

PLACE-NAMES FROM PRE-CELTIC LANGUAGES IN IRELAND AND BRITAIN

The great majority of place-names in Ireland are of Celtic origin, though a small number are of Germanic origin, usually English, occasionally Norse. In Britain the majority of place-names are of Germanic or Celtic origin, each having two main components - English or Norse in the Germanic group and Brythonic or Gaelic in the Celtic group - with wide zones where one or other of these four predominates. Despite almost four centuries of Roman occupation and several centuries of French cultural dominance in part of the country following the Norman invasion of England in 1066, the Latin and Romance contribution to British place-names is, as Professor Rivet has told us, comparatively small.

The combined chronological span of these three linguistic sources of our place-names, of which Celtic is the oldest, covers at most probably about two-and-a-half millennia, but the total time-span of Man's residence in these islands runs to at least eight millennia in Ireland and probably considerably more in at least the southern part of Britain. During that vast stretch of time before the Celts set foot on our shores, earlier peoples must have used place-names for at least the most prominent features of the landscape, and it is possible that some of these survived the shift from languages now lost to those that have survived. One such group of names that appears to be identifiable consists of river-names dating from a very old stage of western Indo-European, before its Celtic, Germanic, and Italic branches had emerged as separate entities. Such names have been identified on the Continent by Hans Krahe and it is believed that they extend at least to mainland Britain if not to its western off-shore islands or to Ireland. A selection of such names is given in one of the small maps devoted to place-names in the Complete Atlas of the British Isles (Reader's Digest, London, 1965) where they are described as 'Pre-Celtic or Old European.'

In this paper individual place-names will not be considered so much as the total linguistic situation in pre-Celtic times in so far as we can discern its probable outlines faintly through the mists of the Celtic past. If rather more explicit attention is paid to Ireland than to Britain this is because its smaller size and greater distance from the Continent make it possible to see the main outlines more clearly, and also because I am better acquainted with the archaeological record of its pre-history than with that of Britain.

Speculation as to the nature of the pre-Celtic inhabitants of both Britain and Ireland has been rife for several centuries and has been based on references to their early inhabitants in classical literature, on legends in the native tradition, and on the progress of archaeology from the later eighteenth century onwards. Place-names, however, are part of language and it was only at the very end of the nineteenth century that anyone made a logically based attempt to examine the possible nature of pre-Celtic speech by analyzing the structure of the Celtic languages themselves. In 1899 John Morris Jones of University College Bangor wrote an Appendix to a book by John Rhys and David Brynmor-Jones entitled The Welsh People, which was first published in 1900. This Appendix is entitled 'Pre-Aryan Syntax in Insular Celtic'. Briefly what John Morris Jones did was to draw up a list of syntactic features in Welsh which are untypical of Indo-European languages and then see where else, outside this language family, similar features can be found.

His idea was that if they could be found in some other language this would give some indication of the type of language spoken in Britain before the arrival of the Celts, since it could be assumed that when earlier peoples in Britain learnt the incoming Ancient Celtic they would have spoken it as a foreign language, importing into it their own speech-habits which would then have come to colour the Neo-Celtic languages as they gradually developed out of Ancient Celtic.

The only non-Indo-European language now spoken in western Europe is Basque. In deference to the old idea that there was a possible connection between the pre-Celtic inhabitants of Britain and those of Iberia John Morris Jones compared his list of distinctive Welsh syntactical features with the structure of Basque, but he found little similarity in that direction. When he made his comparisons, however, with the Berber dialects and with Coptic or earlier Egyptian he found that the apparently non-Indo-European features of Welsh syntax had parallels in almost every case. Berber and Egyptian are two branches of what is now known as the Hamito-Semitic language-family, or Afro-Asiatic family, as Greenberg has renamed it. The other three coordinate branches are the Semitic languages, the Cushitic languages of the Horn of Africa, and the Chadic languages of which Hausa, spoken in northern Nigeria, is the most important. Basque on the other hand is a language whose wider connections still puzzle linguists. Some, including Löpelmann in his Etymologisches Wörterbuch der baskischen Sprache (Berlin, 1968), think that it has North African connections, and of this more will be said in a moment; others believe that it has links with Caucasian languages, and more particularly with the South Caucasian group which includes Georgian, a view discussed, though with some reservations, by G. A. Klimow in a paper entitled 'Zu Beziehungen zwischen baskischen und kaukasischen Sprachen' contributed to the Liber Amicorum Weijnen (Assen, 1980), a collection of essays presented this year to Professor A. Weijnen on his seventieth birthday.

In these islands the proposition put forward by John Morris Jones was treated with derision, partly because it was not fully understood, since many people did not grasp the distinction between linguistic similarities deriving from the common genealogical descent of languages and those deriving from convergence of originally distinct languages spoken within a common geographical area. In due course, however, the question was taken up again on the Continent by Julius Pokorny in a long article 'Das nicht-indogermanische Substrat im Irischen' in Zeitschrift für Celtische Philologie, beginning in 1927. On the Celtic side he added evidence from Old Irish and on the Hamito-Semitic side additional evidence from Semitic to support John Morris Jones. There the matter rested for a generation. More work needed to be done in establishing securely relationships between the different branches of Hamito-Semitic before the matter could be profitably pursued. As yet the similarities were almost entirely based on syntactical comparisons. No successful attempts had yet been made to identify lexical items that might have survived from pre-Celtic times by becoming embedded in the Neo-Celtic languages.

Some advances towards recognising the linguistic state of western Europe in pre-Indo-European times were then made by Romance linguists, particularly in Spain and Portugal where the arrival of writing at an earlier period than it became known in these islands provided the means for identifying various pre-Celtic and pre-Classical languages and the areas in which they were spoken. As well as two Celtic languages - that of the Celtiberi, apparently of Q-Celtic type, in north-

central Spain and that of the Celtici, apparently of P-Celtic type, in Portugal and parts of western Spain - there appeared to be an early Indo-European language or languages, to which the name Hispanic has been given, which was pre-Celtic in the sense that it preserved Indo-European /p/ which was lost in the Celtic languages. There is also evidence for several non-Indo-European languages (notably Iberian in north-eastern Spain), which are not necessarily related to Basque and may have North-African connections without necessarily being related to Berber. In addition to these conclusions, which are derived from inscriptions and place-names in the Iberian peninsula, Romance linguists have postulated a number of non-Indo-European language areas in southern and south-west Europe based on the distribution of words in the Romance languages which are clearly not of Latin or Celtic origin. In particular, one such area is that to which the name 'Eurafrican' has been given, whose former existence has been inferred from the presence of certain words that are common to the western Romance languages, to Berber, and to Basque, but which have apparently no Indo-European or Hamito-Semitic or Caucaso-Pyrenean connections.

The most recent contribution to this Eurafrican theory has come from the Austrian linguist Hans Mukarovsky in his book Die Grundlagen des Ful und das Mauretische (Vienna, 1963) in which he examines certain aspects of the vocabulary of Ful, or Fulani as it is more commonly called in English. This language is widely spoken across the savannah belt of West Africa between the Sahara and the tropical forest to the south from Gambia to the Cameroons and was for long a problem-language for linguists. Among its distinctive features is a set of initial consonant mutations surprisingly similar to those that occur in the modern Celtic languages. It is now recognised that Fulani is basically a language of the West-Atlantic sub-group of the vast Niger-Congo language family but one which has been subject to considerable hybridization from external sources. Mukarovsky's investigations reveal two basic strata in its vocabulary: a stratum made up of the most fundamental words of the language including words relating to agriculture and to women's work, and a stratum made up of words relating to warfare, stock-raising, and sexual matters - in general those parts of the vocabulary reflecting men's interests. While the first stratum is related to similar words in other West-Atlantic languages such as Wolof and Serer, Mukarovsky has shown that the second stratum appears to be related to similar words in Basque. This is the element that he calls Mauretanian. He suggests that, at some remote time in the past, speakers of a Eurafrican language split and migrated in two directions. One group went northwards into Spain and merged with other population elements, who possibly had links across Europe to the Caucasus, to produce the Basque people. The other group went southwards round the western edge of the Sahara to merge with the Negroid peoples of West Africa to produce the Ful or Fulani people. In this way it is suggested that Basque and Fulani may both preserve some elements of the otherwise extinct Eurafrican language.

To return to the Neo-Celtic languages, the problem of their early non-Indo-European contacts was again taken up two decades ago by Professor Heinrich Wagner, who has recently moved from the Queen's University of Belfast to the Institute of Advanced Studies in Dublin. In his book Das Verbum in den Sprachen der britischen Inseln (Tübingen, 1959) he examined the structure of the verb in all the Neo-Celtic languages and in English, French, Basque, and Berber, and after noting certain common tendencies in the structure and use of the verb throughout this area he suggested that certain features might derive ultimately from a

Eurafrican substratum which was pre-Celtic and pre-Indo-European in western Europe and pre-Hamito-Semitic in North-West Africa. The whole question of contact between Ancient Celtic and pre-Celtic languages is thus seen to be much more complex than the rather simplistic view taken by John Morris Jones eighty years ago, though he does seem to have pointed the way to the general direction in which an answer to this problem must be sought.

These islands have been populated by people who reached them at various times from the western seaboard of Europe, all the way from Norway to Portugal and beyond that to the continuation of this seaboard in Morocco and beyond. The Celtic, Germanic, and Romance-speaking invasions which have reached our shores within the last two-and-a-half millennia represent intrusions into this seaboard periphery from the east, from central Europe and beyond it, ultimately from South Russia where the Indo-European languages are thought to have arisen. The only other possible intrusion from beyond the peripheral seaboard lands of western Europe and North-West Africa - and it is a much smaller and weaker intrusion - is that represented by the activities of the prospectors for metal who probably reached these islands in the second millennium B.C. If they came, as seems likely, from the higher civilizations at the eastern end of the Mediterranean they almost certainly spoke some variety of North-West Semitic, the language stock of which Ugaritic, Hebrew, and Aramaic are later specialized forms. It is reasonable to expect that if explorers and traders came from this direction they would have named the principal coastal landmarks at least in their own language, and, if they settled in any numbers to exploit the mineral resources of Ireland and Britain, that their names for such prominent geographical features as bays or promontories and mountains that served as landmarks might well survive to become embedded in the later Celtic languages. With these exceptions we must assume that any other pre-Celtic place-names that did survive derive from the unknown languages of the older seaboard peoples of the Continent who reached these shores.

We must now leave language on one side for a moment to consider who these early peoples who populated these islands might have been and at what period they arrived. I will use Irish rather than British prehistory as the basis of my time-scale, which is based on the broad outlines of what has been revealed by archaeology.

Ireland appears to have been uninhabited until some time towards the end of the seventh millennium B.C. The earliest Carbon 14 date indicating the presence of a Mesolithic population is about 6140 B.C., plus or minus the usual variation, from Ballyhalbert sandhills on the east coast of Co. Down. These are the people whose culture has been called 'Larnian' by the archaeologists, from Larne on the east coast of Antrim where it was first identified. They settled up the rivers from Inishowen round to Dublin Bay, though there are recent indications that they also penetrated further inland. In most of Britain the earliest population would probably date from the same millennium. It is only in the small part of Britain lying south of the Thames, which was never covered by ice, that one can speak of the possibility of populations going back to a very much older time, even into Palaeolithic times, and it is not quite certain even here that there was continuity of settlement going back to such remote times. With a food-gathering economy in Mesolithic times the population must have been extremely small, perhaps something of the order of one or two persons per square mile.

A more advanced stage was reached with the introduction of Neolithic peoples with a food-producing economy based on primitive agriculture and stock-raising and capable of sustaining a higher density of population. They appear to have reached Ireland about 4000 B.C., in round figures, and the date of their entry into Britain was probably not very different. Archaeological evidence points to lands round the western Mediterranean as the source of this northward population movement whose ultimate cause was probably increasing dessication of the Sahara area of North Africa which caused population movement from North Africa into southern Europe and thence into North-West Europe. At the time when these movements were at their height, from the late fifth millennium B.C. to the middle of the second millennium B.C., the western Mediterranean lands and the most westerly parts of Europe would certainly not have been Indo-European-speaking as the Indo-European languages were then confined to eastern and parts of central Europe. Archaeological indications are that during this period several different population groups reached Ireland and presumably also Britain and that they did not necessarily all speak the same language.

The Irish Bronze Age began about 2000 B.C., in round figures, and the use of bronze was probably introduced by trade rather than by any kind of warlike invasion, possibly by explorers and traders from the eastern Mediterranean, the people who have been called 'Prospectors' by the archaeologists and who probably came in relatively small numbers. About 900 B.C. in the Irish chronological record, however, the Middle Bronze Age was marked by the introduction of weapons and tools of a rather different kind, which suggests a new people who may have been invaders of a more warlike type. We now have no means of knowing, but it is believed that the original settlement of these islands by Neolithic farmers was largely a matter of the peaceful penetration of virgin territory of which only the margins had been occupied by the earlier Mesolithic peoples.

Finally, during the last four centuries B.C. came a series of warlike invasions by the Iron Age Celts. Their arrival was contemporaneous with Celtic population movements on the Continent which are recorded in classical literature, and the memory of these invasions survived in Irish oral tradition to be written down in later centuries after the introduction of Christianity. Without becoming involved in abstruse arguments as to whether P-Celts or Q-Celts arrived first, let it suffice that out of the amalgam of Ancient Celtic dialects then introduced there emerged in due time the Celtic language in Britain which we now call Welsh and the Celtic language in Ireland which we now call Irish or Gaelic. The spread of the latter from Ireland to the northern part of Britain was a later development.

Let us now see how this record of population movement discernible through archaeology can be clothed in terms of language for the long period that stretches backwards in time almost six thousand years before the period of Celtic invasions. Of the language of the Mesolithic culture described by the archaeologists for Ireland as Larnian but presumably valid also for adjacent parts of Scotland we have virtually no inkling. One faint relic which just possibly points in its direction has been discussed by Heinrich Wagner in a paper entitled 'Nordeuropäische Lautgeographie' in *Zeitschrift für Celtische Philologie*, vol. 29 (1964). There he refers to the preaspiration of voiceless occlusives - which occurs in Scottish Gaelic, Icelandic, and Lappish (the most northerly Celtic, Germanic and Finnic languages), but not in other members of these three groups - and suggests that this may be a

phonetic carry-over from some early language which survived till relatively recently in the most northerly parts of Britain and Scandinavia till it was eventually displaced by these three languages in one or other part of these northern extremities of Europe. There is of course a chronological difficulty here. The supposed North European prehistoric language must have been replaced by Lappish in Northern Scandinavia early in the second millennium B.C. if we accept the view of H. E. Ronimois in *The Hittite and West Finnic Languages* (Vancouver, 1957) that Lappish was separated from the other West Finnic languages about this time, by Proto-Norse in Western Scandinavia probably about the beginning of the first millennium B.C., and by Scottish Gaelic in Northern Britain shortly after the middle of the first millennium A.D. There is moreover the difficulty that we have no means of knowing whether this supposed North European relict language was in fact the latter-day survivor of the language spoken by the Mesolithic population of Britain and Ireland in the 6th and 5th millennia B.C., though this possibility cannot be ruled out. If this is the case, and if any place-names bestowed by these people survive in either Ireland or Britain, then the place outside these islands where we might expect similar names to survive would be Scandinavia. We are then faced with the difficulty that such place-names or place-name elements might by now have come to be interpreted as being North Germanic, albeit Germanic of a type for which no firm Indo-European etymology could be proposed.

When we turn to the Neolithic population who were newcomers and who survived with later additions right through the Bronze Age, we are faced with a more complex linguistic situation. There is no reason to think that they all spoke the same language. Given that they seem to have migrated northwards from the general direction of the Western Mediterranean, there are three possible language types that they could have spoken: (1) a language of Eurafian type, now everywhere extinct and discernible only through chance survivals in western Romance, Basque, Berber, and possibly Fulani; (2) a language of Proto-Berber type; and (3) a language of Proto-Basque type. These last two must be mentioned if only because their modern forms survive in northern Spain and North Africa as the only living languages that go back to pre-Indo-European and pre-Semitic times and with which we can compare elements of presumably pre-Celtic origin that survive in the Neo-Celtic languages. Whether in fact speakers of all three of these languages ever reached these islands, or of only two or only one of them, is a matter on which no final pronouncement can yet be made. The time-span within which they could have been introduced runs to about three thousand years between c. 4000 and c. 1000 B.C.

Finally, in the last third of the long prehistoric period, one must reckon with two further language types. It can hardly be doubted that the Prospectors of the second millennium B.C., who introduced a knowledge of bronze-working and sought supplies of metal, were speakers of some form of North-West Semitic, the forerunner of Ugaritic, Hebrew and Aramaic. What is in doubt is whether they simply came and went as occasional visitors or whether they settled in both islands in sufficient numbers to establish their language in certain localities. Last of all, before the Iron Age Celts, came those Middle Bronze Age innovators with new types of tools and weapons. It seems likely that they were the first wave of Indo-Europeans, speaking what may be called Old West Indo-European. This was certainly pre-Celtic in the classic sense of that term, but the question arises: did it differ enough from the Ancient Celtic of classical times to be regarded as a

separate language?

We have now listed six possible pre-Celtic languages: Larnian, Eurafrican, Proto-Berber, Proto-Basque, North-West Semitic and Old West Indo-European. It hardly seems possible, at least for Ireland, to add to this number except by breaking these down into sub-types. Many will regard a list of such length as this with amazement if they have not thought seriously about the problem, and indeed not all of these may have reached both islands. The first in the list can hardly be eliminated. Of the three language types dating from Neolithic times Proto-Basque is perhaps the one that might most easily be omitted, and it could even be that the Neolithic peoples spoke either languages or a language of Eurafrican type or of Proto-Berber type but not both. North-West Semitic was perhaps the language of occasional visitors but not of permanent settlers, and Old West Indo-European might be eliminated if we believed that it did not differ enough from Iron Age Ancient Celtic for the two to be mutually unintelligible. By such intellectual cheese-paring we can perhaps reduce our original list of six languages to about half its length but it may be doubted if very much is gained thereby. After all, six languages introduced over a period of almost six thousand years amounts to only one new language per millennium and that can hardly be said to be impossible or to make too heavy demands on the imagination.

We turn now to another aspect of the problem: when did pre-Celtic speech finally die out? And how long was the gap in time over which place-names of pre-Celtic origin survived from their latest use in the languages to which they originally belonged to their earliest recording in Celtic documents? Many people, while accepting the idea that there must once have been some form of pre-Celtic speech in these islands, push it as far back as possible into the misty past and thereby hope to relieve themselves of the necessity of thinking seriously about its possible nature. It cannot have died out before Ancient Celtic arrived. On average we can put this date somewhere about the fourth century B.C. - probably about a century earlier than this in Britain and possibly a century later in Ireland. Insular Celtic inscriptions begin with the Irish ogham stones, the earliest of which are usually dated to the fourth century A.D. By the time Irish literature begins in the 6th/7th century A.D. - almost three centuries later - there would appear to be no surviving tradition of any pre-Celtic language being spoken in Ireland. This silence may have been due to the fact that all such languages had already died out beyond the reach of living memory, or it may have been due to the fact that the Irish-speaking literary class perhaps took no notice of odd scraps of pre-Celtic speech surviving in odd corners of the country, especially if all who might have preserved it had by that time become in some degree bilingual. In the northern half of Scotland a pre-Celtic language does seem to have survived till after the middle of the first millennium A.D., though we cannot understand its very scanty remains, and this suggests that a similar situation may not lie so far back in the past in Ireland as is sometimes thought.

Between the stage of Proto-Irish represented in the ogham inscriptions and the stage represented in manuscripts of the Archaic Irish period very considerable phonological changes had taken place. Professor Jackson has shown that the changes which separated Welsh and its sister Brythonic languages from Common Brythonic were also considerable and took place at more or less the same period. Indeed it would appear that down to late Roman times the differences between

Irish and Welsh - or Proto-Irish and Common Brythonic as one should rather say - were by no means so great as they later became when the oldest stage of the Neo-Celtic languages was reached shortly after the middle of the first millennium A.D. I cannot speak for the position of Brythonic but it seems to me that in the case of Irish these very considerable sound-changes must have taken place at a time when Celtic Irish was being mangled in their mouths as a foreign language by the mass of the people who till then had spoken something else and who, after a period of bilingualism, were then finally adopting Irish as their own language. If this is the case then one or more pre-Celtic languages survived very late indeed among the non-privileged sections of late pagan Irish society. We may reflect here upon the fact that the English language has existed in Ireland for some eight centuries but it is only within the last century and a half that it has become the majority language of Ireland and that Irish has suddenly shrunk away to the remotest corners of the country. I suspect that pre-Celtic speech in Ireland only finally disappeared towards the end of the long period of eight or nine centuries separating the arrival of the earliest Iron Age Celts from the introduction of Christianity.

We must now turn to the actual forms of place-names that are probably of pre-Celtic origin. Here again I will speak mainly of Ireland and those who are concerned mainly with the greater part of Britain which was once or still is Brythonic-speaking can make the necessary adjustments in their mind's eye. Much of the discussion will turn on possible relationships between the different sound-systems of different languages and for this purpose I am going to use only two of the six hypothetical languages that might have been spoken in these islands before Celtic, namely Proto-Berber and Proto-Basque, and this for two reasons: first, that their period of possible arrival here takes us far enough back into prehistoric times, between 3000 and 6000 years ago, to illustrate some chronological aspects of the problems involved, and second, that both have surviving descendants which we can compare with Irish and Welsh. The chronological aspects (even where cognate relatives of possible pre-Celtic languages still exist elsewhere, as in these cases) present particular difficulties which may be illustrated by citing examples from within English. In Middle English the words *ice* and *mouse* were pronounced /i:s/ and /mu:s/, but during the last four centuries their vowels have been pronounced as diphthongs /ai/ and /au/, which, being naturally less stable than 'pure' vowels, have developed divergent phonetic realisations in different dialects. This movement in pronunciation formed part of what is known in English historical linguistics as the Great Vowel Shift. From Middle English, however, back through Old English to Common Germanic and back again to Common Indo-European, the vowel sounds in these two words were perfectly stable as /i:/ and /u:/ over a period of some three-and-a-half thousand years. The contrast between stable sound-systems and shifting sound-systems is crucial to the identification of cognate word-forms in related languages or in borrowings from one language to another. We have no means of knowing what sound-changes have taken place in the long but unrecorded history of Basque except to a limited extent for a fairly recent period covered by the split-up of its dialects. We are only in a slightly better position as regards Berber because of its known relationship with other Hamito-Semitic languages. Starting from the modern forms of these two languages it is therefore hard enough to say what might be the ancient forms of modern Basque and Berber words in those forms of Proto-Basque and Proto-Berber that are their direct ancestors. We are in even greater darkness when it comes to guessing what sound-changes might have taken place in the extinct forms of such

languages which might once have been spoken in these islands before place-names deriving from such sources were absorbed into the Irish and British forms of Ancient Celtic. If the languages concerned had stable sound-systems we are in luck, for it may then still be possible to identify place-names and other loanwords that passed from one language to the other, but if they had shifting sound-systems of whose development we know nothing then the task of identification becomes well-nigh impossible.

It must be remembered that place-names which survive a change of language are only one special class of loanwords that pass from one language to another. In this connection the question of loanwords from pre-Celtic sources in the Neo-Celtic languages is one that has not yet been fully explored. Pokorny in his *Indogermanisches etymologisches Wörterbuch* (Bern, 1959/69) gives etymologies for great numbers of Irish words but these are naturally only those for which a reasonably firm Indo-European origin can be proposed. For those where this is not the case we must turn to the *Lexique étymologique de l'irlandais ancien* (Dublin and Paris, 1959) begun by Joseph Vendryes and continued after his death by E. Bachellery and P. Y. Lambert. So far the letter A and all letters from M to the end of the alphabet have been covered, which is perhaps somewhere around 40 per cent of the Irish vocabulary. Apart from the numerous words which Vendryes and his successors explain adequately or tentatively, there are quite a number on which their verdict is 'sans étymologie' or 'étymologie inconnue' or 'origine inconnue'. About these we may come to one or other of two conclusions:

1. Either the capacity of the scholars concerned to discern the origin of the said words does not measure up to the capacity of the ancient Irish for chewing up certain portions of their vocabulary to such an extent as to make its Celtic and Indo-European origin unrecognisable;
2. Or the words in question are not part of the Celtic and Indo-European heritage of the Irish language but are loanwords from some pre-Celtic language or languages that the Ancient Celts encountered, most likely in Ireland itself or just possibly in their wanderings round western Europe, roughly somewhere between Bavaria, Portugal and Scotland, before reaching Ireland.

If we are prepared to give the scholars concerned the benefit of the doubt, as I believe we must, then we have to accept the second of these two propositions. We have in fact met the earliest stratum of loanwords in Irish, lying chronologically before those from Latin and other known sources. The listing of words by Vendryes and his successors for which no etymology can be suggested provides a corpus of material, possibly of pre-Celtic origin, which can be investigated along with place-names of unknown origin with a view to establishing whether there is any connection with the languages whose syntax appears to present parallels with Irish and Welsh as suggested by John Morris Jones and later scholars.

When we survey this corpus of Old Irish words, whether place-names or other loanwords, which are of unknown origin, the first thing we hope to glean from them is some idea of the phonological structure of the source from which they come. We know the phonological structure of Old Irish (8th/9th centuries A.D.) and of its immediate predecessor, Archaic Irish (6th/7th centuries A.D.), and from the ogham inscriptions we have a fair idea of the phonological structure of late Proto-Irish (4th/5th centuries A.D.), the latter at a stage not far removed from

Common Celtic. From inscriptions in Spain and Gaul we have other varieties of Ancient Celtic also not far removed from Common Celtic. We thus know reasonably well the phonological framework into which these supposed loanwords and place-names of pre-Celtic origin fitted about the time when they were adopted into Irish in Ireland, or by the same token into Brythonic in Britain.

It may be supposed that this also gives us some idea of the native phonological system out of which they sprang, but here a word of caution is necessary. Irish loanwords in English, including the mass of Irish place-names which have been anglicized for the most part during the last two or three centuries, give us a fair idea of the phonological structure of Irish, but there are some features - for example the system of velar versus palatal contrasts - that reach us only in a very garbled form and can only be properly appreciated by going back to the original Irish forms which are still accessible to us in those parts of the country where Irish still survives. If Irish were extinct as a spoken language and had left no written records we would be hard put to it to understand its phonological structure in its entirety. We may suspect that even a large corpus of loanwords and place-names will give us only a garbled version of the original phonological system or systems from which they sprang. With this reservation it is legitimate to investigate whether the phonological system revealed by the corpus of supposed loanwords and place-names of pre-Celtic origin agrees with or differs from that enshrined in the general corpus of Irish words known to exhibit the regular Goidelic and Celtic development of the Common Indo-European sound-system. If there are significant differences then we know something about the nature of the pre-Celtic language or languages whence these words and place-names come and we can begin to look for some other language that might prove to be their source.

The kind of evidence we would look for is the following:

1. The relative frequency of monosyllabic versus dissyllabic or longer words;
2. Whether the source language appears to have had a five-vowel system or a different type of vowel system, say only three vowel phonemes;
3. Whether it made any distinction between long and short vowels;
4. Whether its vowel system allowed only simple vowels or admitted diphthongs;
5. Whether there is any evidence for a different stress-system from that normal in Old Irish, though this might be hard to establish from the written recorded evidence of the words in question;
6. Whether the corpus exhibits the full range of consonants that can be expressed in the Old Irish use of the Roman alphabet or whether any particular consonants are lacking;
7. Whether consonant clusters that occur quite frequently in Old Irish words of Indo-European origin and known derivation fail to occur in the corpus or whether consonant clusters occurring in the corpus of supposed loanwords and pre-Celtic place-names fail to occur in native Celtic words of known Indo-European origin.

If all or most of these criteria are present in the whole body of words and place-names of unknown origin in such a way as to differ from the main body of words of Celtic and Indo-European origin then we are fairly certain to be dealing with a corpus of loanwords and place-names from some external source and not just a miscellaneous collection of probably Celtic items which scholars for some reason have failed to identify.

We may now look at the seven criteria listed above to see how they appear in the four languages we have decided to compare, namely Basque, Berber, Irish and Welsh, which will be treated in that order.

1. Syllable-count: The first hundred words beginning with K were counted from Löpelmann's Etymologisches Wörterbuch der baskischen Sprache and the first hundred beginning with C from Contributions to a Dictionary of the Irish Language and from the Geriadur Prifysgol Cymru for Basque, Irish, and Welsh respectively. For Berber no dictionary of similar scope was immediately available so the first fifty words each beginning with A and B in An Outline of the Structure of Shilha by J. R. Applegate (New York, 1958) were counted. The results by percentages in syllables per word are set out in Table I.

Table I

Percentage of words having from one to five syllables in four languages

	Basque	Berber	Irish	Welsh
1 syllable	-	28	18	6
2 syllables	23	46	59	44
3 syllables	60	25	20	38
4 syllables	15	-	3	12
5 syllables	2	1	-	-

This refers to words in their dictionary form and shows:

- (1) that there is a radical difference between Basque and Berber;
- (2) that there is a reasonable degree of similarity between Irish and Welsh but with Welsh having a greater tendency to longer words;
- (3) that the greatest general similarity in the matter of word-length by syllable-count exists between Irish and Berber.

2. Vowel-system: Details are set out in Table II.

So far I have only been able to do a quick survey of some of the words of unknown etymology listed by Vendryes and his successors which shows that while the vowels A, E, O are very common, I and U are extremely rare. This suggests that Irish has acquired these words from some source with a three-vowel system, which points to Berber as a possible source rather than to Basque with its five-vowel system. One possible difficulty is that the three Berber vowels are A, I, U, and not A, E, O, but the two close vowels in a three-vowel system could be affected by a certain amount of phonetic drift.

3. Vowel length: Details are set out in Table III.

Table II: Vowel-system

Basque has a triangular five-vowel system.

Berber has a triangular three-vowel system, with /ə/ as an additional syllable-formant [but Touaregue on the southern extremity of the Berber region has now developed a triangular five-vowel system with two syllable-formants /ə/ and /ä/.]

Irish has a triangular five-vowel system [with additions in Ulster Irish and Scottish Gaelic] but with fewer phonemic contrasts in unstressed syllables and a tendency for the five vowels to be reduced to a vertical three-vowel system when short.

Welsh has a triangular seven-vowel system with front-spread, central, and back-round contrast at close and mid levels [the close central vowel being eliminated in south Wales].

Table III: Vowel length

Basque makes no difference between long and short vowels.

Berber originally had long and short vowels but in North Berber the latter are now reduced to /ə/ and the three distinctive vowels /a, i, u/ are of one quantity.

Irish contrasts long and short vowel phonemes.

Welsh makes no difference between long and short vowels at phonemic level except that before l, n, r all vowels other than i and w [phonetic u] may be long or short, but otherwise length is induced in certain cases by syllable structure or the nature of the following consonant.

Here, among the words of unknown etymology so far examined, long vowels are extremely rare but of course one does not know how far this may be due to careless scribal omission of the length mark. It does, however, suggest a source where length was or had become irrelevant.

4. Diphthongs: Details are set out in Table IV.

This is a more difficult feature to assess. Historically the tendency in Irish has been to level diphthongs into long vowels but at the same time to develop new diphthongs due to the weakening of consonants. The latter tendency does not seem to operate in either Basque or Berber.

5. Word-stress: Details are set out in Table V. In this matter all four languages are now thoroughly distinct and there are no special cross-links between

any two of them.

Table IV: Diphthongs

Basque has no diphthongs; contiguous vowels constitute separate syllables.

Berber pronounces contiguous vowels as diphthongs.

Irish has developed most original diphthongs to long vowels but has made two old long vowels into centering diphthongs and has recently developed new closing diphthongs from the weakening of lenited consonants.

Welsh pronounces most contiguous vowels as diphthongs, most of these having arisen from older long vowels or the weakening of consonants.

Table V: Word-stress

Basque has no system of word-stress, all syllables being pronounced with equal stress.

Berber has heavy stress on the last vowel of the stem; medium stress on the vowel of a suffix and then also on the last stem-vowel; and medium stress on the vowel of a prefix, other syllables having zero stress.

Irish has initial stress except in a tiny class of adverbs with an unstressed prefix, and an Old Irish class of verbs with unstressed prefix which has been eliminated; [but Munster Irish has developed a new shifted stress on the second or third syllable of certain words, depending on vowel length.]

Welsh has penultimate stress which in a minority of words has been converted into final stress as a result of syllable contraction.

6. Range of Consonants: Details are set out, of necessity at some length, in Table VI. Of the individual consonant phonemes p, f and s call for comment. Basque has p but did not originally have f. Berber has f but no p, except in the very early Proto-Hamito-Semitic stage before separating from the other Hamito-Semitic languages. Irish has now both, but only since the 7th century in the case of p, which then came in through loanwords from Latin and later extraneous sources, and perhaps a century or two earlier in the case of f which - apart from loanwords - arose from earlier initial w (written v in earlier Hiberno-Latin records) which became gw in Welsh, the Welsh ff having other sources of origin. The earliest stratum of loanwords from Latin represents p and f by c and s respectively. In this case c represents Proto-Irish and Ancient Celtic q which became p in Welsh, whence the equation of Irish c with Welsh and Latin p. The

Table VI: Range of Consonants

Basque: Non-aspirated p, t, k; aspirated ph, th, kh; b, d, g, which are occlusive initially but now fricative after vowels; three sibilants: cacuminal s, dental z and alveolo-palatal x, together with the corresponding affricates ts, tz, tx; l, m, n, weak r, strong rr, h, j (the latter originally yod but now like French or Spanish j according to dialect); f in fairly recent loanwords only; palatalized t̃, d̃, l̃, ñ in diminutives and children's words only. All can occur initially except r and rr which must be preceded by a support vowel, but only l, n, rr, t, k and the three sibilants and their three affricates, together with l̃ and ñ, can occur finally.

Berber: Some variation in its different forms but basically the following: t, k (but no p); b, d, g; l, m, n, r; f, s, ʃ, z, ʒ; h; and the velar fricatives x, ɣ; to which are added: the semi-vowels w, y, in so far as they are not classified in some dialects as allophones of u and i; the emphatics q, ṭ, ḍ, ṣ, ẓ, ḷ, ṇ, ṛ; and the pharyngeals ħ, ʕ in Northern Berber, and the prepalatalized ǰ and Ǩ in southern Berber. For Proto-Berber, however, Prasse proposes a more compact system: t, k; b, d, g; l, m, n, r; f, s, z, ʒ; x, ɣ; h, w, y; with possibly ʃ, while for pre-Berber (the stage when it was just moving away from the other Hamito-Semitic languages - Proto-Semitic, Proto-Egyptian and Proto-Cushitic) he adds the pharyngeals ħ, ʕ, the emphatics q, ṭ, and also p, and states that the emphatics at this stage were probably ejective consonants.

Irish: p, t, c, b, d, g, l, m, n, r, f, s, h, all except h standing for two phonemes with broad (labio-velarized) or slender (palatalized) articulation according to value of adjacent vowel-letter; initial and double ll, nn, rr have a stronger articulation (except that slender strong r and broad weak r have now fallen together); all others except h have lenited partners denoted by adding a superscript point or postscript h, pronounced as follows: ph like f (which is bilabial), fh is silent; sh and th like h; ch and gh are velar or palatal fricatives [x] and [ɣ]; dh is now identical with gh, but in Old and Middle Irish th and dh were interdental fricatives; bh and mh are voiced bilabial fricatives, the latter nasalized; ng is a single velar or palatal nasal phoneme; h is prefixed to vowel initials but is not itself a radical initial except in a few recent loanwords.

Welsh: Uses the same consonantal letters as Irish for the same range of sounds with the important difference that they do not represent a parallel series of labio-velarized and palatalized phonemes. h can be a fixed radical initial as well as a prefixed letter; w and i function as additional consonants when before vowels and not themselves vowels; ff is written double for the labio-dental /f/ phoneme but single f for the labio-dental /v/ phoneme which corresponds to Irish bh/mh; dd is written for Irish dh, and th, dd have retained their original interdental fricative sounds; ph (labio-dental) and ch as in Irish, but gh, sh, fh do not occur; voiceless nasals mh, nh, ngh occur as initial mutations of p, t, c; initial l and r are normally voiceless, written ll and rh, the former also occurring in any position and the latter medially before a stressed syllable.

use of s for Latin f, at least initially, arose from the fact that before Irish f developed out of earlier w a near equivalent existed in the sound-combination /hw/ which could arise by lenition of sw. From this, s was extrapolated by the reverse process of false delentation. If Irish acquired any large body of loanwords from a pre-Celtic source during the first five centuries of the Christian era, the sounds p (from a possible Proto-Basque origin) and f (from a possible Proto-Berber origin) would presumably be treated in the same way as Latin p and f in the earliest stratum of Latin loanwords and would be represented in Old Irish by c and s respectively. If by any chance p or f were to appear in any corpus of loanwords from a pre-Celtic source in Old Irish, it would have serious chronological implications for the survival of some form of pre-Celtic speech in Ireland, because words containing these sounds could only have reached Old Irish from some spoken language that survived long enough for Irish to have developed its own p or f. In the case of f this would probably be the 5th or 6th century. In the case of p, it would have to be the 7th century, with the reservation that a much earlier date would suffice if there were P-Celts as well as Q-Celts in Ireland who could transmit such loanwords and place-names, providing their own P-Celtic dialect survived long enough in some parts of the country for the Q-Celtic Irish language to develop a /p/ phoneme of its own.

The problems connected with s are of a different kind. Indo-European, Common Celtic, Proto-Irish, and Welsh appear to have had only one voiceless sibilant, the Common Celtic s. Irish now has two, the broad huss-sibilant and the slender hish-sibilant - not, be it noted, a hiss-sibilant and a hush-sibilant as in English - and some varieties of Northern Irish have indeed three since s in combination with r has a third type of articulation, a reverted sibilant. It is unlikely, however, that this splitting up of the original single sibilant arose early enough to represent different sibilants in words from any possible pre-Celtic source. Welsh has still only one sibilant, though we may wonder whether its voiceless fricative ll might not have served to express some distinctive sibilant in loanwords and place-names derived from some pre-Celtic source. Irish s and Welsh ll are not normal equivalents in Celtic words of Indo-European origin; yet there is Welsh Llynnon for the Irish river-name Sionann; is one dealing here with two different Celtic ways of representing some distinctive type of pre-Celtic sibilant in some older language from which this river-name was taken over?

So far as Irish is concerned the three sibilants of a language like Basque would presumably fall together as s. Berber now has two sibilants against three in Basque, though Prasse in his Manuel de Grammaire Touaregue (Copenhagen, 1972-) suggests only s for an earlier stage of this language with ʃ doubtful. However, if we go far enough back in time, Berber, like other Hamito-Semitic languages, may have had a greater number of different sibilants, though here again they would probably fall together as s if place-names and other loanwords from a Proto-Berber source ever reached Old Irish. The possibility cannot be ruled out, however, that if any language with a greater number of sibilants than the single Indo-European s ever preceded Celtic and if place-names and other loanwords from it passed into Old Irish in large numbers, efforts to maintain distinctions between them might result in one or other phoneme being equated with one of the allophones of some other Irish phoneme, or even in a consonant cluster, so that an unexpected sound substitution would result. One thinks for example of Spanish alcalde from Arabic al-qāzi, where the emphatic z of western Arabic has been transformed

into Spanish ld.

7. Consonant clusters: Details are given in table VII.

Table VII: Consonant Clusters

<u>Basque</u>	did not originally allow any consonant clusters initially and now has occlusives or <u>f</u> plus <u>l</u> or <u>r</u> only in recent loanwords, but does not allow a sibilant plus consonant even in these. The only final clusters it allows are <u>l/n/r</u> plus <u>t</u> or one of the affricates <u>ts/tz/tx</u> .
<u>Berber</u>	allows a very wide range of biphonemic consonant clusters, 101 occurring initially and 95 finally, at least in the Shilha variety of northern Berber, including almost all of those occurring in the Neo-Celtic languages in so far as the individual sounds that compose them exist in Celtic; but the following clusters which can occur in Irish do not occur in Berber as clusters: initial <u>tr</u> , <u>kr</u> , <u>br</u> , <u>xr</u> , <u>xl</u> , <u>xn</u> (the last three written <u>chr</u> , <u>chl</u> , <u>chn</u> in Irish), and final <u>lb</u> , <u>lg</u> , <u>nm</u> , <u>sb</u> . This, however, is the situation in those dialects where short vowels have been reduced to /ə/, which is frequently dropped; originally only single consonants could occur finally, and clusters and geminates then only occurred medially where a vowel had dropped out. Prasse supposes this to have been the case in Proto-Berber, while for the still earlier pre-Hamito-Semitic stage he envisages only open syllables, i.e. single consonants always followed by vowels, with no consonant clusters and no geminated consonants even medially.
<u>Irish</u>	allows initial clusters of occlusive or <u>m</u> or <u>f</u> plus <u>l/n/r</u> , though certain combinations are rare; also <u>s</u> plus <u>l/n/r</u> , or <u>m</u> or an occlusive plus <u>l</u> or <u>r</u> . It allows final clusters of <u>dhb</u> , <u>dhg</u> , <u>dhm</u> (in which, however, the <u>dh</u> has now been vocalized) and also <u>cht</u> ; also <u>s</u> plus an occlusive; also <u>l/n/r</u> plus an occlusive or <u>m</u> , or recently <u>f</u> or <u>s</u> ; but many of these clusters are now broken up by intrusion of the weak helping vowel /ə/ between the two consonants if the second one is voiced and non-dental.
<u>Welsh</u>	allows a similar range of initial and final clusters to Irish but until recently initial <u>s</u> plus consonant had to be preceded by a support vowel (written <u>y</u>).

It may be noted that although Berber now admits a large number of consonant clusters this may not always have been the case. In many cases clusters have arisen because the syllable formant /ə/ has dropped out. Originally only single consonants could stand finally while clusters and geminates only occurred medially where a vowel had dropped out. Prasse (*op.cit.*) supposes this to have been the case in Proto-Berber, while for the still earlier pre-Hamito-Semitic stage he envisages only open syllables. It may be assumed that if any variety of Proto-Berber ever reached Ireland or Britain it would have had this simpler syllabic structure or something very near it.

We may conclude with some final general observations. It will be seen that

the problems of absorbing words of Basque phonological type and words of Berber phonological type into Irish - or into Welsh - are by no means the same. The Basque and Berber sound-systems, as they now exist, are very strongly of contrasting types, with Irish and Welsh occupying an intermediate position, at least in respect of their consonant systems. There is nothing in the Basque phonological system that would impede the absorption of words from this source into Old Irish, assuming that ancient Proto-Basque had the same sound system as modern Basque, except the /p/ phoneme and the three sibilants, which would probably fall together. If the corpus of obscure place-names and other loanwords of unknown origin contains words beginning with consonant clusters, or ending in clusters other than l/n/r plus t, they cannot have come from a language of Basque type though they might have come from a language of Berber type. Words ending in any simple consonant except l, n, rr, t, c are also unlikely to be of Proto-Basque origin unless we assume that a final vowel has been dropped in their passage into Old Irish, but this limitation would not affect words of Proto-Berber origin. If the whole corpus of loanwords and place-names of obscure origin displayed clear evidence of having a five-vowel system there would be no impediment to assuming that they might have come from a language of Basque type, but it would then be difficult to see them as coming from a language of Berber type which originally had a three-vowel system, and where a five-vowel system is a secondary and recent development confined to certain dialects, e.g. Touaregue. As already mentioned, the loanwords of obscure origin in Old Irish appear to have had a three-vowel rather than a five-vowel system, and it is perhaps worth noting that Common Celtic itself shows some evidence for a time of moving in that direction. For example, IE long /e:/ became long /i:/, and IE long /o:/ became long /a:/ or long /u:/ according as it stood in initial or non-initial syllables, so that for a while there were only three long vowels until new long /e:/ and long /o:/ arose from former IE diphthongs. Among the short vowels all except a were redistributed on a kind of vowel-harmony basis so that e and o almost appear to have been allophonic variants of i and u. Was this due to contact with earlier languages having a three-vowel system?

Words of Proto-Berber origin on the other hand would present greater difficulties to absorb on account of their wide range of consonant clusters - if these already existed, which is however not certain at a period when such a language might have reached these islands. Certain individual phonemes foreign to the Irish sound system would also have created difficulties, such as the voiced sibilants /z/ and /ʒ/ - the first of which might have become dh in Old Irish, like Indo-European z - together with f and the pharyngeals and emphatics, whether the latter had their modern pharyngealized form or what is thought to have been their ancient ejective form. Regarding f, which was not an original Indo-European sound and arose only at a late period from initial w in Irish, could this latter development have been due to the influence of an older language which had f but lacked w? Proto-Berber, of course, seems to have had w originally but at some stage it might have been lost or vocalized to u, leaving f as the nearest sound to Common Celtic w.

One thing that must be remembered in using modern Basque and modern Berber as models of what Proto-Basque and Proto-Berber might have been like is that the modern forms of these languages have been influenced to some extent by the sound-systems of Spanish and Arabic respectively, so that certain features in their modern phonological systems have to be discounted in seeking to understand their

ancient sound-systems. Modern Basque shows some Romance influence in the acquisition of f, of initial consonant clusters with l or r as second sound, and probably non-aspirated p, t, k before vowels. Modern Berber shows some Arabic influence in its pharyngealized articulation of the emphatic consonants, where the ancient language perhaps had ejectives, and in the multiplication of consonant clusters. It may be noted that northern Berber shows the spirantization of occlusives, lacking in southern Berber, which forms the starting-point of Neo-Celtic and more especially Irish lenition.

Irish and Welsh differ from each other more in their vowel systems and their stress systems - differences in the former probably arising largely from those in the latter - than in their consonant systems, apart from the contrast between labio-velarized and palatalized consonant phonemes which is present in Irish but absent in Welsh. They differ from Basque and Berber in having institutionalized a system of initial consonant mutations that were at first allophonic but became phonemicized because of other changes in their sound-systems. This phenomenon occurs also in Fulani, where it may be Mauretanian in origin, i.e. a Eurafrikan trait, since it does not occur in other African languages related to Fulani. A Eurafrikan substratum, rather than either Basque or Berber, may also be its ultimate source in the Neo-Celtic languages.

It may be a source of profound disappointment that I have not taken this or that place-name of obscure origin and tried to demonstrate its derivation from this or that language which can therefore be claimed as being the pre-Celtic, and probably pre-Indo-European, language of Ireland, and indeed of Britain too. To do that in the present state of our knowledge would be to demand too much. What this paper has sought to do is to look carefully at the whole nature of the problem of pre-Celtic languages in these islands, and to show that the whole concept of what is pre-Celtic is not just an untidy bin-bag into which any place-name can be thrown that one has wrestled with and failed to demonstrate as being of Celtic origin in the hope that it can conveniently be forgotten about. I hope to have shown on the contrary that the pre-Celtic field is a house of many mansions, each with its own strict discipline which demands unending patience to explore.

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