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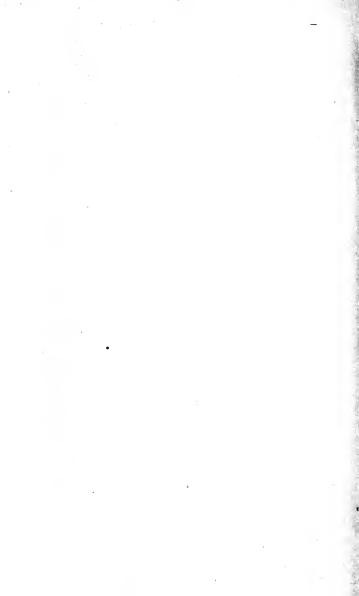


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ON THE HEAD-FORMS OF THE WEST OF ENGLAND.

XXV.—On the Head-Forms of the West of England. By John Beddoe, B.A., M.D., F.A.S.L., F.E.S., Foreign Associate of the Anthropological Society of Paris.

In anthropology, as in chemistry, and other progressive sciences, the disposal or modification of old theories, renders ambiguous or misleading terms that once appeared to have a definite and unequivocal meaning. Kelt and Keltic are words which were useful in their day, but which have ceased to convey a distinct idea to the minds of modern students of the science. I ask the indulgence of those who on this ground would object to the frequent use of these words in the present paper. I could have employed no others in their place without still greater risk of being misunderstood. The sense in which I use them will, I think, become tolerably clear in the sequel, and I apply them, in fact, to the common element of race in ancient Gaul, Britain, Ireland, Noricum, and Keltiberia.

It is my principal object, in the present paper, to throw some additional light on the vexed subject of the Keltic skull-form, by adducing a series of unpublished facts. These facts are derived for the most part from mensuration of the heads of natives of the south-western counties, and of Wales and Ireland. The people subjected to examination were mostly either inmates of certain factories and workshops which I visited for the purpose, or applicants at the Bristol Royal Infirmary; but, as a certain number of persons belonging to the professional and trading classes were added, it is probable that the general population, except its purely rural section, was fairly represented.

It can hardly be said now, as it was, not many years ago, that the question as to the true Keltic head-form is as far as ever from being settled. The materials for its determination which have been accumulated and utilised by Davis, Thurnam, and Daniel Wilson, by Broca and Belloguet, and the acute observations of Pruner-Bey, have certainly placed us in a far better position for its consideration than the one we occupied when Professor Nilsson vainly demanded of British authropologists a typical Keltic skull. Still the differences of opinion founded on these materials continue to be great, and are complicated by the doubt whether any or many pre-Keltic races have left their traces not only in riverbeds, caves, and kjökkenmöddings, but in the contents of our barrows and the blood of our people; and, moreover, by the obscurity of the relations inter se of the Kymric, Gaelic, Belgic, and Gallo-Keltic stocks.

The opinion formerly predominant in this country, as in France, that the Keltic skull was long, was somewhat rudely shaken by the revelations of the Crania Britannica, Dr. Barnard Davis, while claiming for the average Briton of the barrows a moderate degree of brachykephalism, has never, so far as I am aware, done the same for his supposed modern representatives. His observations in Kerry (Cr. Br., p. 200,) equally with his extensive collection of modern and mediæval Irish skulls, indicate a tendency to length rather than to shortness. His colleague, however, in his recent valuable paper in the Anthrop. Memoirs, vol. I, has gone further :- "In England," he says (p. 127), "the prevailing form of skull is ovoid or moderately dolichokephalic, combined with a more than medium stature, and generally with a fair skin, and light eves and hair. A much less common form of head is the brachykephalic, usually found in connexion with a less stature, and with a dark skin, eyes, and hair. The first of these two types is Teutonic, and to be traced to an Anglo-Saxon and Scandinavian source, whilst it is almost equally certain that the second is derived from our British or Keltic ancestors."

All this seems to be assumed as a postulate by Dr. Thurnam. I find, however, on analysing my observations, that they distinctly negative the most important part of the statement. On the one hand, eighty-one heads, which by my method of measurement, in which the glabella is assumed to mean the prominent spot between the superciliary ridges, yield a modulus of more than eighty per cent.; heads, therefore, which are ordinarily called brachykephalic, belonged for the most part to

individuals with light hair, and an average stature somewhere about the mean. And, on the other hand, of twenty-five Englishmen having black or brownish-black hair, the average index of head-breadth is so small as 76.5, which is the lowest I have met with in any set of men. Eight Welshman having black hair, yielded the same modulus to a fraction as thirty-eight who had hair of other colours, though I must concede that eight black-haired Kerrymen had heads broader by $\frac{1}{2}$ per cent. than twenty-four others. The observations of my friend Mr. Hector MacLean, on the islanders of Islay and Colonsay, bear me out on this point very strongly, his black-haired men, twenty in number, yielding a modulus of seventy-six, or three per cent. less than that of their lighter-haired neighbours.

We shall see the bearing of all this presently. In the meantime it is worthy of remark that the remaining part of my friend's postulate is more correct. Mr. Maclean's measurements, and my own, both indicate that a notable, though not very great, inferiority in stature and bulk, does, on the average, characterise the black-haired type.

I shall now proceed to state, from the narrowest to the broadest, the moduli, or indices of relative breadth, which I have found in the living heads of natives of the following districts. I shall introduce seven Hanoverians from the neighbourhood of Bremen, as representatives of one of the Teutonic

No. ob- served.	DISTRICT OR COU	NTRY.			Modulus.
40	Wiltshire, North and West				76.56
33	Munster (mostly co. Cork)				76.75
53	West Somerset				76.9
20	Kerry				77.6
10	Belgium (Walloons)				77.6
50	South Wales and Monmout	hshire			77.7
30	South Devon				77.9
50	Gloucestershire				77.9
50	Bristol				77.9
80	East Somerset				77.9
7	Cornwall				78.0
30	Sweden (coasts)				78.3
50	North Devon				78.3
29	South Somerset				78.6
20	North, South-east, and Cer	itre of	Engla	nd	78.7
5	Norway				79.8
7		•••			79.9
8					83.6

tribes that took part in the conquest of England,* and thirty Swedes, partly for a similar reason, and partly to show that the Swedes are not so universally and intensely dolichokephalous as most people seem to believe. Also ten Walloons from the province of Namur, as representatives of a race more or less Keltic in blood, and eight Finns as an example of a truly brachykephalous people.

The conclusions or inferences I should draw from this table would be as follows:—

That, inasmuch as there is reason to suppose that the comparative breadth of a cranium, is less than that of a living head, with its integuments, etc., there is ground for believing the people of the West of England to be decidedly dolichokephalic. That the same statement applies to South Wales, and to Munster.

That the difference in this respect between Anglo-Saxons in general, and Kelts in general, is immaterial, and that if any such difference does exist, it is quite overshadowed by the tribal or sectional differences, between Saxons and Kelts *inter se*.

That the table affords no support to the view that the Keltic skull has been, or would be narrowed by an admixture of the Iberian type. For there is more reason to suspect the presence of Iberian blood in Cornwall and South Wales, than in West Somerset, and more in Kerry than in Cork.

That if the modern Gaelic skull differs from the Kymric or Cambro-British in this respect, it is probably in the direction of greater narrowness.

That the heads in North-western Wiltshire are remarkably long. Lest this should be attributed wholly to the fact that Wilts is more Teutonic than any county to the west of it, I will remark that the twenty heads from the other Teutonic districts of England occupy the other extremity of my scale, and, moreover, that my Wiltshire list includes some specimens whose other physical characteristics are distinctly Keltic, and

^{*} I have had no opportunity of measuring Frisian heads; judging by the eye, I believe Dr. Lubach's opinion of the dolichocephaly of the Frisians to be correct. Nor have I measured any Danes.

who yet have very long heads. Have we here the traces of Dr. Thurnam's dolichokephalous long-barrow-men?

The mention of these same long-barrow kymbekephali transports one at once from the region of dry and repulsive modern fact into the enticing and glorious uncertainty of prehistoric theory. For my own part, neither Dr. Wilson nor Dr. Thurnam has as yet quite convinced me that there was a distinct megalithic race, still less that that race was Iberian.

In forming my idea as to the existence of a common Keltic type, I have been guided very much by the evidence of colour. "Colour," said Sir Henry Rawlinson, while presiding over the Geographical Section of the British Association at Bath, "is of no value in the consideration of types." From this statement of Sir Henry's I most emphatically differ. It has never hitherto been proven that chromatic is more changeable than cranial type, where there is no intermixture of blood; and to assert that it is so is at least premature.

Now, there is a certain chromatic character, the frequency of which I have myself observed in all parts of Ireland, in most parts of the Scottish Highlands and of Wales, in Cornwall, in the West of England to a gradually diminishing extent as one travels eastward into Wessex, in Champagne, and less markedly in the Walloon country, and in Piedmont, and which, on the trustworthy evidence of M. de Belloquet, I believe to be common also in Brittany. I mean that conjunction of blue, cærulean or ashgrey eyes, with dark hair, brows, and lashes, which Dr. Barnard Davis calls, for shortness sake, "the Keltic eye." Having found this combination frequent everywhere where Keltic blood may be supposed to abound, and scarcely anywhere else, I believe it to furnish a pretty good index of the presence of Kelts.

In the next place, is there any cranial form which abounds wherever the "Keltic eye" abounds? With the diffidence which becomes one who has not made craniology a special study, I incline to think that there is. It is the one which my friend Dr. Daniel Wilson, in his recent and important paper on the characteristics of the ancient and modern Kelt, designates as the pear-shaped or insular Keltic type, and

which he describes as equally long with the Anglo-Saxon, but marked by a sudden tapering in front of the parietal protuberances, and a narrow prolonged frontal region. Most of the other eminent anthropologists whose names I have cited, from Retzius onwards, have more or less clearly, and with some difference of opinion on the point of length, indicated a somewhat similar view; but none of them, so far as I can recollect, have so clearly and tersely expressed it. I myself, working independently of Dr. Wilson, and in a different manner, had educed the same conclusions, which have since been confirmed by further investigations, including a few upon Swedish, German, and Walloon heads; and, moreover, by a visit to Rheims, in Champagne, where, in the elaborate sculptures of the monument of Jovinus, I had the satisfaction of beholding the same marked features, square forehead, prominent brows, and angular chin, which almost equally, to the present day, characterise the Belgic Kelt of the continent and the Firbolgian of Arran.

I do not think Wilson's term, "pear-shaped," very happy; that of "coffin-shaped" would perhaps be better, but would be liable to convey the idea of great length, which is not desirable. The heads to which I should apply it vary in length, but are usually rather dolichous. A nearly straight line extends from the outer angle of the forehead to the point of greatest breadth, which is generally parietal, and placed far back above and behind the meatus auditorius: while in Saxon skulls this point is generally temporal, and placed above the meatus, at a rather low level. The forehead has great squareness when viewed from above, and from behind diagonally its angle and the malar bone are both seen to be prominent, so that the eye can hardly be got to show in profile: the zygomatic diameter may or may not be large, but it is placed well forward, and appears large in a front view; and this fact, with the flatness of the anterior and fronto-lateral region, would cause the skull to be phænozygous. In the Saxon type, on the other hand, with which the Swedish generally but not exactly agrees, the forehead is rounded laterally, the eye prominent in profile, the greatest zygomatic

diameter lies far back, and the tendency of the skull to ellipticity renders it aphenozygous. The brows are, in the Keltic type, prominent and low, either oblique, or, which is very common in Ireland (see Davis, Cr. Brit., p. 201), "forming, with the projecting superciliary ridges, a horizontal line above the eyes." The forehead above the brows is rather flat, in intelligent men often elevated and square (Edwards' Kimric type), but in the bulk of the population low, "gaining," as has been said, "in length what it wants in height." The upper profile of the skull has generally a gentle and regular curve as far as the upper occipital region; this is generally protuberant, and whether so or not, is oval in section: this point we owe to Pruner-Bey, but I have confirmed it in a good many instances. "Receptaculum cerebelli small," said Retzius of a particular skull, an Irish one. (Cr. Brit., Description of Ancient Hibernian Skull, plate 55, p. 2). I think the remark applies to the best examples of the type, but my method of measurement does not allow me to test its correctness.

The facial features in several varieties or crosses of this type have been well described by Dr. Barnard Davis. The most constant are the rather deep-set eye, the sinuous long-nostriled nose, prominent at the tip, and the always angular and often narrow chin. A slight degree of prognathousness, producing a vertical furrowing of the cheek, is so common, that it may perhaps be a race-character. Length of face varies like length of head, but is generally considerable; in the Firbolgs of Arran, and in many Walloons, it is conspicuously great.

Such is the prevailing type in Ireland generally; and I think it is more conspicuous than any other in the greater part of Somerset, and perhaps in South Devon. It is common in other parts of the west also, including certain tracts in the valley of the Bristol Avon, which, according to Dr. Guest, long remained Damnonian. The ovoid head, tending to ellipticity when long, to roundness when short, seems to predominate in all the upper part of Wiltshire and of Gloucestershire, and occurs in more or less force elsewhere, notably about Bideford, and along both coasts of the Bristol Channel. But in the Vale of Thornbury and the Forest of Dean, as well as in

Wales and North Devon and Cornwall, one or two other types rise into importance. One of these I believe to be Iberian. In this the form is distinctly ovoid, as in M. Broca's Basque skulls. It is conjoined with a dark, almond-shaped, and often · obliquely set eye, quite Turanian in character, with arched or oblique eyebrows, and with other features much resembling those I have seen in photographs from the Western Pyrenees. Another may be described as rounded-oblong in horizontal section; it is broader in the forehead and fuller in the temples than the ordinary Keltic head, of which it may, however, be only a variety or cross. It abounds in Wales and North Devon. My friend Mr. David Davis, an acute observer, considers it to be the special Kymric form, as does also Mr. D. Mackintosh. Something like it reappears in the north of England among the Kymro-Scandinavian breed. In Devon and Cornwall some find Romans and Phœnicians: I cannot say whether they are right or not.

Let us now see how these facts as to length, and these views, partly based upon measurements, on the other parts of the subject, can be reconciled with the contents of British and Gaulish barrows. There are great difficulties in the way, to which I will advert presently, but I do not think such a reconciliation impossible. In the first place, so far as Ireland is concerned, these difficulties are non-existent. The ancient Irish skulls, as well as the mediæval and modern ones, are long; the four in the catalogue in the Crania Britannica average 76.2, and the two in the museum at Kilkenny the same modulus to a fraction. Moreover, the physiognomy and proportions of these skulls agree with my description, and are also, as may be seen in the two figured by Dr. Davis, thoroughly Irish. I would treat with respect any opinion put forward by Sir William Wilde; but I am as yet unconvinced of the existence of any race of globular-headed Irish, though I by no means absolutely deny it.*

^{*} Of ancient French skulls I know but little, but that little rather strengthens my views; for during a recent visit to M. Broca, I convinced myself that some if not all of the "Bellovaque" skulls agreed well with our Keltic type, and those of the Merovingian Franks with our ovoid Anglo-

In England we have to deal with the duplicate theory of Thurnam, and the triplicate theory of Daniel Wilson; or, if we adopt the single race theory of Barnard Davis, we have to account for the disappearance of that tendency to brachycephalism which he attributes to the majority of his Britons. I. find the pear- or coffin-shape which I have described, in a great many of the skulls figured in the Crania Britannica, both long and short, e. q., those from Parsley Hay, Ballidon Moor (bating the prominence of the centre of the forehead,) Arras, End Lowe, Codford, Juniper Green, Bincombe, and the long skull from Uley, while the typical ovoid Saxon form is exhibited in the example from Linton Heath, and less distinctly in others, as those from Wye Hill and Brighthampton. There are, however, cross exceptions. Thus the round skull from Tosson, Northumberland, supposed to be late British, has a very German The coffin-shaped "Saxon" from Harnham, if that burying-ground belonged, as Thurnam thinks, to the churls and thralls of the neighbourhood, may well have appertained to a man of British lineage. If it be objected that the filling out of the temporal region may arise in a race as a consequence or concomitant of advancing civilisation, I can only reply that the ancient Saxons and Merovingians certainly did not rank very high in that respect, any more than some of our "bulletheaded" boors of the present day; and that the round-headed barbarian of Tosson must in that case have been born long before his time.

As for the supposed brachykephalism, or inclination towards brachykephalism, of the ancient British Celt, two or three considerations suggest themselves. The change, if any change there was, took place very long ago. Daniel Wilson has shown evidence in favour of the medieval Keltic skull having been long; and we can hardly suppose that under somewhat similar influences the Keltic skull was growing narrower, and the German one wider. If there really was a megalithic race, it

Saxon one; and moreover, that the form of M. Broca's Basque crania was very much that of some modern Silurian heads. In the valley of the Meuse, the long skull of Engis, and the shorter ones of M. Dupont's reindeer-men, are certainly not adverse to my view in any way.

may have survived through the bronze period in serfage, rarely appearing in the barrows, and have ultimately fused with its conquerors, modifying their skullform. But if the race was substantially one, and the kymbekephali were merely aberrant specimens, we have to do with the familiar phenomenon of a wide range of proportionate length and breadth, such as occurs in most races,* Change in the mode of nursing infants may account for one or two per cent. of additional length, and different methods of measurement for something more. Dr. Davis, for example, understands by the glabella the smooth spot, or slight depression, generally found about an inch above the fronto-nasal suture, while my glabella is the point of union of the superciliary ridges. A frowning beetle-browed skull. such as many of the ancient British ones, would therefore yield in my hands a slightly longer antero-posterior diameter than in his.

^{*} My 30 Swedes varied from 72:4 to 85:5.



