf. Position, p. 351). Celtic also added the equative, in -ithir, -idir in Old Irish, but -(h)et in Brythonic; its etymology is uncertain (cf. C. Watkins 1966: 37; McCone 1994: 125).
Table 12.4 Nominal stem in -n-

<table>
<thead>
<tr>
<th>Case</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom.</td>
<td>ců&lt;sup&gt;L&lt;/sup&gt;</td>
<td>&lt;sup&gt;*kwones&lt;/sup&gt;</td>
</tr>
<tr>
<td>Acc.</td>
<td>coin&lt;sup&gt;N&lt;/sup&gt;</td>
<td>&lt;sup&gt;*kwones&lt;/sup&gt;</td>
</tr>
<tr>
<td>Gen.</td>
<td>con</td>
<td>&lt;sup&gt;*kunōm&lt;/sup&gt;</td>
</tr>
<tr>
<td>Dat.</td>
<td>coin&lt;sup&gt;L&lt;/sup&gt;</td>
<td>&lt;sup&gt;*kunobis&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Pronouns

Pronouns are not well attested in Continental Celtic, and in Insular Celtic they have evolved through analogical levelling, through interaction with verbal endings, and through phonetic attrition, especially when unstressed.

The demonstratives mostly derive from IE *so + clitics, e.g. Gaul. sōsīn cēlicnon (acc.), sōsio < *sosiod ‘this’ (p. 355; Syntax, p. 374), OIr. suide < *sodjo-. Demonstratives recalling Latin iste occur in Lepontic ḗisos (p. 354) and in Celtiberian ῐsTe,  xamarin (n. pl.) (Eski 1989: 165). In Insular Celtic the definite article comes from *sindos, *sindā, *sen. Demonstrative *so may mark the relative in the Old Irish third-person singular relative beires ‘who carries, which he carries’ < *beret-so-, while (s)a<sup>N</sup> < *sen appears as antecedent in for example, OIr. for(s)a<sup>N</sup> ‘on which’; but the usual relative marker was uninflected *jo (Hitt. ya ‘and’): for example, *esti-jo ‘who is’ > OIr. as(a), MW yssyd; *welesi-jo ‘*whom thou seest’ (Sims-Williams 1984: 153–4) > OIr. file ‘who is’; *beronti-jo ‘who carry, which they carry’ > OIr. berte; cf. Gaul. dugiontīo (p. 355). In compound verbs *jo was infixed, causing lenition, e.g. do-ceil ‘hides’, relative do-cheil < *di-jo-kelet(i) (McCone 1980; Ó hUiginn 1986). The interrogative stem *kwej- (OIr. cia, OW put ‘who?’) is rarely used to express the relative. The connective particles *kwe (: Latin -que, Celtiberian -Cue) > OIr. -ch (‘and’) and *de (: Gk dē) > OIr. -d- may serve as relative markers in Old Irish, by a secondary development (Vendryes 1911, C. Watkins 1963).

In the personal pronouns the distinction between nominative and accusative in the first and second person seems to have been lost in Celtic, and in Insular Celtic ‘dative’ pronouns occur, in greatly reduced form, only in combination with other words, for example OIr. duit ‘to you’ < *to ti < *to toi. First-person singular OIr. mé and OBret. me suggest *mē, so OW mi may be influenced by second-person singular ti, rather than deriving from *mī < *mē (but cf. mi in Gaulish, below). OIr. gen. mol ‘my’, stressed muí ‘mine’, imply *mowe < *mewe, whereas MW vy<sup>N</sup> ‘my’ implies *men < *mene (cf. Avest. mana, Slav. mene), so the Old Irish forms (and Middle Welsh stressed
meu ‘mine’) may be analogical to the second-person singular *tewe. The Old Irish second-person singular tú and Old Welsh ti together imply CC *tū. Its genitive forms, OIr. doL, stressed tuí, tait, and MW dyL, stressed teu, imply Celtic *tewe (: Skt tāva). The first-person plural forms, OIr. sní, MW ní, Gaul. sna, suggest *snīs < *(s)nēs, and the second-person plural, OIr. sí, MW chwi, suggest *swtīs < *(s)wēs; the *s- may be due to the first-person plural verbal ending: *-mos nīs > *-mos snīs. The Old Irish genitive forms nathar, nár ‘ours’ (unstressed arN, MW an), sethar, sár ‘yours’ (unstressed farN), are obscure but have been compared with Latin noster, vester, Gothic unsara-, izwara- etc.

The third-person pronouns are problematic. The Old Irish subject pronouns, singular é (m.), sí (f.) (W hi), ed (n.) plural é (W wy), may derive from *es, *stè, *edā, *ei. Welsh ef ‘he’ may come from accusative *emem, while an unreduplicated accusative *em lies behind the masculine infixed object pronouns OIr. -aN-, Breton -en-. Old Irish accusative feminine -sN-, -eN, implies *(s)iyam, and the neuter accusative singular -aN- implies *e < *ed. (In Gaulish id may occur, but OIr. beirthi ‘carries it’ implies *bereti-e(d), not **bereti-id.) The accusative plural -s- (also -sN-) comes from *sūs < *sö(n)s (cf. Gaul, sos ‘them’). Most of the above forms cannot be traced directly back to Indo-European. By contrast, the unstressed genitive forms OIr. aL (m. n.) (MW yL), a (f.) (MW y-), aN (pi.) (W eu h-) can be derived regularly from IE *esjo, esjäs, *ejsöm, the /j/ survives as Ibl in the stem of the Middle Welsh stressed forms m. eidaw, f. eidi.

Subject pronouns seem to occur after verbs in Gaulish (uediu mī Consonantism, p. 358, unless -mi is an added athematic ending as in Skt bháraṁi), and they perhaps lie behind OIr. 1 sg. -mm in for example benaimmt ‘I strike’ < ?*binam-me. Some Old Irish ‘emphasizing pronouns’ are pronominal, for example, laimir-sni ‘we dare’, ni-bir-siú ‘you do not carry’ < *nīs-beres-tū (cf. MW kereist ‘you loved’ with -t < *tt); most of them, however, are demonstratives in origin, for example, beirid-som ‘he carries’ (: Goth. sama ‘the same’, Gk homōs), earlier -sa (< IE *so ‘this’). Old Irish object pronouns are suffixed to simple verbs, for example, beirthi ‘carries it’ < *bereti-e (above), but infixed within compound verbs and after particles, for example, da-chèil ‘hides it’ < *di-e-kelet(i), ra-mbèrt ‘has carried him’ < *pro-em-berst(i). They are often combined with the particle *de, for example, fordom-chdin ‘he teaches me’ < *wer-de-me-kanet(i). The Old Irish stress (’) regularly follows infixes and the latter cause sandhi mutations. Deuterotonic compound verbs without visible infixes or sandhi, for example, do-cēil ‘hides’ have been attributed either to a meaningless sandhi-inhibiting particle, for example *di-(e)s-kelet(i) (Cowgill 1985, Schrijver 1994: 180–6), or to analogical creation by ‘infix deletion’, for example, *di-e-kelet(i) > *d(i)-e-xèle(b) > *di-kèle(b) > do-cēil (McCone 1985 – the -c- is not spirantized because it arose after the period of lenition, p. 362, pace Russell 1995: 54).

The sentence-initial position of such deuterotonic verbs in Old Irish (Syntax,
p. 374) implies the former presence of infixes, standing in second position according to Wackernagel’s Law (Vendryes 1911; Chapter 2, p. 70). The deleted particles may have been mainly proleptic/redundant neuter pronouns ($e^1$, $d(e)-e^1$), whose deletion would have avoided confusion with relative verbs of the type *do-cheil* (Pronouns, p. 366) (Sims-Williams 1984). For prototonic verbs (e.g. *dichil < *di-kelet(i)) see Syntax, p. 374; such forms occur when a proclitic particle precedes, with or without an infix, e.g. *ni-dichil ‘does not hide’, *nim-dichil ‘does not hide me’.

The Celtic Verbal System
This simplified semantic distinctions carried by inflections in Indo-European. For example, the IE aorist and perfect merged in a single ‘preterite’ tense, and the subjunctive and optative moods merged as a single ‘subjunctive’ mood; instead aspectual differences were expressed syntactically by the use of preverbs and particles, for example OIr. *ro, MW *ry < *pro (Schmidt 1990). The inflectional system survives most fully in Old Irish. In Old Irish, verbs express the active voice with either active inflection or deponent inflection, and for the passive/impersonal voice a passive inflection evolved which was similar to but distinct from the deponent inflection; both probably resulted from a late split in the IE mediopassive: e.g. *suidigidir ‘places’ differs from *suidigthir ‘is placed’ only in lacking syncope. Syncope patterns would vary according to the syllable-count of the base, and this variation was probably exploited in order to differentiate deponent and passive (McCone 1986: 240). Already in Gaulish deponent verbs (i.e. verbs with active meaning and mediopassive inflection) are apparent, e.g. *marcosior ‘I shall (or may I) ride’ (Lejeune 1985a: 138; Lambert 1994: 125).

Personal Endings
The personal endings of the Celtic verb derive mainly from:

(a) the primary endings of the IE present/aorist system (*ō/*mi, *si, *ti, etc.), which probably fell together with the secondary endings (*m, *s, *t, etc., Chapter 4, p. 113), partly through early loss of *-i as in Italic (Cowgill 1975, 1985; Lambert 1994: 63; Schrijver 1994; Villar 1995) and possibly through a still earlier expansion of the domain of primary endings;
(b) IE imperative endings;
(c) IE mediopassive endings in -r (as in Hittite, Italic, Tocharian: cf. Chapter 11, Verb Conjugation, pp. 336–8);
(d) IE perfect endings (see Chapter 2, p. 57).

In Insular Celtic there are also obscure ‘imperfect’ endings in the imperfect indicative, conditional, and past subjunctive. They are identical in both active and deponent verbs and are perhaps of mediopassive origin (cf. Ahlqvist 1993; McCone 1994: 161).
Like other IE languages, Celtic came to prefer ‘thematic’ inflection, with a thematic vowel alternating between *e* and *o* before the personal endings, to ‘athematic’ inflection, without *elo* but often with ablaut variation in the root in the present (full grade in singular, weak grade in plural). A survivor of the athematic type is the ‘copula’ (the form of the verb ‘to be’ expressing equivalence rather than existence): third-person singular OIr. *is*, MW *ys* < *éš-ti*, third-person plural OIr. *iti*, MW *ynt* < *ś-es-ti*. Celtic tended to thematicize athematic verbs and to generalize a single grade of ablaut, usually the zero grade of the plural: thus IE *melk-ti*, *mlg-enti* ‘milks’ → CC *mlig-e-ti*, *mlig-o-nti* > OIr. *mligid*, *mlegait* (C. Watkins 1962: 141–2; McCone 1986: 228; 1991a: 29). The *e/o* spread wherever it helped to avoid awkward consonant clusters; hence it was not inserted after roots with final laryngeal, which gave Celtic /a/ and remained athematic, e.g. *skérH-ti*, *skrH-enti* > *skarati*, *skaranti* > OIr. *scaraid*, *scarait* ‘separate(s)’ (cf. C. Watkins 1962: 189).

(a) **Primary endings** occur in Old Irish active verbs in the present indicative, present subjunctive, future indicative, and in such preterite indicatives as derive from the IE aorist (i.e. not those which derive from the IE perfect). In Insular Celtic this type of ending has two forms: (a) ‘absolute’, in simple verbs in absolute initial position without preceding particle; and (b) ‘conjunct’, in all compound verbs and in simple verbs in non-initial position: e.g. (a) OIr. *beirid* ‘carries’, MW *trenghit* ‘dies’; (b) *ni-beir* ‘does not carry’, *ny threingk* ‘does not die’. It is now agreed that ‘absolute’ and ‘conjunct’ endings have a single origin, and do not derive from the IE primary and secondary endings respectively (see Sims-Williams 1984; Cowgill 1985; McCone 1985; Koch 1987; Russell 1995: 49–55; cf. C. Watkins, 1963). Accepting an early apocope of *-* (Personal Endings, p. 368 cf. sistat p. 355), the conjunct forms of *beirid* ‘carries’ can be derived from primary forms as follows:

| 1 sg. | -biur [bʲiʊr] | < *birū | < *bʰerō |
| 2 sg. | -bir [bʲirˠ] | < *biris | < *bʰer esi |
| 3 sg. | -beir [bʲerˠ] | < *beret | < *bʰereti |
| 1 pl. | -beram [bʲerəɾˠ] | < *beromos | < *bʰeromosi |
| 2 pl. | -beirid [bʲerʲəɾˠ] | < *berete | < *bʰerete |
| 3 pl. | -berat [bʲerəɾˠ] | < *beront | < *bʰeronti |

The Old Irish **absolute** forms are longer than the conjunct forms, and it appears that they originally included some additional element which protected final *-* from apocope. Since absolute verbs always occur at the head of clauses, the position of the additional element must be due to Wackernagel’s Law (cf. p. 368). Various particles have been proposed (cf. p. 367), but the most likely candidate (Sims-Williams 1984) is a redundant or proleptic neuter object pronoun *e(d):*
1 sg. biru [bʰiru]  < *birä-e
2 sg. biri [bʰiri]  < *birisi-e
3 sg. beirid [bʰeräði]  < *bereti-
1 pl. bermai [bʰermi]  < *beromosi-e
2 pl. beirthe [bʰer³phie]  < *berete-e
3 pl. berait [bʰer³d³]  < *beronti-

In the third persons (or all persons according to McCone 1994: 141, who posits analogical developments) the additional element was dropped before the general apocope by a process of ‘suffix deletion’ presumably contemporary with ‘infix deletion’ in compound verbs (p. 368).

(b) The imperative endings were mostly similar to the conjunct of the present indicative except the second-person singular, e.g. OIr. gaib ‘get!’, Gaul. gabi, and the third-person singular, e.g. OIr. gaibed < *ghabh jetoul (cf. Goth. -dau); the need for distinct indicative endings in absolute initial position may have encouraged the generalization there of the absolute (rather than conjunct) indicative endings of simple verbs (Sims-Williams 1984: 171; Eska 1991). Similarly the imperative of compound verbs was distinguished from the (deuterotonic) indicative by its protonic stress (cf. pp. 367–8).

(c) The passive/impersonal inflection has third-person singular and third-person plural endings only. (The absolute forms, with palatalized final consonant, are probably based on the analogy of active absolute forms like third-person plural berait.) In the present tense there are two inflections in the singular, with or without a dental consonant (cf. Umbrian pres. subj. ferar vs Latin feratur?), as seen in the following conjunct forms:

3 sg. -berar  < *beror (absolute berair) ‘is carried’
         -marbthar  < *marwätor (absolute marbthair) ‘is killed’
3 pl. -bertar  < *berontor (absolute bertair)
         -marbtar  < *marwänþtor (absolute marbtair)

Infixed pronouns indicate the first and second persons, e.g. nom-berar ‘I am carried’.

The passive preterite paradigm, however, was built up on the basis of the IE verbal adjective (Sims-Williams 1984: 183), e.g. MW llas ‘he was slain’ < *slad-tos, OIr. nom-breth ‘I was carried’ < *nu-me-britos ( < *bʰrutos).

The deponent conjunct endings may be illustrated with OIr. -fograigedar ‘sounds’. The irregular syncope outside the third-person singular and third-person plural of this five-syllable base presumably follows the pattern of four-syllable bases (The Celtic Verbal System, p. 368).
1 sg. -fograigiur < *wogaro-sagi-ör (absolute fograigim)
2 sg. -fograigther < *wogaro-sagi-ter (absolute fograigther)
3 sg. -fograigedar < *wogaro-sagi-tor (absolute fograigdidir)
1 pl. -fograigmer < *wogaro-sagi-mor (absolute foagraignir)
2 pl. -fograigid < *wogaro-sag-edwe(?) (absolute foagraigthe)
3 pl. -fograigetar < *wogaro-sag-ttor (absolute foagraiggitir)

The first-person singular and second-person plural absolute endings are borrowed from the athematic active, and the palatalized consonants in the absolute third-person singular, first-person plural and third-person plural are by analogy with passive absolute forms like gaibthir, gaibtir.

(d) Some IE perfect endings survived in the OIr. ‘suffixless preterite’, e.g.
1 sg. -gád ‘I prayed’ < *gʷāda, 3 sg. -gáid < *gʷāde, 3 pl. -gádatar < *gʷādontavr – the last a blend of the IE r-ending (cf. Skt vid-ür) and the nt-ending of the present/aorist (cf. Lat. uidē-r-unt).

Present Stem
The present stem (used to form the present and imperfect indicative and the imperative) was formed with various suffixes, which merged to give the following Old Irish conjugations according to the numeration of Thurneysen 1946:

AI: -ā- (cf. Lat. -āre) and -ā- < root-final *-H, e.g. scaraid (Personal Endings, p. 369)
AII: *-eje/ejo- (denominative and causative), also *-i- (partly < stative *-ē-, e.g. -ruidī ‘blushes’ cf. Lat. rubēre ‘to be red, blush’)
AIII: miscellaneous verbs with hiatus, e.g. baīd ‘dies’ < *ba-eti (McCone 1986: 228)
BI: *-elo- (e.g. beirid Personal Endings, p. 370)
BII: *-eljo- (3 sg. -gaib, not **-gaibi < *gʰabʰjet(i), is probably on the analogy of BI, although a *-iljo- suffix has been suggested (cf. Sims-Williams 1981: 211–16)
BIII: *-elo- with nasal infix, e.g. bongid ‘reaps’, passive pret. -bocht, cf. Lat. ta-n-go, tac-tus (cf. Joseph 1990; McCone 1991a: 41–7);
BIV: *-nā-, e.g. crenaid, pl. crenait ‘buys’ < *kʷri-nā-ti, *kʷri-nā-mi (? ultimately from *kʷri-nē-H₂-ti, *kʷri-n-H₂-enti, with nasal infixed in the root *kʷr(e)iH₂, seen without infix in the Old Irish subjunctive stem cria-) (McCone 1986: 225; cf. 1991a: 11–54);
BV: supposedly *-n(e)u- (but see McCone 1986: 225–7; Campanile 1990; Hamp 1991; McCone 1991a: 13–15, 22–3).

AI and AII are the only productive formations in Old Irish, and lie behind the Brythonic regular verbs, MW caraf ‘I love’ < *kārāmi, kenif ‘I sing’ < *kanīmi (unless the latter is < *kanū-mi).
Subjunctive Stem

The subjunctive stem (used for present and past subjunctive) is divided into two classes: (a) the unproductive s-subjunctive, e.g. OIr. geiss, -gé ‘may pray’ < *gʷed-s-t(i), MW gwnech ‘may do’ < *(g)wrex < *wrek-s-et(i); (b) the productive so-called á-subjunctive, e.g. beraid, -bera ‘may carry’ < *ber-á-t(i). It is semantically difficult to derive (a) from the IE s-aorist indicative (with C. Watkins 1962), and derivation from the s-aorist subjunctive is difficult unless *gwed-s-t(i) replaced the expected *gwed-s-et(i) under the influence of the s-preterite inflection (McCone 1986: 245–6), which is against the normal Celtic athematic → thematic tendency (cf. Hamp 1987; McCone 1991a: 57, 73, 79–80). Subjunctives in -se-Ti may occur in Celtiberian (Eska 1989: 170). (b) The á-subjunctive, traditionally derived, with that of Latin, from an Italo-Celtic optative suffix *-ä- (cf. OLat. aduenat, subj. of aduenio), is now often analysed as *-ä-se/o- or *-a-se/o-, with *a, originally from roots in -H, -RH (McCone 1986: 260; 1991a: 85–113, but cf. Schmidt 1991: 17–19).

Future Stem

There are three main types of Old Irish future stem (used for indicative future and conditional): (a) the f-future, e.g. ranña, -rannub ‘I shall divide’; (b) the reduplicated s-future, e.g. gigis, -gig ‘will pray’ < *gʷi-gʷed-s-t(i); (c) the reduplicated so-called á-future, e.g. cecñáid, -cèchna ‘will sing’ < *ki-kaná-se-t(i), and its subtype the e-future, e.g. célla, -céla ‘will hide’ < *ki-klá-se-t(i) (with *kidl- > *kexl- > cèl-). (a), the f-future, is traditionally compared with the Latin future in -bo. This is phonetically controversial – normally /f/ is < *sw – but because the f-future occurs only in Old Irish, where it is very productive, it is difficult to avoid the conclusion that it is a late, parallel innovation, based on a periphrasis involving the root *b(e)w- ‘to be’ (Quin 1978; Bammesberger 1979; on /bw/ cf. McManus 1991: 122). However, McCone (1991a: 17 and 82) suggests that it spread from a verb in which reduplicated *si-sw- > *si- (Russell 1995: 20 and 49) rejects this. (b–c), the two reduplicated futures, run parallel to the corresponding subjunctives and their suffixes must be explained similarly. They are originally desideratives (semantically cf. English ‘he will pray’) and are comparable with Sanskrit desideratives, e.g. titrpsati < *tí-trp-se-ti (root *terp- ‘enjoy’) (Thurneysen 1946: 414–15; McCone 1986: 248–55). Unreduplicated futures in *-sjelo- have been identified in Continental Celtic, Indo-Iranian and elsewhere (e.g. Schmidt 1988: 241, Lambert 1994: 63).

Active Preterite Stem

The Old Irish active preterite stem (to which ‘deponent’ as well as ‘active’ inflections could be added) derived, for most verbs, from the IE aorist, but for others from the IE perfect.

With few exceptions the aorists were originally athematic and sigmatic, e.g. *skerH-s-t, *ber-s-t. Such third-person singular forms developed
regularly via *skarass(i), *bert(i) to -scar, -bert (cf. OIr. tart < *trstu-

thirst'), and these third-person singular forms formed the basis for the whole paradigms, e.g. first-person singular *skarass-ū > -scarus (the s-pret.), *bert-

ū > -biurt (the t-pret.). Cf. MW 1 sg. kereis, keint < *karassū, *kantū, 3 sg.

(*caras, cant < *karassit(i), *kant(i). Other stem vowels before *ss were partly influenced by present stems (McCone 1986: 232, Joseph 1988). The third-person singular Brythonic termination of Middle Welsh absolute keressyt < *karass-iti, conjunct (*)caras < *karass-it is an innovation paralleled in Gaulish legasit < *legast + -iti versus more archaic prinas < *kwi rinast (Sims-Williams 1984: 188; cf. Eska and Evans 1993: 42; Lambert 1994: 64, 68). For other Continental Celtic preterites see p. 354.

Some of the Old Irish 'suffixless preterites' based on old perfects employed reduplication (cf. Lat. tango, te-tigi), e.g. OIr. cechain 'he sang' <

*ke-kan-e (a rare MW example is kigleu 'he heard'); others replaced *ē in the root with Celtic *ā (probably < *ō), e.g. OIr. do-feid < *-wedet 'leads',
do-fāid < *-wāde 'led', MW godiwawd < *-wāde 'overtook'. The origin of the ā-preterite is obscure (cf. Germanic comparison in McCone 1986: 235–8; 1994: 168) and it is unclear whether it is attested in Continental Celtic: a possible precursor, perhaps with /ō/ as in the IE perfect, is Gaulish AVVOT(E)


Word Formation
Despite much work on Celtic name formation (e.g. Uhlich 1993), the vast subject of Celtic word formation is only beginning to be studied in detail, for example Joseph (1987) on denominative verbs in *-sag- 'seek' (e.g. fograigedar: fogur 'sound', Personal Endings, pp. 370–1), and Russell (1990) on the productive velar suffixes such as *-ākos. Most IE types of composition survive in Celtic, at least residually (cf. McCone 1994: 126–32), including dvandva-compounds such as OIr. gaisced < *gaiso-skietom 'spear-and-shield' or TEVŌ-XTION (gen. pl.) = DEIS ET HOMINIBUS in a bilingual Gaulish inscription at Vercelli (Schmidt 1983: 81, cf. p. 363). Like other IE languages, Celtic developed the use of preverbs to modify verbal bases aspectually (The Celtic Verbal System, p. 368) or semantically, e.g. OIr. fo-reith 'helps < *runs under' < reithid 'runs' (: MW gwaret 'helps'; Lat. subcurro, succurro < curro). Large numbers may be strung together (e.g. OIr. intururas 'incursion' < *ind-to-are-eks-ret-), and they tend to appear in a particular hierarchy (McCone 1987: 94) which has parallels elsewhere, e.g. ro < *pro tends to occur close to the root as did Vedic prā, Homeric pró (Sims-Williams 1984: 190). Despite similarities, the system of preverbs and prepositions in Celtic and Italic cannot be reduced to a unity (C. Watkins 1966: 36). As in other IE languages, e.g. OLat. ob uos sacro (→ obsesco uos), preverbs may be divided by tmesis (see Syntax below; McCone 1985: 267).
Syntax
The most important development in Celtic is in the position of the verb. Whereas the normal order is SOV in Celtiberian (e.g. p. 354) and in some Gaulish (e.g. *Buscilla sosio legasit in Alixie Magalu ‘B. placed this in Alisia for Magalos’), Insular Celtic favours VSO (p. 363), with most apparent exceptions, such as SVO (Lewis 1989), being explicable either as nominativus pendens or as cleft sentences with [copula] + S + relative verb (T. A. Watkins 1987; Fife and Poppe 1991; Russell 1995: 292–300). The most important exception is the archaic Old Irish construction known as Bergin’s Law (Binchy 1979), by which the verb, instead of appearing initially in absolute (Personal Endings, pp. 369–71) or deuterotonic (p. 367) form (e.g. *Loiscis Lugaid trebthu ‘Lugaid burnt dwellings’, *Ad-rími maicni nAilb ‘You reckon the sons of Alb’), appears finally/medially in conjunct or prototonic form, e.g. Lugaid loisc trebthu, Maicni nAilb ármi. This construction is probably a relic of the SOV/SVO syntax seen in Continental Celtic. The key to the development of VSO was identified by Vendryes (1911; cf. C. Watkins 1963; Eska 1994; Russell 1995: 13, 303) in the phenomenon that certain clitics were closely tied to verbs in Celtic and therefore drew either the verb or its first preverb to the head of the clause by Wackemagel’s Law (p. 368; Personal Endings, pp. 369–70), e.g. verb + relative *jo in Gaulish dagiontio Ucuetin ‘who honour Ucuetis’ (p. 355), preverb imm + -a < *jo in archaic OIr. imma- lanna -lig ‘which lies about lands’ (with tmesis (Word Formation, p. 373), later → *imma-lig lanna). This phenomenon must surely be linked with the fact that absolute and deuterotonic verbal forms, which are required in VSO order, seem originally have included clitic elements subject to Wackernagel’s Law (see Pronouns, pp. 367–8. Personal Endings, pp. 369–71 and Sims-Williams 1984).

References


Kuryłowicz, Jerzy (1960) Esquisses linguistiques, Wroclaw and Cracow: PAN.
Lambert, Pierre-Yves (1979) ‘Restes de la flexion hétéroclitique en celtique?’, in


-------- (1994) ‘The Celtic adverbs for “against” and “with” and the early apocope of *-i’, Ériu 45: 151–89.


