RACIAL DISTRIBUTION IN THE LIGHT OF ARCHÆOLOGY.¹

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I.

THE linking together of the data of archæology, race-study, and sociological research is a task of the future and one of great intricacy and difficulty, but the steady stream of new discoveries in every field is beginning to draw forth attempts at synthesis, of which one by Professor Menghin² is among the most comprehensive.

Our species, or group of allied species, is descended from creatures that gathered food, in the main of vegetable nature, and that was grading from life among the trees to life on the ground, acquiring the erect posture, liberating the hands for new effort, improving powers of stereoscopic vision, for some reason diminishing markedly the hairy covering of the body; and, with the need of training to walk erect, and the nakedness of the soft skin, infancy under maternal care was prolonged. The assumption of hunting as a habit, and the use of tools, soon deliberately shaped, belong to a very early stage of our evolution, and it would seem that they gave men such power that these spread far and wide through the continents of the Old World. An early divergence in type occurred between what became Homo sapiens and what became Homo neanderthalensis, the former being known from early skeletons, especially in Africa, where Leakey has been able to demonstrate a very early skull

¹ An elaboration of the lecture delivered in the John Rylands Library on the 11th January, 1933.
² Menghin, O., Weltgeschichte der Steinzeit (Wien, 1931).
from Kanjera near Lake Victoria and the lower jaw of what is most probably a near predecessor of the fully evolved Homo sapiens from Kanam in the same area. The early skeletons of Homo neanderthalensis, on the other hand, belong essentially to Eurasia. The facts are, of course, not quite so simple as this, for the Piltdown skull and jaw may represent a predecessor of Homo sapiens, and belong to a very early stage of human life in Europe; while the skull from Broken Hill, Rhodesia, has kinship with Homo neanderthalensis as well as with Homo sapiens. Though its date is unknown, it is probably very ancient.

Homo neanderthalensis has a general association with early flake implements of flint, early Homo sapiens in Africa rather with implements made from pebbles or flint cores. At all events, pebbles and cores play a great part in the latter case though large flakes are used. But East and South Africa also have fairly pure flake cultures, though these are mostly less early. The distribution of early core implements is a characteristic one. They have been found in some parts of India, in North Arabia and Syria-Palestine, in South, East and North Africa and in South-west Europe. Menghin is drawn towards the idea of a birth-place of this culture in India, and of its spread via Africa to South-west Europe. Its absence from eastern Europe suggests at any rate that it got into Europe from Africa, which was of very great importance as a home of makers of core implements, though it may be well to await further evidence before deciding which region has the best claim to be their original home. The rise of these cultures somewhere in Africa or south-western Asia is probable, and would have been followed by a spread to India on the one hand and to South-west Europe on the other. That the more highly evolved core implements (late Chellean and Acheulean) are the work of Homo sapiens, and not of a ruder being, has long been felt by those who have been accustomed to handle those works of art. It is noteworthy, too, that apparently, when the early flake industries get into the region of the core industries, they show refinements of style and execution. Leakey has apparently reached a very similar view independently.

1 See report in The Times, 20th March, 1933.
A provisional association of what are mainly core implements (and some flakes) with early *Homo sapiens*, and a more problematic association of early and rough flake implements with *Homo neanderthalensis*, may be made tentatively, the primary home of the latter species being in Eurasia. Menghin associates the origin of core cultures with the warm forest, which yielded wood scrapers and lances, while he thinks the flake cultures came from the steppe, on which wood lances could not be had.

According to general opinion *Homo neanderthalensis* has disappeared, while the hunting stage of *Homo sapiens* survives only in scattered regions.

With the rise of hunting there appears to have gone the differentiation of men’s work and women’s work, the former hunting, the latter collecting as of old. The group habit is strong among all modern hunter and collector peoples, and many archaeological finds suggest its strength among those of early times. Man was already a social being, indeed it is fair to say that society is doubtless older than man. The hunting group is rarely a large one and rarely a permanent one.⁴ There is a drift from group to group, and often an exchange of marriage-partners and so on, usually following lines of some social ethic which may well be different from our own. It is probable that the modern ‘hunters and collectors’ in many cases show results of the influence upon them of more advanced cultures, but their mode of life nevertheless suggests analogies with what can be inferred concerning the hunter and collector peoples of early times. The modern hunter and collector peoples survive, one might sometimes say linger, in the warm wet forests, in the steppe deserts of South-west Africa and Australia, and in the Arctic of North America, with a few in North-east Siberia as well. They also occur far and wide in America, though whether the last should be fully included in this group is not clear, it is indeed improbable.

A comparison of the hunter and collector peoples of the warm rain forest with those of the steppe deserts and the Arctic

brings out the fact that the former are very poor in art while the latter are remarkably gifted in this respect. There is inevitably an attraction towards an analogy with early phases of man's progress, for there are no traces of art, save that of tool-fashioning, among the early Palæolithic peoples, whereas the later Palæolithic peoples are renowned for their skill in drawing and modelling. Sollas, also, for many years, has rightly emphasised the analogies, or more, between that drawing and modelling and the work of the Bushmen of South-west Africa. But there are dangers in the argument that the almost artless people of the equatorial forests parallel or represent the early Palæolithic people. One should not argue that the latter did not draw; drawing may be an art that has decayed among the forest hunter and collector people who still survive. Moreover, one cannot analogue the implements of the hunter and collector peoples of the warm wet forests with those of the lower Palæolithic cultures; from the former the implements known are chiefly of wood, from the latter the implements that survive are, naturally, nearly all of stone.

When the physical characters of the people concerned are studied, some very important points emerge. Firstly, men with short heads and a cephalic index usually between 77 and 84, in technical terms a growth-tendency distinctly towards mesaticephaly or even brachycephaly, with kinky hair, marked prognathism, very broad flat noses, feeble or absent brow ridges and short or very short stature, occur in the equatorial forest regions of Africa and south-eastern Asia. In both cases they are characteristic among hunter and collector groups only, though occasionally groups including these types may show traces of influences of other cultures. Also there are other physical types characterising other hunter and collector groups in these regions. Nevertheless, these pigmy peoples are types apart, with special assemblages of characters. It is better to speak of types, rather than of a type, for while the African varieties (Negrilloes) have rusty brown hair and yellow grey skin, the Asiatic (Negritoeyes) are generally darker, though they

1 Sollas, W. J., Ancient Hunters (London, 1924).
also have red tints in the hair, and it is said that their cheek bones are less prominent. This last feature is probably correlated in some way with the fact that the head is broader than in most of the African varieties.

Unfortunately, ancient skulls and skeletons truly comparable with these pigmies are unknown, save that a dwarf found in an early tomb at Sakkara, Egypt, may belong to this group. Kollmann \(^1\) described some skeletons found at Schweizersbild, Switzerland, and belonging presumably to the Neolithic phase of culture, as pigmies, but this identification was rather fantastic. The female skeletons from this station are diminutive, that is all. At Schweizersbild the cephalic indices range from 71.4 to 78 and in two cases the noses are distinctly narrow.

The absence of ancient skeletons resembling those of the pigmies does not, however, close the matter, for it is generally recognised that the increasing number of skeletons found, who belong to presumably extinct types of man, the Neanderthal race, Piltdown, etc., have a skull of mesaticephal to brachycephalic proportions, if the measurement of length is so taken as not to include the great frontal torus. And like proportions are general among the anthropoid apes with the exception of a small minority of gorillas. It is therefore possible that the proportions found among the pigmies approximate to those of ancestral forms.

On the other hand, as was discussed last year, among the early representatives of Homo sapiens a large majority of cases have extremely long heads,\(^2\) the height of which (basi-bregmatic height) is about equal to or greater than the maximum width. The brow ridges are often strong, making the eyes very deep set, whether those ridges stand out as almost separate features or are incorporated with the forehead. There are marked lateral temporal hollows. The nose is usually moderate and may even be quite narrow, the cheek bones are prominent, and prognathism is moderate even if the mouth is large. The better development of the nasal profile, compared with that in the


pigmy naturally reduces the relative forward projection of
the mouth. Apart from one group of supposedly early skeletons
from Solutré, most skulls known from the later part of the
Old Stone Age approximate to the general description above,
save that the Cro-Magnon skull, and a very few others, differ
in that in them the basi-bregmatic height is decidedly less than
the breadth, and the face is short and broad. Also, whereas
the other group is typically of moderate stature, the characteristics
of the Cro-Magnon man usually go with marked tallness.

The interest of the first group is enhanced by the fact that
most of its characteristics are found together among some
primitive hunter and collector groups, notably jungle tribes
of South India and the Veddhah of Ceylon, and the Australian
blackfellows, in both cases accompanied by hair that is wavy
or curly but not fully kinky, and some other groups, who may
have picked up elements of herding or cultivation or both,
in the south of Africa (the Korana) ¹ and the East Indies and
Papua, in both cases kinky hair being a feature. The nose
is broad, but less so than it is among the pigmies.

Two interesting southern groups, the Bushmen and the
now extinct Tasmanians, also include a good proportion of ex-
treme long heads but also some moderately long heads, their
usual range of indices being from 67 or 68 up to about 78.

In the far north, the Eskimo of Greenland have extremely
long heads, and heads of this proportion occur among the skull
collections and among living remnants of native populations in
various culs-de-sac in America, usually associated with a stage
not far from that of the hunter and collector. The nose in these
cases is medium to narrow, very narrow among Eskimo.

So far, then, the diverse groups of pigmies, with their assem-
blages of characters on the one hand, and the very long-headed,
high-headed peoples with their assemblages of characters on
the other, stand out as possibly representing two early drifts
of man, the latter pushed out to the farthest corners of the earth,
the former taking refuge in the equatorial forests. It might

¹ See Broom, R., The Yellow-skinned Races of South Africa, "Journ.
be discussed, without end and without profit, how far the pigmies are to be considered primitive and how far degenerate; there is the same question about the types at the base of almost every genealogical tree, e.g. Amphioxus, Balanoglossus, Nebalia, Polygordius, etc. In a lecture last year, an argument was worked out suggesting North Africa and South-west Asia as the early home of Homo sapiens. Now, on the southern fringes of that zone in Africa, for example, in and near the Nile Sudd, are found men (Dinka and Shilluk) with extremely long, high, narrow heads, broad noses, kinky hair, very dark skins, and tall stature; often they are herdsmen. And though the very broad nose and the kinky hair may not be general farther north, the other characteristics, often also with strong brow ridges, are common in and near the desert zone of North Africa and South-west Asia. They also occur among small numbers of people in several remote corners in Europe, there completely assimilated in mode of life to the population among which they live.¹

One may compare groups in which a fair proportion have the extremely long head and some the more moderately long head, along with dark colouring and more or less kinky hair, with the Tasmanians and Bushmen, but it is difficult to make much of this comparison.

More important is the fact that there are numerous groups in which most have moderately long heads (indices usually between 73 or 74 and 78 or 79), with perhaps a few persons who have extreme long heads. These groups are common in Africa, where they have kinky hair, thick lips, usually rather broad noses and often big cheek bones. Around the Western Mediterranean, heads of the same proportions, but hardly the same form in detail, have olive to white as the skin colour, wavy hair, moderate lips, moderate noses and smoother contoured faces, without noteworthy projection of the cheek bones. In the more fertile parts of North Africa, including Mauretania and Egypt, a corresponding type is widespread, but is darker in colouring than it is on the European side of the Western Mediterranean. Arabia has a similar type with perhaps rather

stronger growth, and especially a more projecting nose that is rather narrow, or moderate in width. In India the population of the Deccan plateau is largely of a related type, with dark colouring, and much the same may be said of large groups in the East Indies. All these are essentially cultivators or herdsmen, the Africans without, the other mostly with, the plough, if they cultivate. They are usually organised in self-conscious durable groups with traditions which, if they possess the plough, may be cherished for the community by a priesthood. Again, if they possess the plough, they normally know the life of cities.

The evolution of cultivation and herding is a very involved problem save for some elements that stand out and are generally accepted. Cultivation arose from gathering, and the woman's digging stick is the primeval instrument, first improved by addition of a lateral foot-rest and then by broadening into a spade, i.e. a broad disc pushed in forwards. How the hoe arose, with its plate pushed in, as it were, backwards, is quite unknown, though one may make guesses. Some attribute the plough to an improvement of the spade, pulled by animals instead of being pushed by man, others think it is an elaboration of the hoe, as it were, turned round. The plough itself has gone through several stages of elaboration. The worship of a mother goddess is widespread in many forms, especially among cultivators with the plough, i.e. among the men who have taken over a large part of the work of cultivation from the women who did it at first.

Herding arose in the main from hunting and to some extent from the keeping of animal pets; it is thus a man's job, and around it has developed a large measure of collectivism, a hierarchical authoritarian social scheme, organisation for defence and attack when the herds are large, and, often, high mobility.

Cultivation made women more valuable assets than ever in a community, and African groups show that, in several cases, hunter-men acquired cultivator-women. One can perceive the gathering into such groups of at any rate the females of older organisations. The cultivator mixes his blood freely, at least while he is still in the lowlier stages; and there are many groups with systems of marriage-exchanges which are probably partly
intended as a means to promote peace. Herding made men more predominant than ever, and, with the close herding organisation, less likely fully to acknowledge unions with women not of their own breed and tradition. The prizing of genealogy among the herders is a marked feature, and male deities are important; in some cases they are deified ancestors.

Cultivation almost certainly arose first near the rivers of South-west Asia and North-east Africa, perhaps in India as well, and one may picture a primary spread thence to the south-east and west. The other spread, to the south, in Africa, faced difficulties of climate limiting nervous energy and initiative, of unsuitability of the best of the primary crops for the new surroundings, of lack of local plants adaptable to cultivation, of the huge extent of warm wet forest in early times. The African intertropical cultivator is typically a woman; and it is more than probable that much of the blood of the stock whence also spring the pigmy peoples has been handed down. It is evident that this stock has been less potent in India and Farther India, where at most, only a few traces of it survive, and even this small survival is doubted by some observers. Hutton, whose experience of the area is unique, thinks traces of the type linger in Assam and parts of Farther India among the mountains. In the East Indies it survives here and there, but is very distinct from the rest of the population. In Papua, however, the general population is kinky-haired (but not quite as in Africa) and grades from almost pigmy to normal and occasionally super-normal proportions; here the heads are mostly of the extremely long, high, narrow kind and the noses are fairly, sometimes very, prominent. It thus seems useful to think of a gradation with increasing importance of older types as one goes either south into Africa or east through South Asia to Papua, and in both cases there is also a gradation of social structure with increase of importance of older modes of life. The south-east of Papua, on a maritime highway out to the Pacific,¹


¹ See Haddon, A. C., Racial Distribution in New Guinea, "Geography," 12 (1921), p. 15.
is naturally excepted from this broad and necessarily imperfect generalisation.

The absence of cultivation and of the physique roughly associated with cultivator types from Australia and Tasmania points to physiographical changes isolating that region before the drift of cultivators had gone to Papua. Strays from drifts of this and, perhaps, later phases have touched Australia and have left fragments of culture, but the main later migrations depended on the development of maritime interest and took people out to the Pacific Isles rather than to Australia.

So far, consideration has been given chiefly to Africa, with western or south-western Europe as a northward extension, and to South Asia with Papua and Australia and Tasmania as south-eastern extensions. It is within this area that there occurred the earlier drifts of *Homo sapiens* and it is, mainly, within this area, with some extension in Europe, that one finds archeological evidences of these early drifts.

North of these regions of early cultures and drift lies, in Asia, the great mountain mass of Tibet with westward extensions in the Pamir and Hindukush, Elburz, Armenia and the Caucasus. These, under conditions of the Pleistocene glaciation, must long have retained ice sheets and glaciers that formed important barriers, while G. F. Wright has suggested that for some periods of the Pleistocene the lowland of Turkestan was largely under water, probably frozen in winter. If this picture be accepted as a tentative sketch, then it would be only when the retreat of the last glaciation had proceeded far enough that ways north of the mountains mentioned would be effectively opened up. The north-eastward drifts through Asia and its continuation in America seem associated, at the earliest, so far as *Homo sapiens* is concerned, with a more or less Tardenoisian or late Capsian phase, and in America, may be relatively late.

In this connection the rise and spread of broad-headed men demand consideration. Where they occur in more southern lands they seem to be immigrants, their main distribution in the old world is along and around the mountain zones of Central

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Asia, Anatolia and Central Europe. Their origins are unknown to such an extent as to make constructive speculation almost useless, beyond the making of a very tentative hypothesis that the type came into existence somewhere, probably in Southwest Asia, either in or near the Anatolian peninsula, on the north side of the more open areas on which the moderate long heads were increasing and spreading, and the extreme long heads were becoming restricted to regions specially mentioned above. This is not to say, however, that there were none of these long-headed types on the north side, for we have the extreme long heads such as the Eskimo and various other groups in American culs-de-sac, who undoubtedly represent an ancient drift; and in America, as well as among the Ainu in Japan, there are more moderately long heads, sometimes with the extreme kind intermixed. In the valleys of the Upper Indus basin, where the river runs north-westward between mountain folds, there live long-headed peoples among whom the extreme type of head characterises a small minority.¹

Still, types with broad heads, and types with heads intermediate between long and broad, but nevertheless larger headed than the pigmies, are characteristic of this mountain zone and, treated broadly, show some regional types.

In the mountain zone of Central Europe broad-headed people of moderate or short stature and wavy hair, with a thick-set build, a round skull, and sometimes a rather dead white skin are called the Alpine race, and form the characteristic type of the Central European peasantry. Knowledge of ancient skulls is as yet insufficient for a decision as to when this population moved in,² but there are broad heads from an epipaleolithic station at Ofnet, and Central Europe has had a peasantry since the dawn of the Bronze Age some time in the third millennium B.C., though the evidence from buried skulls is conflicting. The skulls from the loess areas near the present Czechoslovakian borders were, in large proportions, extreme long heads

but a fair number of broad-headed ones have been found in and near the Alps.\(^1\)

Broad-headed, like the modern peasantry near the mountains of Central Europe, and like them in several other characteristics of head, skin, face and body, are some of the peoples of the Pamirs, and some elements among the Armenians.

It is difficult not to suggest a common and intermediate origin for these two, i.e. for the Asiatic and the European groups, especially as archaeology suggests that Central European agriculture spread in from the south-east; and Myres has worked out the hypothesis of former better land bridges between the Balkan and Anatolian peninsulas.

In Anatolia and the western part of the Balkan peninsula there is a very broad-headed type \(^2\) with a very straight occiput and an almost pyramidal general form, giving a look formerly emphasised by the wearing of the fez among Muhammadans. These men are usually taller than those of the previous type, and they have most prominent features, especially the nose. Around the fringes of this area here and there are rather tall broad heads who yet lack their extreme specialisation of head form. It is possible that this specialisation is an intensification of the brachycephalic condition, and that it has more or less superseded the older type, of more ordinary round head, in its original home, the latter having survived both to the east and to the west of the region of intensification.

Further east, and specially associated with the high plateau of Gobi and its mountain frame, there are rather different intensifications of broad-headedness, the most marked being that with the face flattened, the oblique eyes, the lank hair and the rather dense skin yellow-brown in colour. Buxton \(^3\) has usefully drawn attention to the presence among these populations of types also with strongly-developed profiles, and it is important to think of both variants, especially when studying the native


populations of America who have drifted into that continent via Alaska.

It is quite possible that these broad-headed types began to spread in the early days of the development of cultivation or of their acquirement of the arts of cultivation from their southern neighbours. There was obviously an important spread of population about the middle of the third millennium B.C. in and around the great steppe, and the resemblances between the pots from North China and pots from South Russia suggest clearly that there was some intercommunication. It seems legitimate to suppose that this period of dispersal or widespread extension was responsible for some of the drifts to America, especially as, in its earlier phases at least, it carried with it the polished stone implement, and this is a great feature of the American peoples. It is easily conceivable that in the long drift via Northeast Asia and Alaska the cultivated plants of the old world should have dropped out of the equipment of the cultivators, no doubt not yet provided with the plough, but that when they found cultivable plants like maize in America they should have redeveloped cultivation. The absence of domesticable animals in America, other than the dog, the turkey and the llama of the Peruvian Andes, led agricultural development in America along lines different from those followed in the Old World.

The broad-headedness of Central Asiatic populations is a most striking feature at the present time, but, so far as the steppe of western Asia and southern Russia is concerned, this was clearly not the earliest type in the population. The graves of the third millennium B.C. yield a majority of extreme long heads, but they are not the type already noticed as forming the majority among the hunter and collector peoples surviving farther south. Here they are tall and strong, with narrow noses and often sharp profiles. Their type spread into Europe from the early Bronze Age onwards for a time, as is indicated by finds of skulls in graves especially on the loess of east Central Europe.1

The richness of the steppe in memorials of the dawn of the


early Bronze Age contrasts with its poverty in remains of the late Bronze Age, save in a few special regions, while the traces of early Iron Age peoples, Cimmerians, Scythians and Sarmatians are abundant. This fact receives its interpretation when it is borne in mind that the latter half, and probably a portion of the first half of the second millennium B.C. was a period of warmth and drought, when the Hyksos dominated Egypt, and various migrations from the Russian steppe to Central Europe took place. Late in the development of that climatic phase the Swiss lakes were reduced in size and the western Baltic was obviously prosperous and possessed of high-grade craftmanship in metal. Spain suffered a set-back in the second millennium after a period of high cultural development in the third or at its end; this is what would be expected under the conditions of climate above inferred. It is to be noted that intertropical Africa was very little influenced by Bronze Age movements, although the drifts associated with hunting and with early agriculture affected it considerably. The climatic hypothesis above suggested helps to interpret this most important gap in the African sequence, the consequences of which have doubtless been very serious. The Bronze Age movements obviously distributed far and wide men with considerable skill as craftsmen and a fairly high grade of organisation; drifts of hunters and collectors, and step-by-step spreads of peasants, had given place in some measure to larger organised movements. As regards the steppe of western Asia and southern Russia, there was behind the movements probably the driving force of frequent droughts, but also the fact that, there, people had acquired increased power through the utilisation of the horse to carry them and to accompany them in battle. Once this is grasped we understand that those Bronze Age movements of these extreme long heads with strong profiles, which are of the later phases, were not towards Northeast Asia and America, that was not a way for horsed conquerors. Their greatest efforts seem to have been directed towards Iran and India, and they are generally credited with being originators of the Aryan languages. There is little doubt that the Indo-Aryans reached India about the middle of the second millen-

rium B.C. and that their purest descendants retain to this day
the fine, sharp profile, the extreme long head and the tall stature
of their ancestors, while the cult of the horse in India is a most
interesting subject.

How these extreme long heads are related to those of the old
Stone Age is not at all clear. If the relationship is sought, it must
be remembered that some of the latter had very narrow noses.

There is still left, for the completion of this bare outline,
a discussion of some populations in which the majority of the
individuals seems to have a head of moderate length, on the
whole rather on the long and narrow side of the medium con-
dition or round about the medium, but very different in general
development from what is found among the pigmies. Perhaps
one may summarise in the broadest outline by saying that these
are characteristic of parts of western Europe such as Britain
and parts of eastern Asia, notably China.

Recent work¹ has claimed to show that the view held by
many which brings the Chinese cultivators of the Hwang-ho
plains down from Kansu by the Wei valley is wrong, and that
the early kings were really connected with those plains. There
is no denial of influences from the west via the Wei valley.
In addition to the group on the Hwang-ho lowland there was
a group in the valleys of the Wei and the Fen, this group being
separated from the other by upland barbarians, and being prob-
ably the channel by which influences from the steppe and
Kansu penetrated among the Chinese. But the Chinese people
of the Wei and Fen were migrants up from the lower Hwang-ho,
not people on their way down; their territory long remained a
kind of outpost. The civilisation of the Chinese on the lower
Hwang-ho, according to this view, was a development of the
semi-barbarian modes of life found in South China and South-
east Asia, and their sedentary and agricultural civilisation,
intertwined with religious developments gathering around land
tenure, would thus be something growing from southern roots
with northern fertilisation by accretion of village units into what
may be called a cellular or beehive state. This later spread
its system bit by bit over the south.

¹ Maspero, H., Les origines de la civilisation chinoise, "Annales de
The newer view concerning Chinese origins has its difficulties, but helps to clear up long-standing problems about the contrasts in type between northern Chinese, among whom a large proportion has the cephalic index below 80, and the Buriats, Mongols, Manchus and Koreans whose indices vary rather round about 84 or 85.

There are thus indications of a spread of early agriculturalists via south-eastern Asia to northern China and doubtless to Japan as well, and this spread appears to have included moderately long-headed as well as some broader-headed elements. The abundance of moderately long-to medium-headed people in the west of Europe suggests that there also a migration included this element; dating had better not be attempted in the present state of ignorance.

In the various ways sketched out above, the bases of the populations of the world’s chief regions were laid down. As the ways north-eastward through Asia opened, when ice sheets and glaciers retreated, drifts of man to America occurred, at first epipalaeolithic, and later influenced by the neolithic or polished-stone culture, possibly with the rudiments of ideas of metal in some cases. Whether the drifts were more or less continuous, or were in separate waves, one cannot as yet say; both opinions have been put forward. It seems not impossible that elements of higher civilisation also came across the Pacific or around its northern side through the agency of drifted boat-loads. That main drifts via North-east Asia to America were partially composed of extreme long heads at first, and later included chiefly broad heads, is most probable.

Australia and Tasmania received, apart from strays; only the very early drifts, and preserved highly primitive populations until European influences came in. Melanesia, the Pacific Isles near Papua, received drifts of seafarers incorporating Papuan elements, but in the more distant parts of the Pacific peopling took place under the influence of better-equipped voyagers and was mainly of moderately long-headed types, some few suggesting kinship with peoples of Eastern Asia, others rather with Europeans.

In Asia long- and moderately long-headed groups predominate generally in the south, with blocks of immigrant broad heads
in South Arabia, West India, etc., and remnants of the extreme long heads here and there. In the mountain zone, and on the steppe, are now broad-headed peoples, while China appears to have large numbers of moderately long to medium heads. To the north, in Siberia, many groups are broad-headed, and have spread from Central Asia, but, towards the north-east, are some with more medium proportions, and eastwards thence in the north of America one, in a sense, grades off to the extreme long heads of the Greenland Eskimo. The ancient steppe peoples of western Asia, with very long, narrow heads and strong profiles, and a great love of the horse, are now mostly in North-west India and Iran, though some are said to remain north of the mountain chains among the Tajiks.

In Africa, Bronze Age culture and broad heads are not common south of the Sahara; the very early drifts of *Homo sapiens* obviously were important and mingled, so far as one can judge. Later drifts were mostly of moderately long-headed types, and kinky hair and thick lips are very nearly universal; it seems that invaders time after time have taken unto themselves the women of older stocks. In the zone of steppe and desert in North Africa and South-west Asia it is especially the moderate and the extreme long-headed peoples that form the population; and the former, with traces of the latter, has spread around the western Mediterranean and into western Europe. The last owes its population partly to this stream from the south and partly to the stream of broad heads along and near the Illyrian-Anatolian, Carpathian and Alpine chains. There are probably also survivors from the men of the Old Stone Age, and in north-western Europe the people with the indices 71 to 80 are specially numerous, however they came there. The spreads of race types have been shown to have some measure of correspondence with the spreads of social and cultural schemes, and both are intertwined in the sequences that archaeology works out. The immense increase of knowledge concerning these spreads of culture and race in the last generation makes it less improbable than it once seemed that some day we may be able to trace out together, even if only in broad outline, the racial and cultural histories of mankind.