The Semantic Structure of SCOTTISH HYDRONYMY

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INTRODUCTION

Scottish place-names have never suffered from lack of interest. On the contrary, there have always been people, from all walks of life, who have dedicated a considerable amount of their time to the study of Scottish toponymy. Very often the reason for this has been an academic one: an antiquarian's interest in local history, an archæologist's desire to find confirmation of his own research in the place-nomenclature of the region, a geographer's attempt at solving the problems of human settlement or a philologist's quest for data relating to the linguistic past of a district. The most important factors taken into account by these students of place-names are usually the distribution of certain elements, the morphological formation of names, the sound changes they imply and the definition of the language and linguistic stratum to which they belong.

But besides this academic approach there has always been a genuine interest in place-names on the side of the general public, although with a completely different emphasis and attitude. To the archæologist, the geographer, the historian —and even to the philologist, semantic considerations may only be of secondary importance. To them it does not really matter what a name "means". Not so with the ordinary enquirer and place-name enthusiast. His first, and normally his only, question is "What does this name mean?" And if the name is not easily explained and understood, he resorts to what is usually called "folk-etymology" until its obscurity is made intelligible. Just as a thing, an idea, an event cannot be "mastered" by the human mind until it can be put into words, so one's geographical surroundings cannot be "mastered" till one has given them intelligible names or till one understands the names they already possess. So, this popular approach to a place name—in contrast to the scholarly one—reflects in

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its special interest in the "meaning" of the name the tendency of the human being to "master" his world—and that includes his geographical surroundings—linguistically.

The Scot—and the Scottish Highlander in particular—seems to have developed an even stronger inclination towards this merely semantic interpretation of toponymic evidence, than members of other nations, as any visitor, especially to the Gaelic-speaking areas, who has ever made any enquiries about place-nomenclature will testify. The crofter, the shepherd, the local schoolmaster—not only will they supply him with the "correct" form of the name and its meaning, but most probably also with a story that explains and underlines this particular meaning. Etymological speculation and imaginative interpretation are applied to the name in question and both have undoubtedly been very strong formative powers in the creation of new names, or the adaptation of old and obscure ones, throughout all phases of Scottish toponymy.

It is typical of this popular approach to the understanding of a place-name—and, indeed, of many a pseudo-scholarly attempt at such an understanding as well—that a linguistic explanation is looked for only in the modern language spoken in that particular area at the time of the enquiry. This is where the peculiar nature of place-names is completely misunderstood, a nature which makes them important sourcematerial of the linguistic history of any country. Personal names wander and migrate with the people that bear them and only in exceptional cases throw much light on the nature of the language or languages spoken in a certain area in the past. But place-names are more stationary, as is to be expected because of their close connection with the land.* They also possess a remarkable power of survival. When, in the course of extensive migrations and re-settlement people of different linguistic stock arrive in a certain region, settle there and, finally, dominate the earlier inhabitants, politically and linguistically, not every geographical feature is named afresh. Old names are translated, either in part or in whole, or are just adapted in accordance with the phonetic possibilities of the new language; sometimes elements belonging to the old language are used in conjunction with elements that are part of the new one, resulting in a not inconsiderable number of

^{*} This does not, of course, mean that they cannot be transplanted; names of European settlements in the "New World" prove the contrary; but, in these cases, the original name usually stays behind and remains a stationary feature of the emigrants' home-land.

toponymical hybrids. The main fact emerging from these observations is, that when new place-names are coined in a different linguistic medium, not all the old names are replaced and disappear, but a certain number of them remains, although often disguised and hardly recognisable.

The result is a stratification of various layers of linguistic sediments, the lowest of which leads us much further back into history and prehistory than any other linguistic evidence. It is the task of the place-name scholar to remove layer after layer, examining the morphological and semantic structure of the names each contains and utilising them in the interpretation of the early stages of those languages to which they can be assigned. When the "lowest" stratum is reached that can still be interpreted with the linguistic knowledge now at our disposal, there will still be a number of names left that have defied all attempts at an explanation, but it would be dangerous to treat obscurity as a sign of the great age of a name. Oral tradition of a name is subject to so many influences, especially when more than one language is involved in its execution, that it would be surprising if every single name could be satisfactorily analysed in the course of our investigations.

Generally, place-names ante-dating names of human settlements are those denoting water-courses or mountains and hills, and especially names of burns and rivers. Such throw much light on the problems of linguistic prehistory and so of prehistory in general. The oldest of them are like fossils preserved in later surrounding linguistic media, and it is not too bold to say that the oldest Scottish river-names give us information about the language or languages spoken on the banks of the water-courses they denote, more than 1000 years B.C.

This is not the place for us to outline the course of our investigations in that particular field of research. It will suffice for our immediate purposes to state the results of that enquiry: there are at least five layers of Scottish hydronymy, the English, the Norse, the Gaelic, the "p"-Celtic and the pre-Celtic Indo-European. A closer examination, however, shows that there are really two English strata, one linked up with northern English stream-nomenclature and one moulded upon underlying Gaelic patterns when English began to invade the Highlands. Furthermore, the Norse layer may be divided into three sub-sections, one supplying the generic terms Old Norse \(\bar{a}\), grof and—possibly— $l\bar{o}n$, the second introducing the beck-names near the English border, the third

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providing the Scots dialect with the term grain. Only two strata cover the whole of Scotland: the latest, the English, and the earliest, the pre-Celtic one. All others are confined to a certain part of the country and usually to a certain period of name productivity.

Morphologically, the top strata of Scottish hydronymy as those of the other parts of the British Isles and of other European countries—consist of compound names, regardless of the language to which they belong. But underneath these a different class of names is to be found characterised by the formation: stem+suffix. This group only amounts to 8 per cent of all Scottish river-names marked on the one inch Ordnance Survey maps, with the following subdivision: Gaelic names 5.3 per cent, p-Celtic names 1.8 per cent, pre-Celtic names 0.8 per cent. With two possible exceptions, Germanic names do not appear in this category, and the formation of river-names by suffixing seems to have ended in their respective languages before the Norsemen and Anglo-Saxons reached Scotland. A number of simple stems occurs in the early hydronymic strata. Even if these early names are few in comparison with the overwhelming majority of modern names, they prove how futile it would be to try to explain every single name of a Scottish water-course from the vocabulary of Modern Anglo-Scottish or Modern Scottish Gaelic.

It is against this morphological and historical background that we wish to outline the semantic structure of Scottish river-nomenclature, i.e. we want to apply scholarly and linguistic methods to that aspect of a section of Scottish toponymy that is normally the prerogative of popular and imaginative speculation. The form in which this will be done will be a systematic classification of names of Scottish watercourses that covers all the categories of meaning which appear in this nomenclature. Significant examples will be chosen from all hydronymic layers, from all dialect areas and from all morphological classes. We shall examine whether and how the predominance of certain aspects of meaning changed in the course of time, and how much each stratum of Scottish hydronymy has to contribute towards each semantic group. We shall also attempt to illustrate, by these examples and by the changes they imply, the change of attitude in the minds of the people who created this Scottish river-nomenclature in its various phases.

The system of classification used will be, in principle, the

one worked out by Bach (1953) for the names of German water-courses. It will be adapted to the special Scottish situation and enlarged to be applicable to the whole of our hydronymy. Comparative notes will be supplied wherever the river-nomenclature of other parts of the British Isles or of other countries in which an Indo-European language is, or used to be, spoken seems to throw light on our particular Scottish problem. Scottish hydronymy is not an isolated entity —either in its semantic or its morphological aspect—and cannot be treated without comparative reference to the terminology applied to rivers and streams in those countries from which the languages, traceable in Scotland's linguistic history, originally emigrated. Scandinavia, Ireland, England, Wales, the European continent proper all have much to contribute to toponymic research in Scotland. Scottish hydronymy, and Scottish toponymy in general, may have many peculiarly "Scottish" features, but nothing could more dangerously impair a satisfactory progress in their investigation than a parochial or national outlook that, apart from ignoring the toponymic situation and research south of the Tweed, refused to look for elucidation from beyond the North Sca, the Irish Sea and the English Channel. The study of place-names in any country must be based on the methods and results of comparative linguistics.

The basic material for the following survey has been excerpted from Ordnance Survey maps, scale 1 inch: 1 mile, and supplemented by derivations and explanations of Scottish rivers and burns, given in various place-name studies of which there are not very many that can be accepted and approved without some considerable hesitation. The acceptance of this kind of material as a basis for a genuinely linguistic investigation entails certain handicaps, limitations and inaccuracies, due to the nature of geographical names printed on Ordnance Survey maps covering Scotland, especially in respect of Gaelic names. But it seems that these inexactitudes, slight or grave as they may be, do not seriously impair the validity of the conclusions reached at this stage of Scottish hydronymic research especially in a study of this nature, in which neither comprehensiveness nor finality can be attempted. The advantage of the Ordnance Survey maps is that they cover the whole of Scotland, and the 1 inch: 1 mile edition provides a suitable number of names of rivers and burns.

The spellings given will be normally those to be found on

these maps, and the county abbreviations, used to indicate the geographical situation of the water-courses concerned, will be those adopted by the place-name department of the School of Scottish Studies. A complete list of these abbreviations will be provided at the end. Names in the Western Isles will be followed by the name of the island in which they occur, not by the county name. Older forms will generally not be mentioned, as that would only extend the already lengthy lists of names without contributing much to our particular attempt at a classification of Scottish river-names according to their meaning. Normally only one instance of a name will be mentioned, even if it occurs several times, as is often the case with the names of smaller water-courses.

CLASSIFICATION *

A. Streams named after Characteristics OF THE WATER

(a) The colour of the water

O.S.M. 1" (Scotland) † have 412 stream-names derived from the colour of the water. This naming of a water-course after the special characteristics impressed upon the people living near it, through the medium of the eye, is by far the most common, compared with the other groups of names that express a special quality of the water of a stream or river. The figures for these groups are: the taste and smell of the water 8; temperature of the water 6; noise of the flowing water 53; effect of the water 12.

Almost the whole colour-scheme is represented in this category, some colours more frequently than others. Yet although, in the majority of cases, the actual colour of the water of a stream may have prompted the name it bears, we must take into consideration the possibility of fashionable name patterns and semantic models. Moreover, in quite a number of instances black and white do not so much serve to describe the colour of the water as to distinguish between two water-courses that flow into each other, are parallel tributaries of the same river or bear the same name and could be confused because of their geographical proximity.

^{*} The following name-lists were first compiled for the third chapter of my thesis entitled Studies in Scottish Hydronymy, submitted for the degree of B.Litt. of Glasgow University in 1956.

† O.S.M. 1" will be used in this article as the abbreviation for Ordnance Survey map, scale 1 inch: 1 mile, 4th edition.

Here are some examples for the various colours:

Black: Abhainn Dubh ROS, Alltan Dubh SUT, Allt Dubh SUT, Allt Dubhagan PER, An Dubh-Alltan SUT, Black Burn MOR, Black Sike SLK, Black Water ROX, Caochan Dubh INV, Douglas Water ARG, Duack Burn INV, Dubh Uisge INV, Dupple Burn DMF, Dye Water BWK, Feith Dubh SUT, Lón Dubh SKYE, River Divie MOR, Uisge Dubh INV.

Blue: Allt Ghormaig INV, Allt Gorm INV, Gormack Burn ABD, Feadan Gorm LEWIS.

Bright: Light Water KCD, Lochar Water DMF, Luggie Water DNB/LAN—DNB, Peffer Burn ELO, River Loyne INV, The Lussa ARG.

Brindled: Alltan Riabhach SUT, Allt Riabhach ROS, Caochan Riabhach INV, Féith Riabhach SUT.

Brown: Caochan Donn INV, *Duinnid (in Inverinate) ROS.

Dark: Alltan Dorch ROS, Leuchar Burn ABD, River Lochy INV.

Dun: Alltan Odhar ROS, Allt Odhar INV, Feith Odhar PER.

Filthy: Mossat Burn ABD, Salachie Burn ROS.

Green: Abhainn Glas PER, Abhainn Uaine LEWIS, Allt Glas PER, Allt Uaine INV, Glas Allt ABD, Glas Burn ANG, Glas Féith PER, Greenburn BNF, Lón Glas SKYE, River Glass ROS.

Grey: Allt Liath SCALPAY.

Pic-bald: Allt Drimmeach INV.

Red: Abhainn Dearg ROS, Alltan Dearg SUT, Alltan Roy ABD, Allt Dearg ROS, Allt Ruadh INV, Dearg Abhainn ARG, Dearg Allt INV, Red Burn MOR, River Roy INV.

Silver: Silver Burn ABD.

Speckled: Allt Ballach INV, Alltan Breac ARG, Allt Breac ROS, Caochan Breac INV.

White: Allt a' Gheallaidh MOR, Allt Ban INV, Allt Geal SUT, Burn of Canny ABD, Cander Water LAN, Dig Bhan ARG, Féith Bhan ARG, Fender Burn PER, Finglas Water PER, Fionn-abhainn ROS, Fionn Allt LEWIS, Geldie Burn ABD, Gelder Burn ABD, Lon Ban SKYE, River Finnan INV, Sruthan Ban S. UIST, Sruth Geal PER, White Burn ANG, White Grain SLK, White Sike SLK, White Water ANG.

Yellow: Allt Buidhe ARG, Féith Buidhe SUT, Pollan Buidhe ROS. Colour adjectives are often used to distinguish between two related water-courses, as for example:

Allt Ban-Lower part Allt Dubh SKYE.

Dubh Lighe-Fionn Lighe (parallel streams) INV.

White Burn joins Black Burn ANG.

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Black Cart Water RNF joins White Cart Water LAN/RNF—RNF. Black Laggan Burn > White Laggan Burn KCD.

Blackadder Water -> Whiteadder Water BWK.

River Findhorn (*Fionn Earn)—River Deveron (*Dubh Earn)—identical primary river-names in the same district.

That this practice is not confined to Scotland is shown by Welsh doublets like Braenan Ddu and Wen, Claerddu and Claerwen, Cleddy Ddu and Wen, as well as by the German rivernames Schwarze and Weisse Elster.

In a few instances colour adjectives seem to have become generic terms for "water, river". The Gaelic and Welsh term glais, "a stream" is based on Welsh glas "blue, grey, pale", Gaelic glas "grey, green", Breton glaz "green", etc. According to Wilhelm Schulze (1934) a similar derivation is to be considered for Gaelic dobhar and Welsh dw(f)r, "water", which are connected with Gaelic dubh, Welsh du, etc. "black"; so the original meaning of these two hydronymic terms seems to have been "the green one" and "the black one", respectively.

(b) The taste and smell of the water

This group of names is small compared with the preceding one, no doubt due to the fact that the senses of taste and smell are easily overruled by the eye and the ear in the determination of the main characteristics of a water-course.—Nevertheless we can list Allt Bhrachain PER ("putrefaction"), Allt Breinag INV ("putrid"), Allt Shallainn PER ("salt"), Almeel Burn STL ("sweet"), Foul Burn BWK, Garroch Burn KCD ("having a bad odour"), Grotaig Burn INV ("putrid"), Sweet Burn ARG.

(c) The temperature of the water

This group of names forms an even smaller category, numerically, in Scottish hydronymy. The hotness or coldness of water have to be extremely intensive before they form the main quality of a stream. Instances are Burn of Brown INV/BNF (*Brutonā), Cald Burn ANG, Cauld Burn ELO, Coldstream Burn KCD, Uisge Fuar ISLAY, Warm Burn KNR.

(d) The noise of the flowing water

This group contains about one-eighth of the number of names in the category referring to the colour of the water, but it is considerably stronger than b, c and e. Its outstanding feature is the great variety of defining elements which are used to describe the kind of noise peculiar to a certain stream. One

has to listen very long and carefully before one is justified in applying any of these 53 names. Labhar, "talkative" seems to be one of the most favoured defining elements, and there are indications that its p-Celtic equivalent was used just as readily. In any case, the number of early names in this group is remarkable.—These are some of the names: Allt Darrarie ABD ("rattling"), Allt Eigheach PER ("noise"), Allt Gleadhrach ROS ("shrill"), Blye Water BNF ("noise"), Calair Burn PER ("loud"), Clattering Burn LAN, Kale Water ROX (*Calonā), Lavery Burn AYR (*Labharag), Levern Water RNF (*Labaronā), Liddel Water ROX ("loud"), River Balvag PER ("silent"), River Braan PER ("bleating"), River Garnock AYR ("noisy"), River Ythan ABD ("talkative"), Rumbling Burn AYR, The Shevock ABD ("quiet"), Uisge Labhair INV ("loud"), Water of Gairney ABD ("loud").

(e) The effect of the water

Names in this section refer to the health-giving quality of the water, to its blessedness, and to other virtues. They do not necessarily prove any kind of river-worship, but only point to a certain amount of superstition in the medical ideas or practice of the people living on the banks of these streams and possibly to some genuine health-promoting faculty of the "waters", when drunk by the patient. In this connection the usage of Gaelic fion, "wine" is interesting (Watson 1926, pp. 436-7). Examples from O.S.M. 1" are Abhainn Eilg INV ("virtue"), Abhainn Bhuachaig ROS ("virtue"), Alltan Buadh CAI ("virtue"), Allt an Fhìona INV ("wine"), Allt Mathaig PER ("good"), Allt na Slànaich INV ("having a healing virtue"), Allt Sealbhach SUT ("lucky"), Allt Slanaidh PER ("healthy"), Hallow Burn PEB, Polmath Burn AYR ("good"), Sound Burn LAN, Water of Buchat ABD ("abounding in virtue").

B. Streams named after Characteristics of the Water-course

(a) The size and length of the stream

In 211 cases Scottish stream-names marked on O.S.M. 1" seem to refer to either the size or the length of the stream, and amongst these, names referring to the size are in a great majority. The most popular Gaelic name of this category is Allt Mór, of which there are at least 61 instances. Mór is in these cases seldom used in a relative sense, being meant to denote the absolute size of the stream, although one cannot escape the impression that it is very often just the imitation of a semantic

name pattern not referring to the actual size of the water-course. But in some instances an Allt Beag runs parallel to an Allt Mór and quite frequently Mór and Beag, Big and Little are attached to the names of parallel streams to distinguish them from each other. Beag and Little are also used to denote a tributary that bears the same name as the river into which it flows.

Examples: Abhainn Bheag JURA, Abhainn Mhór ARG, Allt Beag INV, Allt Fada LEWIS ("long"), Allt Mór ARG, Allt Yairack INV ("short"), Beg Burn ROS ("small"), Big Burn INV, Caochan Mór ABD, Faeshealloch Burn INV ("short"), Feadan Mór LEWIS, Féith Mór INV, Gearr Abhainn ARG, Little Burn SLK, Little River CAI, Little Water ABD, Long Burn ROX, Long Grain SLK, Long Latch BWK, Lón Mór SKYE, Meikle Burn LAN, Muckle Burn ANG, Pillmour Burn ELO, River Morar ROS, Wee Burn AYR.

Instances of two parallel water-courses distinguished by mór and beag are Allt Beithe Mór and Beag PER, INV; Allt Chaorach Mór and Beag INV, Allt Dearg Mór and Beag SKYE, Allt Dhaidh Mór and Beag ABD, Allt Mór and Beag ARG, ROS, Allt Ruadh Mór and Beag INV, Féith Odhar Mhór and Bheag PER, Feochan Mhór and Bheag ARG, Fionn Allt Mór and Beag LEWIS, Scaladale More River and Scaladale Beg River LEWIS.—Here also belong Allt Mhuic Bheag INV, flowing parallel to Allt Mhuic, and Little Gruinard River ROS, flowing parallel to Gruinard River.

Examples of Little and Beag being used to denote a tributary that bears the same name as the river into which it flows are Allt Borgidh Beag SUT

River Borgie, Beanaidh Bheag INV

Am Beanaidh, Duibhe Bheag PER

Abhainn Duibhe, Garbh Uisge Beag BNF

Garbh Uisge, Kish Beg River LEWIS

Kish River, Little Allt Bheitheachan, Little Calder LAN

Calder Water, Little Eachaig River ARG

River Eachaig, Little Tarras Water DMF

Tarras Water, Luibeg Burn ABD

Lui Water.

Sometimes the main river shows an additional mór: Allt Cristie Beag ABD

Allt Cristie Beag ABD

Allt Cristie Mór, Féith Gaineimh Bheag CAI

Féith Gaineimh Mhór, Glas Féith Bheag PER

Glas Féith Mhór.

Two water-courses that join, belonging to this category, are Little and Big Water of Fleet KCD which flow together to form the Water of Fleet.

Just as in the case of the juxtaposition of Gaelic dubh and ban (or fionn), English black and white in the description of parallel

or joining streams of identical names, the usage of Gaelic mór and beag can be paralleled outside Scotland. In Wales we find, amongst others, Anghidi Fawr and Fechan, Dwyfawr and Dwyfach, Llynfi Fawr and Fechan, etc.

Edward Schröder (1944) in his Deutsche Namenkunde points out that tributaries can be named by forming diminutives from the names of the rivers into which they flow; he mentions as examples the continental river-names $Selke\ (<*Selica) \rightarrow Sala$ and $M\ddot{u}rz\ (<*Muoriza) \rightarrow Muor$. Schwarz (1950) is of the opinion that this type of name is especially common in the Slavonic languages and that there even the upper reach of a water-course may be called Little River. A possible Scottish example of this type is Spean INV, if it may be taken to be a diminutive of Spey (Watson 1926, p. 474), although it does not, of course, flow into that river. In England and Wales this category is well represented, cf. Erthig (Cardigansh.) $\rightarrow Arth$, Sochan (Caernarvonsh.) $\rightarrow Soch$, Sturkel (Dorsetsh.) $\rightarrow Stour$, OE. Temedel (Worcestersh.) $\rightarrow Teme$, etc.

(b) The form of the bed of the stream

In the 184 examples of stream-names referring to the form of the water-course various comparisons with human instruments and tools are made in order to describe the shape most appropriately. We meet the fork, the vat, the bag, the bowl, the ampulla, the needle and the trough. This is a type especially common in Wales (cf. Thomas 1938, p. 128) where the names of many tools and instruments have become names of watercourses. In this hydronymic usage names of containers are to be found throughout Britain, the most frequent of them being cup or bowl, cf. besides the Quoichs, Quaichs and Cuachs of Scotland Bune (Oxfordsh.), Cogan Pill (Glamorgansh.), Sence (Leicestersh.). Obviously, adjectives like crooked, narrow, round, pointed were not sufficiently expressive in the opinion of the name-givers, but they saw the river as being crooked like tongs, pointed like a needle, round like a cup, etc., and so the water-course became itself tongs, needle, cup, etc. The same applies to those streamnames that are identical with names of animals or trees.

Besides these metaphorical terms mostly adjectives are used, among which crom and cam are the most frequent not only in Gaelic hydronymy but also in earlier Celtic river-names. In Leth Allt—in the following list the Ross-shire name serves as one example for many instances of this name throughout the Gaelic area—the intermediate meaning of allt as "a burn with

steep banks" is preserved, for leth allt "half burn" denotes a burn with only one steep bank. References to the form of a water-course in Scotland are much more common in Celtic than in Germanic river-names.

Some typical examples are: Abhainn Shlatach INV ("branchy"); Allt an t-Sniomh LEWIS ("twist"), Allt Briste SUT ("broken"), Allt Cam INV ("crooked"), Allt Caol CAI ("narrow"), Allt Chernie SUT ("angular"), Allt Domhain ROS ("deep"), Allt Gobhlach SUT ("forked"), Allt Leathan PER ("broad"), Allt nan Criopag SKYE ("wrinkles"), Allt Nealagro LEWIS ("needle"), Allt Utha INV ("udder"), An Cam-allt INV, Braid Burn MLO ("broad"), Broad Burn MOR, Builg Burn ABD ("bag"), Burn of Ample PER ("ampulla"), Burn of Breitoe SH ("steep"), Cam Alltan ROS, Cammock Burn AYR, Campel Water DMF, Caochan Cam INV, Caochan Crom SUT ("crooked"), Caochan Uchdach INV ("steep"), Caolie Water INV, Crom Allt ROS, Crombie Burn BNF, Crook Burn BWK, Deep Sike ROX, Fiar Allt LEWIS ("winding"), Gable Burn SUT, Gowl Burn ELO, Leth Allt ROS ("half-burn"), Loop Burn CAI, Meoir Veannaich ABD ("forked"), Old Hangy Burn KNR ("slender"), Poldivan Lake DMF ("deep"), Quoich Water ABD ("bowl"), Rigging Sike ROX ("meandering"), River Bogie ABD ("bag"), Smail Burn SLK ("narrow"), Snaid Burn STL ("needle"), Trough Burn AYR, Vat Burn SUT, Woo Burn SLK ("crooked").

(c) The speed and movement of the flowing water

A smallish category in Scottish hydronymy, this group comprises about 70 names extracted from O.S.M. 1" (Scotland). Very often terms normally applied to human moods and states of mind are used to denote the velocity of the flowing water. A rushing stream is angry or quarrelsome or boisterous or wild; references to the fierceness, gaiety or madness of a river also occur. Slow burns suggest sadness, tranquility, laziness or the stately movement of a procession. A stagnant brook is dead.

The following names may be noted as significant examples: Abhainn Sithidh ROS ("stately"), Allt Bheargais ROS ("anger"), Allt Bhuailteach CAI ("quarrelsome"), Allt Chriosdain BNF ("quick"), Allt Sgualach INV ("moving with a sweep"), Allt Sniomhach INV ("sad"), Allt Socrach ROS ("slow"), Bruar Water PER ("boiling"), Burn of Sheeoch KCD ("tranquil"), Dead Water ANG ("stagnant"), Luther Water KCD ("swift"),

Mad Burn WLO, Maldie Burn SUT ("slow"), Powgavie Burn PER ("boisterous"), River Farg PER ("anger"), River Kingie INV ("striding"), Standing Burn LAN, Still Burn MLO.

(d) The geological nature of the bcd of the stream

Whereas the form of the bed and the movement of the flowing water are described by unusual and imaginative defining elements, the geological nature of the bed is denoted by ever recurring matter-of-fact terms, especially referring to the roughness of the bottom of the stream. So Gaelic Garbh Allt with its variants occurs at least 50 times; Calder-names are widespread and at an earlier period Carron is extremely common, almost suggesting appellative usage of that term, at one stage.

This is a short list of examples: Allt Carnach PER ("stony"), Allt Creagach INV ("rocky"), Allt Lathach INV ("clay"), Allt Leacach ARG ("stony"), Allt Tollaidh ROS ("full of holes"), Burn of Turret ANG ("dry"), Calder Water LAN ("hard"), Carron Water DMF ("hard"), Dry Burn AYR, Gana Burn LAN ("sandy"), Garbh Allt ARG ("rough"), Garbh Uisge BNF, Garple Burn KCB, Grudie Burn SUT ("gravelly"), Keltie Burn PER ("hard"), Megen Burn ABD ("boggy"), Meggat Water DMF, Moo Burn SH ("sandy"), River Clachaig ARG ("stony"), River Elchaig ROS ("rocky"), River Greeta LEWIS ("gravel"), River Lonan ARG ("boggy"), River Pattack INV ("full of potholes"), River Polloch ARG ("full of holes"), River Sligeachan SKYE ("shelly"), Rough Burn AYR, Sandy Burn LAN, Sleach Water CAI ("slimy"), Stone Grain PEB, Yarrow Water SLK ("rough").

C. Streams named after the Surroundings of the Water-course

(a) The terrain through which the stream flows

It is impossible to give an adequate representation of the more than 1800 Scottish stream-names which qualify for this category. It is the largest semantic group, containing about one-quarter of all names of water-courses marked on the 92 Scottish O.S.M. 1". Reference to the natural features of the terrain through which a stream flows has provided ample possibilities for the naming and re-naming of burns; the corrie, the pass, the hill, the fir-grove, the bog, the water-fall, the valley, the hollow, the point, the field, the slope, the haugh, the meadow, the rock, the marsh—they, and many other

natural features of the countryside, all enter Scottish hydronymy as defining elements, as a rule in the names of smaller watercourses. Many of these descriptive names contain quite a number of words as, for instance, Allt Cnoc Airidh an t-Seolich Bhig SUT or Uisge Dubh Poll a' Choin INV, and one is entitled to ask how far these accurate descriptions are really names. Ouite a number of them bear much more resemblance to the directions given by a farmer to his shepherd or by a laird to his foresters than to a short, practicable and current proper name. It may very well be the map that will finally turn these descriptions into names and will preserve them as such. Here are a few out of this host of names: Abhainn Droma ROS ("ridge"), Abhainn na Coinnich ARG ("moss"), Akran Burn SUT ("field"), Allt an Doire-giubhais ROS ("fir-grove"), Allt an t-Sneachda ABD ("snow"), Allt Bad nan Clack SUT ("clump"), Allt Bealach Easain INV ("pass"), Allt Choire Phiobaire INV ("corrie"), Allt Creag a' Chait NAI ("craig"), Allt Eas na Maoile SUT ("water-fall"), Allt Lon Ghlas Bheinn INV ("morass"), Allt na h-Innse Buidhe ARG ("haugh"), Allt Ruigh na Cuileige ABD ("slope"), Allt Uamha na Muice ARG ("cave"), Caochan Glac na Criche INV ("hollow"), Cleuch Burn LAN ("ravine"), Coillechat Burn PER ("wood"), Dale Water SH, Hamra River SKYE ("rock"), Howe Burn BWK ("hollow"), Kames River ARG ("bay"), Knock Burn KCB ("hill"), Laggan Burn BTE ("hollow"), Linnshaw Burn AYR ("copse"), Loch Strand WIG, Longhill Burn MLO, Lon Horro SKYE ("moor"), Mire Burn, ROX, Perter Burn DMF ("copse"), Strath Burn CAI ("valley"), Strone Burn PER ("point").

(b) Tree vegetation associated with the water-course

This group and the following one are not only of interest to the linguist but also the botanist, for if the modern names of this type reflect the distribution of trees and plants as we find it in our own time, older names can contribute towards the knowledge of the distribution of these in earlier periods. At least 16 different tree-names enter into Scottish hydronymy; the birch, the fir, the rowantree, the alder, the willow, and the hazel are especially well represented in younger names, whereas the elm only comes into names of the p-Celtic period. Remarkable absentees are the beech and the ash. Apparently, conspicuous single trees, as well as clusters of trees or little groves and larger forests, can contribute towards the making of a name for the stream that flows past them. O.S.M. 1"

has 169 names of this type altogether; in the following list we shall give one or two examples under each tree-name:

Alder: Alltan Feàrna SUT, Alder Burn LAN. Birch: Allt Beithe ROS, Birken Burn STL.

Bird-cherry: River Fiag SUT. Blackthorn: Allt Dregnie BNF.

Elder: River Tromie INV.

Elm: River Leven INV/ARG, Glen Almagro LEWIS.

Fir: Allt Giubhais ROS.

Hawthorn: River Skiack ROS.

Hazel: Cowie Water KCD, Hazel Burn ANG.

Holly: Allt a' Chuilinn SUT. Juniper: Allt Staoine CAI.

Oak: Derry Burn ABD, Oak Burn SLK.

Rowantree: Allt a' Chaoruinn ROS, Rowantree Grains LAN.

Sloe: Allt a' Droighinn ROS.

Willow: Allt nan Seileach BNF, Willow Burn DMF.

Yew: River Ure ARG, Glen Ioagro LEWIS.

Not all names mentioned in this list are necessarily derived from trees growing, singly or in clusters, near or on the banks of the water-course they denote. In a number of cases the streams can be rather thought of as being identified with these trees, just as in group B.b. above we find river-names identified with names of tools, instruments and containers. The link between tree-name and river-name may be the shape of the water-course or some other quality that seemed to be common to both the tree and the river in question. But it is quite possible that this identification was due to some other imaginative process in the mind of the name-giver(s) which we are now unable to follow. Of course, the possibility of imitation must be taken into consideration; one river-name derived from a tree-name created another, and so forth.

In the above list, River Fiag SUT (= Gael. fiodhag "bird-cherry"), River Tromie INV (=*tromm-de "of elders"), River Skiack ROS (= Gael. sgitheach "hawthorn", or < Allt na sgitheach), Cowie Water KCD (= O.Ir. collde "colurnus") and Derry Burn ABD (= O.Ir. dairde "oaken") seem to belong to this category, although the meaning "abounding in elders, hazel, oaks" is not ruled out for the names in -ie, -y. For this type of name in Russian and Polish hydronymy refer to Paul Trost, Der blosse Baumname als Gewässerbezeichnung, Zeitschrift für Namenforschung XIV (1938), pp. 170. Nearer home Wales

provides quite a number of examples, cf. Castan (Glamorgansh.), Cerd(d)in (several), Coll (Cardigansh.), Helygen (Cardigansh.), etc.

(c) Plants, other than trees, associated with the water-course

Various other plants, besides trees, enter into Scottish rivernames. Most of them are referred to just once, and there are hardly any doublets, except for names indicating an abundant growth of fern or berries in the neighbourhood of the stream. This section is small and contains only 63 names, perhaps because plants are not conspicuous enough to be the most impressive factor in the natural surroundings of a water-course. Examples of this group are Allt a' Chreimh SUT ("wild garlic"), Allt Dogha INV ("burdock"), Allt Luachair INV ("rushes"), Allt na Cuilce INV ("reed"), Allt nan Eithreag SUT ("mountain-strawberry"), Allt Raineach ARG ("fern"), Berry Grain DMF, Blaeberry Burn LAN, Feith Shiol INV ("oats, corn"), Feuchaw Burn DMF ("heather"), Hay Sike SLK, Lusragan Burn ARG ("herb"), Nettly Burn FIF, River Cannich ROS-INV ("bogmyrtle"), River Nant ARG ("nettle"), Starragro LEWIS ("rough grass").

(d) Animals, birds, fishes, etc. associated with the stream

A great variety of names of animals, birds, and fishes must have seemed to be apt characterising elements to those responsible for the creation of Scottish hydronymy. Foxes that had their dens near the stream, horses that came to drink out of it, heifers that grazed in the neighbourhood, birds that built their nests somewhere on its banks, trout and salmon that filled its pools—they all attracted the attention of the name-givers, and apparently most of our stream-names which contain names of animals, etc. refer to the living fauna near the water-course.

But there seems to be another kind of relationship between animal or bird or fish on the one hand, and the stream on the other. Rivers were called after animals whose special characteristics seemed to express the peculiar qualities of the water-course, and so were more or less identified with these animals. This is suggested by names like River Bran ROS ("raven"), River Tarff INV ("bull"), River Einig ROS ("little bird"), River Enrick INV ("snipe"), etc., where we need not suppose any genitival relationship as in the usual name pattern Allt nan Each ("Burn of the horses") or Caochan na Feòraige ("Streamlet of the squirrel"). A similar identification can be

assumed for names which are derived by suffixing -aidh (-ie, -y) to the name of the animal, for instance: Burn of Buckie BNF ("buck"), Kirkney Water ABD ("hen"), Brocky Burn KCD ("badger"), Markie Burn INV ("horse"), Tarvie Burn PER ("bull"). There are also diminutives like Abhainn Chonaig ROS ("little wolf"), River Eachaig ARG ("little horse"), Allt Laoghainn PER ("little calf").

Again, many names of this latter kind are to be found in Welsh river-nomenclature (Thomas 1938, p. 52; Bulletin of the Board of Celtic Studies 1935, p. 128). There not only the names of almost all domestic animals, but also those of wild beasts, birds and insects, have been employed in the naming of water-courses. An instructive example is banw "young pig". This term (Archiv für Celtische Lexicographie 1907, p. 43) is applied to water-courses "forming deep channels or holes in which they sink into the earth and are lost for a distance". It is only a short step to calling a tributary of this stream twrch "boar".—As in the case of river-names, identical with names of trees, we have to consider the influence of analogy, but a river like Bran ROS may have received its name because of its dark colour and Tarff INV may be due to the wild speed of its flow (Trost 1936, 1938; Schröder 1937, Pokorny 1954, Krahe 1951-52).

But it is the former category that interests us here. For it, the following names may serve as illustrations: Allt a' Ghamhna SUT ("stirk"), Allt a' Ghobhair SUT ("goat"), Allt an Daimh ROS ("ox, stag"), Allt an t-Seangain PER ("ant"), Allt na Feadaige INV ("plover"), Allt na Muic SUT ("pig"), Allt na Seabhaig ARG ("hawk"), Allt Nathrach INV ("snake"), Bo Burn KCD ("cow"), Caplaich Burn CAI ("horse"), Cock Burn ABD, Conglass Water BNF ("wolf"), Crow Burn SLK, Ishag Burn PER ("lark"), Lamb Burn ELO, Lón nan Earb SKYE ("roe"), River Laxay LEWIS ("salmon"), Stag Burn KCD.

(e) The situation of the water-course

This is, with more than 300 names, an astonishingly large group. The names it contains not only express the absolute position of the water-course but also the position in relation to other streams or to other geographical features. In this latter sense, the names of the four chief points of the compass are frequently used; other favourite terms are words meaning "back", "fore" or "across, transverse". Very often water-courses form the boundary of some piece of land, be it a field

or an estate or a county, and in many instances this stream is just called the boundary river.* There are plenty of examples of this, in this category. Most of the names occur over and over again; so a few examples may suffice: Allt Deas ABD ("south"), Allt na Criche INV ("boundary"), Allt Shios Bhreac-achaidh ARG ("below"), Allt Tarsuinn ROS ("cross"), Back Burn MOR, Burn betwixt the Laws BWK, Cross Burn BWK, Easter Burn ANG, Fore Burn BNF, March Burn INV, Meur Tuath NAI ("north"), Mid Grain DMF, North Burn SUT, Powmeadow Burn LAN ("middle"), Thorter Burn PER ("transverse"), Twart Burn SH, West Water ANG.

Besides colour-adjectives and words denoting the size of the stream, terms referring to the relative situation of the water-course are used to distinguish between two burns bearing the same name and flowing parallel to each other or joining each other. For parallel streams we may list: Auchlyne East and West Burn PER, East and West Burn AYR, Easter and Wester Burn ROX, Eastplace and Westplace Burn PER, High and Low Mill Burn KCB, North and South Black Burn AYR, North and South Burn of Grimista SH.

Examples of joining water-courses are: Allt Shios and Shuas Chulaibh PER, Back and Fore Burn BNF, East and West Burn of Builg KCD, East and West Burn of Glenmoye ANG, East and West Grain ANG, Easter and Wester Burn BWK, Easter and Wester Glen Quoich Burn INV, Eastrig and Westrig Burn PER, North and South Garvan River ARG, River North Esk and River South Esk MLO, Warroch East and West Burn KNR.

D. Water-courses named after Human Institutions and Human Beings

(a) Water-courses associated with human institutions

This category is represented by 366 names; it does not include stream-names derived from place-names proper, which will be listed separately under E.a. We cannot even attempt to give a representative cross section of this name group because the range of defining elements referring to human life and institutions on the banks of the respective water-courses is far too wide. It comprises mill and fort, creel and deer-trap, bridge and booth, church and mill-dam, hospital and sheep-pen, gallows and kiln, mine and penny-land, orchard and byre

^{*} Continental river-names derived from the fact that the water-courses they denote form boundaries, are dealt with by Hans Krahe in Beiträge zur Namen-forschung VI (1955), 1-13.

and many another imprint of human culture and civilisation upon the neighbourhood of our Scottish streams. We select at random, and mention Abbey Burn KCB, Abhainn Rath INV ("fort"), Allt a' Mhuilinn JURA ("mill"), Allt na Craidhleig INV ("creel"), Allt na h-Eaglaise SUT ("church"), Allt na h-Eilrig INV ("deer-trap"), Allt na Làrach INV ("ruin"), Allt nan Ramh SUT ("oars"), Bught Sike ROX ("sheep-fold"), Castle Burn STL, Kiln Burn DMF, Kirk Burn DMF, Lead Mine Burn AYR, Mill Burn LAN, Puball Burn ARG ("tent"), Pulharrow Burn KCB ("wall"), River Borgie SUT ("fort"), River Brora ROS ("bridge"), River Ericht PER ("assembly"), River Housay HARRIS ("house"), Smithy Burn ANG, Spittal Burn PEB, Tower Burn DMF, Whitehouse Burn ARG.

(b) Water-courses connected with human beings

Not only have human activities and institutions been recorded in Scottish river nomenclature, but also names of gods * and saints, personal names, or names referring to personal callings or titles, are frequently to be found. This group comprise almost 200 names, all of the modern compound type.

Personal names, names of saints, gods and goddesses: Abhainn Catriona HARRIS, Allt Eoghainn MOR, Allt Màiri INV, Allt Mhartuin ROS, Allt Rostan DNB (saint's name), Allt Uilleim INV, Bennet's Burn ELO, Caochan Roibidh INV, Duncan Gray's Burn ABD, Murray's Burn KCB, Patrick Burn AYR (saint's name), River Tora SKYE (god's name).

Human occupations, titles, etc.: Allt. a' Bhodaich INV ("old man"), Allt an Airich ARG ("shepherd"), Allt na Caillich SUT ("old woman"), Altgillie Burn ANG ("lad"), Caochan Greusaiche PER ("shoemaker"), Fiddler Burn LAN, King's Beck LAN, Laird's Burn ABD, Lon a' Chleirich SKYE ("clergyman"), Pollgowan Burn AYR ("smith"), Priest's Water ABD, Salter Grain DMF ("salt-dealer"), Scots Burn LAN, Thief Sike ROX.

E. Water-courses containing the NAME OF NAMED OBJECTS

(a) Water-courses named from the names of human settlements In this category of "names from names", there are more than 1000 place-names proper used as defining elements, the second largest sub-section in Scottish hydronymy. In these cases.

* Difficult to assess are mythological names like the two Dees (< *Dēuā) in ABD and KCB and the Don (* $Deuon\bar{a}$) in ABD. In these cases the river-name seems to mean simply "goddess", implying in all probability river-worship on the part of the Celtic name-givers. Q

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as well as in the following groups, we would describe the rivername as being secondary, i.e. based on the name of some other geographical feature or on a primary river-name. Of course, we cannot expect any discrimination as to the origin, age or linguistic make-up of the place-names which occur as hydronymic elements, and so we find names of all strata of languages in this group. It will suffice to mention a few of them, as they all follow an ever recurring morphological pattern. Allt Baile nan Carn INV (Gael. Pl. N.), Allt Gharbh Ghaig INV (<passname), Balnakailly Burn BTE (<Gael. farm-name), Burn of Auchentumb ABD (<Gael. field-name), Forrestburn Water LAN-WLO (<Engl. river-name), Golspie Burn SUT (<ON. Pl. N.), Gruinard River ROS (<ON. bay-name), Inveruglas Water DNB (Pl. N., containing Celt. river-name), Keith Water MLO-ELO (<p-Celt. wood-name), Kilfinnan Burn INV (<Gael. churchname), Lealt River SKYE (Pl. N. < Gael. river-name), Monynut Water ELO (<Celt. hill-name), Nethertown Burn MLO (Engl. Pl. N.), Pitcarmick Burn PER (Pict. farm-name), River Alness ROS (Pl. N., containing pre-Celtic river-name), Wauchope Burn ROX (<valley-name).

(b) Water-courses named from the names of hills

In section C.a. we came across river-names referring to hills, rocks and knolls past which the stream flows. But the defining elements used in those cases were purely appellative and descriptive, or at least appeared to be so from map evidence. The names of this present group, on the other hand, contain the proper name of the hill or height after which they are called, and so, in our terminology, would have to be classified as "secondary" stream-names. The generic terms used in this category are almost exclusively burn and allt; we find burn qualified by Gaelic hill-names but have no example of allt alongside a hill-name of Anglo-Saxon derivation. Here is a short list of examples *: Allt a' Chnoic DNB (1614), Allt a' Mhaim SKYE (1335), Allt an Tuirc INV (2422), Allt Bhuidheannach PER (3064), Allt Carn na Fiacail INV (1913), Allt Creag an Leth-choin INV (3448), Allt na Glas Bheinne INV (2127), Benbrack Burn KCB (1900), Ben Glas Burn PER/DNB (2037), Carewoodrig Burn DMF (1117), Cruach Neuran Burn ARG (1988), Cuff Burn LAN (1111), Kingsseat Burn ROX (1747), Risingclaw Burn LAN (1591), Shalloch Burn AYR (1777), Toardy Burn ANG (1935), Tushielaw Burn SLK (1431), River Horneval SKYE (218).

^{*} The numerals in brackets denote the height of the hill in feet, as given on O.S.M. 1".

(c) Water-courses named from the names of valleys

Naturally, a river and the valley through which it flows are very closely associated in the minds of the people living near them, and so it is not surprising that large numbers of streams are named after the glen, dale or dean that houses them. The O.S.M. I" (Scotland) has at least 469 of them, not counting valley-names now only used as names of human settlements. These are some of them: Allt Gleann Gniomhaidh INV, Allt Scamodale ARG, Burn of Glendui ABD, Finland Burn DNB, Glendow Sike DMF, Glensherup Burn PER, Greenhope Burn BWK, Lon a' Ghlinne Bhig SKYE, Ravendean Burn PEB, Rimsdale Burn SUT, River Erradale ROS, Strathmore Water CAI.

(d) Water-courses named from the names of lakes

The "normal" practice in Scottish hydronymy, especially as far as the larger water-courses are concerned, seems to have been to derive the lake-name from the name of the river which flows out of, through or into the loch. We need only think of Loch Tay, Loch Earn, Loch Awe, Loch Shin, Loch Carron, Loch Ness to realise this pattern. But there are almost a hundred, usually smaller, streams mentioned on the Scottish O.S.M. 1" that show the opposite semantic development: they are named after the loch out of which they issue.* Here belong amongst others: Abhainn an Loch Bhig SUT (->Loch Beag), Abhainn Caslavat LEWIS, Allt an Lochain Duibh INV, Allt Loch a' Ghael ARG, Burn of Pettawater SH, Gossawater Burn SH, Lochbroom Burn PER, Loch Gower Burn WIG, Loch of the Lowes Strand KCB, Lón Loch Mhóir SKYE.

(e) Water-courses connected with primary river-names

Pleonastic usage of generic terms denoting "water, river" seems to have been common in all periods of Scottish hydronymy. It is normally an expression of a change from one language to another, probably starting with an explanatory quality in a time of bilingual transition, but becoming petrified and losing its interpretative character when the older language dies out and is no longer understood. The oldest instance in Scottish hydronymy is apparently Allander Water DNB, where Celt. dubron was added to a pre-Celtic Alaunā. Celt. dubron, in its Gaelic and Brythonic variants, is, on the other hand, furnished with a pleonastic burn or allt, as in Gelder Burn ABD, Allt Calder INV, Deer Burn DMF. Three linguistic strata are represented

^{*} There are one or two exceptions, where the defining element is supplied by the name of the lake into which or through which the stream flows. 23 I

not only in Allander Water but also in Feardar Burn ABD: Brit. *dubro- or Early Gael. dobur, Gael. feith and Engl. burn. To names in -glais usually an explanatory water is added as in Finglas Water PER and Douglas Water DNB, whereas rivernames containing poll, pwll are, as a rule, followed by an additional burn, cf. Polmood Burn PEB, Dipple Burn LAN, Pillmour Burn ELO. ON. ā enters into quite a number of hydronymic compounds, but always—with the possible exception of The Lussa ARG (but cf. also Lussa River JURA)—demands a more "modern" pleonastic term, as we see it in Allt Torray LEWIS, Laxo Burn SH, Iorsa Water ARRAN. A few rivernames with other pleonastic hydronymic elements suggest that the south-western counties at one time knew allt as a rivername element, but it cannot have been very prolific. There are Garwald Water and Garrell Water in DMF and Garvald Burn on the LAN-PEB border, all of which probably stand for Gael. garbh allt "rough burn"; Altigabert Burn in AYR, Burn of Altibrair and Allivolie Burn in WIG and possibly Old Water in KCB. The maps show 24 names of water-courses altogether in which the primary allt-name has been supplemented by a Germanic hydronymic term.

Difficult, in this connection, is the interpretation of the usage of Engl. river (and in many cases also water). It does occur as a genuine generic element, but where it is attached to a "primary" river-name it is doubtful if it is an integral part of the resulting secondary name, at all. Is it just mapusage or is it an early stage of pleonastic interpretation and addition? We suspect the former although the latter is just possible.

F. "WATER-WORDS"

By this term we mean names which simply mean "river" or "stream" or "flowing water", without any reference to any particular characteristics of the water-course itself or the country-side through which it flows. Names of this kind are to be found in most strata of Scottish hydronymy although they are not very common in modern river-nomenclature. They are well represented amongst the names that have come to us from early linguistic periods, and all names to be ascribed to the pre-Celtic stratum are, without exception, to be classed here. There are 95 of them altogether, 75 of which belong either to the p-Celtic or the pre-Celtic layer, and so it is not surprising that we find here most of the names of the larger

Scottish water-courses. Examples are: Allan (Water) PER-STL, Armet (Water) MLO, Avon (Water) LAN, (River) Awe ARG, (River) Ayr AYR, (River) Clyde LAN, (River) Doon AYR, (River) Eden KNR/FIF, (River) Esk DMF, Leithen (Water) PEB, Lyne (Burn) FIF, (River) Lyon PER, (River) Naver SUT, Pow (Water) PER, Rye (Water) AYR, (River) Shiel ROS, (River) Tay PER, (River) Tyne ELO.

STATISTICAL SUMMARY AND CONCLUSION

In this study examples of the various semantic groups have been chosen from all temporal and morphological strata of Scottish hydronymy. It remains now to find out how the semantic categories are distributed over these strata, whether certain morphological types of names are connected with certain semantic aspects and whether certain periods preferred reference to certain characteristics of the water, the watercourse, the surroundings, etc.

In examining the most modern names first, we leave aside all smaller groups like names in sike, lane or grain, as well as those in feith, lon, dig, etc., and concentrate on the two most prolific river-name elements: Engl. burn and Gael. allt. Names containing these generic terms refer, in the majority of cases, to the surroundings of the water-course, be it natural or manmade. But the difference between the percentage figures is significant. Whereas 64.9 per cent of all allt-names refer to the natural surroundings of the water-course and only 11.3 per cent to the human imprint on them, the respective figures for the burn-names drop to 42.1 per cent referring to the natural surroundings and rise to 35 per cent for names incorporating names of human settlements, institutions, occupations and personal names. The difference is especially striking as far as the derivation of river-names from place-names is concerned: names of that category amount to a mere 2.5 per cent in allt-names but include more than a quarter (26.2 per cent) of all burn-names, expressing the high degree of influence human civilisation and culture has had on the naming of our younger and smaller Anglo-Scottish stream-names. Not even half of all names containing burn as a generic term are primary river-names, for 53.4 per cent are "names from names" (place-names, hillnames, valley-names, lake-names, personal names, primary river-names), including 8.7 per cent in which burn is used pleonastically. The respective figures for Scottish allt-names are 14.9 per cent and 1.7 per cent. Only 15.4 per cent of all

allt-names and 7.3 per cent of all burn-names refer to characteristics of the water and the water-course themselves.

The share of secondary names is even greater in the special type "burn of—". Here 63.2 per cent are "names from names",

		Semantic Group	Α	В			
Morphological Group	Linguistic Stratum	Element	a. colour d. noise	a. sizeb. formc. speedd. bed			
	Anglo-Scottish	burn burn of water water of river	79 10 1 16 2 1 2	17 30 15 25 1 1 1 1 1 1 2			
Compounds	Old Norse	á	7	1 1			
	Gaelic	allt abhainn uisgc	101 11 17 1	62 88 22 9 12 5 4 			
	Early Celtic	glais pow, poll dubro-	7 ··· 7 ·· 4 ···	I 5 I I 2			
Suffixes and	Gaelic {	-ach -ag -an -agan	15 3 5 6 6 1 2	1 12 7 4 2 5 3 3 4			
Simple Stems	Early Celtic {	-aidh p-Celtic	23 5 27 14	17 9 2			
	pre-Celtic						

This table shows the semantic structure of all Scottish river-names to be found on O.S.M. 1". Its sigures are by no means final and may be subject to slight alterations, but the over-all picture is undoubtedly correct.

including 37.2 per cent place-names and 11.5 per cent primary river-names. Whereas 76.6 per cent of all names of this group point to the surroundings, natural or artificial, of the stream, only 1.1 per cent (3 names) refer to characteristics

of the water and the water-course. With the pattern "burn of—" we may link the type "water of—"; "names from names" are represented by an almost identical percentage, i.e. 62.7, but the distribution is very different, for this figure

 													-	
	С			I	D E					F				
a. terrain	b. trees	6. plants	d. animals, etc.	e. s.tuation	a. human	b. persons	a. place-names	b. hill-names	c. valley-names	d. lake-names	e. river-names	water-words	Miscellaneous	Obscure
426 54 38 1 36	24 I I 2	12 2 2 3	36 3 7 3 5	9	155 3 10 	59	634 97 59 4	129 17 1	247 14 25 2 57	14 7 2	212 30 104 26 173	2	21 I 5	131 16 34 8 15
8			8		5	4							1	
1075 84 3	87 2 	27 I 	131 6 	70 5 1	139	75 4	61 18	51 4	71 41 1	61 9 	43 13 1	I I	40 2 2	55 6 2
14,	 7 	 4 2	4 22 	 4 	10	9	 I 	:::	:::	:::	 	:::	3 11 6	10
6 3	8 5 1	6 3 1	6 7 4 2	3 		 		:::	:::		 I 2	3 2 3 1	8 6 1	5 2
7	5 3	4	26	3		:::	:::	:::	:::	:::	ı 	7 32	12	
												43		3

is made up of 51 per cent primary stream-names, 7.8 per cent place-names and 2.9 per cent other names, stressing the strong accent on pleonastic usage which this type has in modern Scottish hydronymy. 13.7 per cent of all names speak of the natural surroundings of the river and 1.9 per cent (1 name!) of the water itself.—Water in the more "normal" morphological 235

pattern, i.e. following the defining element, again is qualified by terms pointing to the surroundings of the water-course or by primary geographical names: 25.3 per cent refer to the natural surroundings of the stream, 21.9 per cent to traces of human civilisation in the neighbourhood, 32.1 per cent show pleonastic usage; the share of "names from names" is just over 50 per cent. We arrive at similar figures for the usage of Engl. river in Scottish hydronymy: natural surroundings 26.4 per cent, human influence 27.3 per cent, pleonastic usage 39.7 per cent; but the category of "names from names" goes up to 78.9 per cent, a confirmation of the view expressed earlier that river has no real creative value, in the "primary" sense, in Scottish river-nomenclature.

The Gaelic generic elements corresponding to Engl. water and river—uisge and abhainn—preserve more of the primary hydronymic character than their English equivalents. Exactly half of all uisge-names refer to the water or the water-course and another 18.4 per cent to the natural surroundings; only 2 names (6.8 per cent) are "names from names", one of them with pleonastic uisge. Abhainn approaches more closely to the usage of Engl. river than uisge to that of Engl. water, but the highest percentage—60·1—goes to streams named after the natural surroundings of the water-course and only 13 per cent to those referring to human settlements, institutions and personal names. Characteristics of the water or water-course are denoted by 17 per cent of the defining elements used. The share of "names from names" is 35.2 per cent. So the main usage of abhainn corresponds to that of Gael. allt: neighbouring geographical features supply the defining term. In this respect, abhainn and allt are joined by Gael. poll, W. pwll, Scot. pow, for 45.3 per cent of the names of that class refer to the surrounding countryside and only 11.1 per cent to human civilisation.

It is interesting to compare, at this point, the semantic aspects of the defining elements qualifying ON. \bar{a} in Scottish hydronymy, for we find that \bar{a} does not go together with the other Germanic terms mentioned—burn, water, river—but can be classed with their Gaelic equivalents in so far as the natural surroundings of the water-course are referred to in 40 per cent of all cases, whereas only about half that number has any connection with human life in the neighbourhood. But in one respect the usage of \bar{a} points away even from allt, abhainn and uisge: 35 per cent of all \bar{a} -names indicate special qualities of the stream itself.

Here \bar{a} (itself belonging to a fairly early Germanic stratum) links up with those two Celtic terms which must be thought of as part of an older layer of Scottish hydronymy than the one allt, abhainn and uisge belong to: glais and dobhar (dw(f)r). Not a single one of the names which contain them as generic terms implies a reference to human activity in the neighbourhood of the stream referred to, though the natural surroundings are mentioned in 28.6 per cent of all glais- and in 5.9 per cent of all dobhar-names. The decisive difference, however, is expressed by the fact that 50 per cent of the names containing glais and 76.5 per cent of those containing dobhar (or dwr) speak of special characteristics of the water or the watercourse. This semantic evidence underlines and confirms the view, based on morphological grounds, that names containing Celt. dubron belong to the earliest stratum of hydronymic compounds in Scotland, for it closely corresponds to the distribution of semantic aspects in names formed by adding a suffix to a word or word-stem, a group that, on the whole, undoubtedly belongs to an earlier period than compound names.

If we first look at the names ending in Gaelic suffixes, we find that the basis of 80.9 per cent of all these names is a word or stem referring to the water or water-course, whereas only 17 per cent point to the natural surroundings of the stream (including names in -ach, derived from names of animals, etc.). Names of human settlements, human activities and institutions and personal names are not incorporated, four names are examples of pleonastic usage (1.1 per cent) and the rest come under the headings "miscellaneous" and "unexplained". For p-Celtic names almost the same remarks apply, for, as to their name-bases, 80 per cent mean special characteristics of the flowing water or its course, in contrast to 3.2 per cent (4 names) that point to the countryside near it and 16.8 per cent miscellaneous and unexplained names. Again human civilisation does not come into the nomenclature of this morphological stratum, at all. If we step even further back to examine the Scottish river-names which we believe to have come down to us from a pre-Celtic period, we find that even references to the natural surroundings are not implied by the stems used, but that all explainable names (93.5 per cent) refer to the water or water-course, most of them simply meaning "water" or "river" or "something flowing", probably with various and sensitive shades of meaning which we can no longer detect.

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A comparison with figures given by Hans Krahe (1949) for the semantic structure of the river-names in the catchment area of the River Main in Germany may be very instructive at this point. There the youngest, German, layer—compound names containing the element -bach—consists of 41 per cent of names referring to human beings and human civilisation, 46 per cent pointing to the natural surroundings and 13 per cent to the water itself and its characteristics. This corresponds roughly to our burn-names, where the equivalent figures are 35, 42 and 7 per cent—In the Main area the main basic element in the older, Germanic, stratum of compound names is -aha, cognate with OE. ēa and ON. ā. Names belonging to this group show a different distribution of the semantic categories: only 6 per cent are derived from human activities and institutions, 54 per cent are connected with the natural surroundings and 40 per cent describe characteristics of the flowing water itself. With these formations in -aha we may compare our Gaelic river-names containing allt or abhainn as generic elements, but it must be noted here that allt- and abhainn-names show a more "modern" trend in so far as they include a higher percentage of names derived from the human imprint on the surrounding countryside and, at the same time, do not refer as often to the water or the water-course themselves. No name-group comparable with our category ending in Gaelic suffixes is mentioned in Krahe's short survey, based on a dissertation by M. Belschner (1943); but our p-Celtic simple stems have an equivalent in Early Germanic names of the same morphological structure, and what Krahe says about the latter is just as applicable to the former (Krahe 1949, p. 24):

And here man is not mentioned anymore, here everything is only nature, or—more precisely—only the water itself. At this early stage the mere description as "river" is predominant, and only here and there a special quality of its course or its character is referred to more explicitly.

As the oldest accessible hydronymic stratum seems to have been the same in the part of Britain examined by us and in the catchment basin surveyed by Krahe—a pre-dialectal Indo-European group of simple stems—it is not surprising that they are identical semantically in both areas, i.e. they consist exclusively of a great variety of "water-words" describing only the water itself.

If we interpret the above lists and the subsequent summary

and examine the development and changes in the semantic aspects expressed in the various strata of Scottish river-nomenclature, we find that the oldest names just refer to the water itself and its flowing. It suffices at this early stage to call the river "the flowing one"; and even the colour and noise of the flowing water do not play any part yet, but only become significant attributes, together with the nature of the bed in which the stream flows, in the slightly later Early Celtic hydronymy. In the next layer the importance of that aspect is still obvious but references to the natural surroundings occur. first of all to the flora and fauna on the banks of the watercourses, then also to hills, woods and glens. Names including the surrounding terrain, plants, trees, animals, become more common during the following period and form, in our most "modern" river-nomenclature, the strongest semantic subsection, although greatly challenged for pride of place by the numerous names to be connected with human life near the water-course. The growing number of references to human activities in the widest sense becomes especially apparent in the group of names containing Engl. burn as a generic term; here man and his civilisation are, as we have seen above, referred to in at least 35 per cent of all examples found on the Scottish O.S.M. 1".

In this youngest semantic stratum—in which reference is made to the natural and artificial surroundings of the water-course—the number of compound names is extremely great. It is possible to say that the inclusion of the surrounding countryside as a source for river-nomenclature is the semantic equivalent of the morphological development from simple stems and suffixed formations to compound names. The form and meaning of a name prove to be almost interdependable. A change in the morphological structure, i.e. the creation of new morphological types, seems to have made possible, or even necessary, a new semantic aspect, and, on the other hand, an altered semantic attitude has necessitated new modes of morphological expression.

As references to foreign hydronymics have shown, this semantic structure and development is not confined to Scotland or to the British Isles. It represents a change in the connection between name and meaning and in the creative process of naming in general, at least in those parts of the world in which Western European languages have formed the structural basis for the linguistic expression of thought.

COUNTY ABBREVIATIONS

ABD	Aberdeenshire	LAN	Lanarkshire
ANG	Angus	MLO	Midlothian
ARG	Argyllshire	MOR	Morayshire
AYR	Ayrshire	NAI	Nairnshire
BNF	Banffshire	ORK	Orkney
BTE	Buteshire	\mathbf{PEB}	Peeblesshire
BWK	Berwickshire	PER	Perthshire
CAI	Caithness	RNF	Renfrewshire
CLA	Clackmannanshire	ROS	Ross-shire
DMF	Dumfriesshire	ROX	Roxburghshire
DNB	Dunbartonshire	SH	Shetland
ELO	East Lothian	SLK	Selkirkshire
FIF	Fife	STL	Stirlingshire
INV	Inverness-shire	SUT	Sutherland
KCB	Kirkcudbrightshire	WIG	Wigtownshire
KCD	Kincardineshire	WLO	West Lothian
KNR	Kinross-shire		

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