

The Englishman of the Future.¹

By Prof. F. G. PARSONS.

IT has been borne in upon me, little by little, that some of the characteristics of the Englishman of to-day do not seem to be hereditary at all, and that in some things we, in our development, are not following any Mendelian laws; nor are we harking back to Long Barrow, Bronze Age, Celtic, or Saxon types, but that gradually we are building up a new kind of man, differing in certain ways from all of these.

Feeling sure that a change is coming over our younger generation, let us try to see where it is leading, and whether heredity or environment is taking the greater share in guiding it; though we shall surely be wrong if we allow either of these great influences to leave our minds for a moment. I must be careful not to undertake more than I can carry through in my time; and therefore I will only ask you to let me say a little about the three physical characteristics of stature, coloration, and head shape, in order to see whether anything may be learnt from these.

I suppose that no one would dare to say what the average height of the modern Englishman is, because we have no State-controlled and State-aided means of sampling the physical conditions of our population in any way. I can state at first hand that the men of our labouring and agricultural classes in the Chilterns average 5 ft. 6 in., and that the mixed classes in a North Kent doctor's practice are 5 ft. 7 in.; but what we do not know is how much the stunted millions in the Midland manufacturing towns, and the mass of unemployed and unemployable humanity in the east of London, will pull this down. I suppose that, taking these into consideration, the average height of the Englishman to-day is not more than 5 ft. 5 in.; though when we speak of the well-nourished classes there is a different tale to tell. I know, for example, that for the last twenty years my students at St. Thomas's Hospital have averaged 5 ft. 9 in. and in no single year have they ever risen so high as 5 ft. 10 in. or dropped below 5 ft. 9 in.; but, steady though their average at this height has been for twenty years, I am quite sure that they are taller than were my own contemporaries forty years ago, just as those contemporaries, in their turn, were probably taller than the originals of Bob Sawyer's and Ben Allen's fellow-students, who walked the Borough hospitals nearly a century ago.

I think, therefore, that hygiene and better nutrition have done their work so far as stature is concerned. It may be that the more intensive health crusade of the last two or three years may cause a new rise in stature which has not yet had time to show itself, but I can see no signs of it as yet. It may be, too, that, though environment may have played its last card, heredity may not have done so, and that if for any reason the individuals with a higher percentage of Nordic traits in their patch-

work composition are put in a more favourable position to marry and beget offspring than those with a large number of Alpine and Mediterranean traits, the stature may rise still further.

I feel sure, however, that there is a certain average height beyond which the purest Nordic stock will not rise, and my belief is that this has been reached, or nearly reached, already—so far as the higher classes are concerned.

We have learnt how to raise our male stature to a point beyond which it will not go, and beyond which it is not well that it should go. But what of the woman? About twenty years ago I measured the height of some 150 students of the School of Medicine for Women, and found their average to be 5 ft. 3 in., but after ten years their successors had added a fraction over an inch to their stature; while this year I have measured 150 nurses and massage students at St. Thomas's Hospital, whose average height was 5 ft. 4-9 in.

Now these girls belong to the very same class of the community as the male medical students; indeed there are brothers and sisters in the two groups, and the difference with which they have reacted to altered conditions is interesting; for, whereas the boys had reached their full average of 5 ft. 9 in. when first I measured them twenty years ago—and their successors, year by year, have never added anything to, or lost anything from, their height, up to the present—their sisters have gained very nearly 2 inches in the twenty years, and practically have reached the height of the average Englishman, whom we dare not estimate as measuring more than 5 ft. 5 in. There are no signs, moreover, that these healthily nourished girls have reached their maximum, as have the boys.

One often hears that the English people are becoming darker. To me the simplest index seems to be gained by adding half the number of the intermediate eyes to the light and half to the dark, and by then taking the new percentage of dark eyes as the index of eye coloration. In most cases it is unwise to use the hair or eyes alone, but to combine the two into a general index of nigrescence by adding the indices of the hair and eyes together and then dividing the sum by two.

I must be content, at this stage, simply to give some massed results in trying to solve the question whether Londoners, who practically are southern English people, have grown darker or fairer during the last sixty years.

The following table gives the material which I have:

ADULT MALES.			
	Hair Index.	Eye Index.	Nigrescence Index.
1860	39.7 (2400)	35.7 (2400)	37.7 (2400)
1927	27.4 (1485)	33.2 (1485)	30.3 (1485)
ADULT FEMALES.			
1860	42.7 (2813)	40.7 (2813)	41.7 (2813)
1927	23.9 (1487)	35.3 (411)	29.6 (949)

¹ From the presidential address to Section H (Anthropology) of the British Association, delivered at Leeds on Sept. 2.

BOYS (8 TO 16 YEARS OLD).			
1927	8.7 (2565)	33.1 (2565)	20.9 (2565)

GIRLS (8 TO 16 YEARS OLD).			
1927	11.0 (1922)	34.3 (1922)	22.6 (1922)

On looking at this table one cannot fail to be struck by the increase in fairness, particularly in the hair; but I do not wish to press it too far, because there are so many possible sources of error. Not only is there the possibility that Beddoe and I had a different border-line between brown and dark brown hair, but other things, such as the modern habit of wearing the hair short, the habit of more frequently washing the head, and the disuse to a considerable extent of pomatum and grease, all give an appearance of fairness which was wanting sixty years ago. In the eye records I place more faith, for both Beddoe and I used an intermediate group between the light and dark eyes, a group which I have divided in both sets of records equally between the light and the dark. The drop in the darkness here is not serious, but I think that it is large enough to be significant.

The children's records at first seem irrelevant, since I have nothing of sixty years ago with which to compare them. Their use is to supplement the present-day eye colours of the adults, especially those of the women, which are very scanty. It will be noticed that in children of eight to sixteen the eye colours have become permanent, though the hair has not, and thus their evidence is valuable.

These records, which run into several thousands, do not give us any reason to think that the Londoner is becoming darker, but do give us reason, though it may need discounting, to believe that he is growing fairer under changing conditions.

The last point to which I wish to direct attention is head shape. The anthropologist usually thinks of skulls in terms of their length and breadth, and certainly he has gained a great deal of useful information in the past from this cranial index; lately, however, he has felt that something more is needed, and specialists in craniology have piled up a mass of arcs, indices, coefficients, and angles. The reason why the cranial or the cephalic index is not enough is that it treats the head as if it were a structure of two, instead of three, dimensions. To use a homely simile, it is like giving the length and breadth of a box and then expecting the hearer to grasp what that box is like. We have hundreds of thousands of records of the length and breadth of heads, but very few of their height. I submit that, if we use all three dimensions—length, breadth, and height—together, a standard will be gained which roughly will represent the size of the skull, and with this each dimension may be compared, and a proportional index for each established. The most accurate method, no doubt, is to take the product of the three dimensions and then to extract the cube root and multiply it by three. The result of this is a standard by which the length, breadth, and height of the skull may be divided, and in this way proportional indices obtained which will bear a definite relation to the size of the skull.

Unfortunately the process, though soon learned, is tiresome and needs a logarithm table, which is not always to hand.

A much simpler, and for all practical purposes an equally valuable method of gaining proportional indices, is to add together the length, breadth, and height of the skull, and then to divide each dimension by the sum thus obtained. This gives a series of indices which are, on an average, 0.006 lower than those which the cube-root system supplies; but in no case does this alter the relative position of any of my series of British skulls.

We are fortunate enough to have two independent sets of measurements of the three main stocks which went to the making of the Englishman—the Mediterranean, represented by the Long Barrow or Neolithic Race; the Alpine, represented by the Beaker Folk; and the Nordic, represented by the Anglo-Saxons. One of each of these three sets has been measured by myself, and the other has been measured or collected by Mr. Morant, who published them in *Biometrika*. If we add the proportional indices of the three stocks together and divide them by three, the result is as follows:

	Length.	Breadth.	Height.	
Morant . . .	0.4185	0.3200	0.2615	= 1.0000
Parsons . . .	0.4205	0.3210	0.2585	= 1.0000
Mean . . .	0.4195	0.3205	0.2600	= 1.0000

This result, surely, is as close as two people working upon different samples and different numbers of skulls of the same races could be expected to reach; and there is every reason to believe that the mean between the two sets of results is more likely to be nearer the truth than either of them taken separately, and ought roughly to represent what we should be likely to find, in the descendants, if equal numbers of Long Barrow folk, Beaker folk, and Anglo-Saxons were mixed and allowed to interbreed.

Let us compare this with the records of the Northamptonshire people who lived at Rothwell in the fourteenth and fifteenth centuries:

	Length.	Brcadth.	Height.	
Mean of Long Barrow, Beaker, and Saxons . . .	0.4195	0.3205	0.2600	= 1.0000
Rothwell . . .	0.4180	0.3230	0.2590	= 1.0000
Hythe . . .	0.4090	0.3300	0.2610	= 1.0000

This shows that if we evolve the kind of skull which a mixture of the three main stocks which we know went to the making of the medieval Englishman would produce, we get a form which, in its proportional length, breadth, and height is almost identical with that found in the Midlander of the Middle Ages

When, however, the Hythe crania are compared with these, we see at once that they must have had a different parentage; and what that parentage

is becomes plain when they are placed in company with the Beaker folk.

	Length.	Breadth.	Height.	
Hythe	0.4090	0.3300	0.2610	= 1.0000
Mean of Morant and Parsons' Beaker Folk	0.4035	0.3325	0.2640	= 1.0000

It seems to me clear that these Hythe people, in the fourteenth and fifteenth centuries, were the result of an incursion and settlement of people from the Continent, of the Alpine Race, who had been slightly, but only slightly, modified by mixture with the Kentish folk.

In the eighteenth century the Londoners who lived in the neighbourhood of Clare Market had skulls the proportional dimensions of which differed very little from those at Rothwell :

	Length.	Breadth.	Height.	
Rothwell	0.418	0.323	0.259	= 1.000
Clare Market	0.421	0.322	0.257	= 1.000

Apparently, however, there was a little more of the Nordic and a little less of the Alpine element about them.

In the seventeenth century three series of plague skulls are available and were described by Macdonell and Hooke. They are remarkable for their low vaults and receding foreheads, and it has been suggested that they show that the modern Londoner has reverted to the Early Iron Age type, though formerly Pearson regarded them as Long Barrow in their characteristics. Unfortunately we know very little of the craniology of the Early Iron Age. We must therefore let this suggestion stand over until more work has been done upon the head shape of the Iron Age. There is one point, however, which I think should be borne in mind, especially since the Londoners seem to have gone back to a more normal head height in the eighteenth century; it is that during the plague the better class of citizens fled from the city, leaving the dregs of the population behind, and it is in these dregs that receding foreheads and low cranial vaults are most likely to be found. I cannot think that it is wise to use plague skulls as types of seventeenth century Londoners as a whole.

Now we come to a new and striking development. Until the eighteenth century, the only skulls which show a proportional auricular height of more than 0.260 are those belonging to the Alpine Race, that is to say the Beaker Folk and the Hythe people. Bearing this in mind, it is interesting to notice that in the early nineteenth century the proportion of the head height of English soldiers was 0.262, while in the men of the Royal Engineers, measured by Benington in the early part of the twentieth century, it had risen to 0.267, and in the patients at St. Thomas's Hospital in the present day it is 0.271.

These last three examples are of the less well-educated classes, and even in these it is remarkable

how the proportional height of the head has risen well above anything which any of our ancestors can show, even were we to claim the Beaker Folk as our main ancestors, which all the evidence tells us would be unjustifiable.

When we come to measure the educated classes of the community, which have enjoyed a greater share of the modern, improved conditions of environment, the result is still more striking, for we see the members of the British Association with a proportional head height of 0.271, the St. Thomas's Hospital students with 0.272, the Oxford undergraduates with 0.272, a number of British anatomists who met in Dublin in 1898 with 0.275, and the University College staff with 0.278.

I can see no signs of heredity or harking back to any known ancestry in the change which is coming over the English head, but only signs of reaction to environment. Is it not reasonable to think that, as the improved conditions of life are gradually shared by all classes, this change in the head shape will gradually become more general until the Englishman of the future is a man with a very differently proportioned head from that of any of his ancestors? I do not wish to decry the old cranial index; it has helped us much in the past, it will help us much in the future. All that I would say is that unless we take the proportional height into account we shall miss a great deal that we ought to know.

To sum up, I am left with the belief that the Englishman of the future is, if present conditions persist, making for an average height of 5 ft. 9 in., and the women for one of 5 ft. 6 in. or 5 ft. 7 in. That our people have reached, and are stationary at, a stage in which some 66 per cent have light eyes and some 34 per cent, dark. That there are no signs whatever that the hair colour has darkened during the last sixty years, though there are signs, which perhaps need discounting, that the hair is lighter than it was sixty years ago. That the head shape is showing unmistakable signs of an increase of its proportional height, with a decrease of its proportional length, and that this increase of proportional height is greater than has been found in any of the stocks from which the modern Englishman is derived. It therefore cannot be looked upon as a harking back to any ancestral form, but must be regarded as an evolutionary process, in harmony with the greatly changed conditions of life which have come about during the last century.

After all this suggestion, which a study of the head height presses upon us, is one which many have held for a long time. If we accept it I fear that many of the sentimental attractions of British anthropology will be lessened, since there will be greater difficulty in determining whether the modern Englishman has more Saxon, Neolithic, Alpine, or Iron Age blood in his veins; and we must realise that he is becoming an individual who could not be formed by any possible combination of these stocks without the aid of external influences. Heredity alone, therefore, will not account for the Englishman of the future.