

MALTA IN THE ETHNOLOGICAL COMPLEX OF EUROPE

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I was in some doubt as to how to approach this subject because you are an Anatomical Society and of course one could be plunged into purely physical anthropological methods, but as I knew other people would be present and also that in any case the best way to deal with the matter would be on broad comparative lines in the first instance, I decided that it was best to handle it in this way. I hope it will not disappoint you.

Now, one thing I should say is that I shall only be briefly mentioning the prehistoric position and development and that you may find my pronunciation of some Maltese names very deficient indeed. I hope you will forgive me. I think you would be in equal difficulty if you came to Argyll in Scotland. The two things we have in common are that we have the gutturals and the strongly stressed vowels when we want to use them. I wish to emphasize that before it is possible to see the Maltese people in their racial aspects correctly it is necessary to consider them within the wider framework of the races of mankind and those of the Caucasoid races, of which they form a part, in particular.

There are three main stocks of mankind which if we were using the taxonomic methods of zoology we would call species. I do not want to read into that anything abnormal. I want to say that if we were using the same sort of classification we would not be calling them races, we would be calling them species. The fact that they are interbreedable does not affect such a classification, as many spe-

cies, and some genera, are known to be interbreedable. The creation of fertile crosses depends upon the possession of a basically similar anatomical structure and of the same number of chromosomes.

These three major stocks are the Negroid, Caucasoid and Mongoloid. Substocks of these are the Amerindian, a branch of the Mongoloid, and the Australoid, which, while it appears to have affinities with Neanderthal man, also appears to show relationship to the Caucasoid, which is an absolutely astonishing thing since the two stocks are widely apart. It is my view that the Ainoid, represented by the Ainu of Japan, is a northern, white, offshot of the Australoid, and not a branch of the Caucasoid. Many of the so-called Australoid elements of South America may very well be Ainoid rather than Australoid. Although the southern Australoid, found in New Guinea and Australia is black, it should be stressed that this nigrescence appears to be different from that of the Negroids. The late Professor Ruggles Gates, a very distinguished Fellow of the Royal Society, found that one pair of genes accounted for the black colouring in the Australoids, whereas where the Negroids are concerned he discovered that four pairs of genes were involved. This would account for the frequency with which fair hair occurs among the Australoids.

Since the last war the term *Geographical Races* was coined for the major stocks and their subdivisions, as though this was something new. Ethnology has always recognised that the major races and stocks were, in a sense, geographical. That is, that each stock and race had evolved within its own geographical or rather climatic environment. It must

be stressed that the environment cannot change the germ plasm (as was thought by earlier environmentalists, and still, in a dim sort of way, is believed by all those who teach that *nurture* is more important than *nature*). What nature does is to determine whether a particular type can survive in a certain region, and if it cannot, to kill it off, and encourage another type which is better adapted to that climate and terrain.

Thus the Negroid stocks are adapted to life within the equatorial and tropical regions of the world, and so they are found from the Niger to the Congo, with Melanesian groups in the East Indies, and extensions, through colonial activities, to the hot lands of America. This stock has a complete adaptation to this zone. It has a greater number of sweat glands, it has a darker skin enabling it to withstand ultraviolet radiation, while even the broad nostrils and the woolly hair formations are beneficial to people living under the tyranny of everlasting heat and sunshine. The Caucasoid and Mongoloid stocks, in contrast, through their light skins, are able to synthesise vitamin D from solar radiation and so live in cold, cloudy climates where the Negroids and Australoids could not survive. The black skins would prevent their being able to carry out efficiently such a synthesis. The narrow nostrils are, probably, as are the smaller number of sweat glands, useful in conserving heat and preventing chilling in the cold regions where the types were first characterised, and for which they are best adapted. Differences in bodily proportions between the Caucasoids and Mongoloids reflect, in my opinion, the differences of terrain in the regions in which the two stocks evolved for a significant and long part of their pre-history. I believe that the Caucasoids originated east of the Urals, in Siberia, on the great Siberian plains, and the Mongoloids arose and developed in the higher lands of inner and eastern Asia. The longer legs, and more slender build of the Caucasoids are better adapted to a plainsman's way of life, while the shorter legs, and powerful calf muscles, are those of a people evolving in a mountainous ter-

rain. Even the "screwed-up" appearance of the eyes, as seen in the typical Mongoloid, is probably an adaptation to the winter conditions of ice-fields, and the high winds of the mountainous environment of inner Asia.

In this sense, therefore, each stock has its region of characterisation, and in that sense it is a geographical "race". The genes which have survived during the long period of development are those which enabled each one to survive best in the lands where they were long resident and where they had to survive by adaptation, through natural selection.

There is what I regard as a mischievous suggestion current today which argues from the concept of geographical races that, in fact, all races are basically mixed, because there is from time to time the flow of genes from one stock into that of another. This I regard as a mischievous suggestion because I believe it is in response to current sociological, and even political, thinking, and it is not based on scientific evidence or thought.

No one is going to deny that from early times crosses took place between the major stocks along their peripheral areas where they met, although it should be observed that this probably occurred but little in the earliest periods of pre-history, and only became a significant phenomenon as time passed. However, the suggestion that this caused a great mixing up of the current stocks has to be taken with very great reserve — certainly as far as the Caucasoids and Mongoloids are concerned in relation to the Melanoid or black stocks of mankind, for the clear cut differences of environment which distinguish the habitats of the northern cold land peoples from those of the stocks living in the hot countries set limits to the survival of such intrusive genes.

There is a mistaken tendency to place too much reliance on blood groups and other genetic characteristics which can be studied very largely in isolation from the traits which generally are taken as the characteristics of stocks and races. These genes do not perform in isolation. They are borne on chromosomes, and those chromosomes carry genes which produce

the traits on which the classical anthropologist bases his identification of races. Consequently, since on each chromosome it is tolerably certain that there are borne traits which are responsive to environment and other forms of selection, it follows that traits such as blood groups and tasting ability are being encouraged or eliminated, as the case may be, all the time. Therefore, it is quite a mistaken notion to study the blood groups in isolation from the physical and anatomical anthropological criteria, as is so frequently being done today. To suggest that, because of certain racial similarities of blood groups, a particular Stock A must have an infiltration of Stock B, when in their physical traits they show no evidence of such an admixture, is bad science, and due to a reliance on too narrow a basis of investigation. Yet that is just what several noted serologists have done, with most peculiar conclusions as a consequence. For instance, to give a simple illustration, the characteristic blood groups in the ABO series of the Western Caucasoids are A and O. For the Mongoloids they are B and O. But for the Negroids over large areas of Africa we have A and O. It is obvious, therefore, that one cannot identify Negroid infiltration of Mongoloid by the blood groups alone, as the A detected in such a Mongoloid stock could just as likely, and, geographically speaking, more likely, have come from the Caucasoids. Further refinements in the identification of blood groups can reduce the occurrence of such errors, but it is unlikely they can do so entirely. Therefore, great caution must be used when employing the criteria of the newer techniques, and they should never be employed in isolation neglecting the anatomical differences as seen between one stock and another.

While crossings have always taken place where a stock, or race, has met another, and some of the genes of such crossings have filtered gradually towards the heartlands of such a recipient stock, it is unlikely that the crosses survive over any length of time. Because of genetic segregation no permanent cross is normally made by haphazard mating. It can

only be created by special selective factors. Since the major stocks are so-called *geographical races*, it follows that the segregates which carry the traits of the intrusive racial stock will not survive the environmental hazards of the zone in which they find themselves.

Consequently through millennia of human history, whatever crosses have been made from time to time between the stocks, genetic segregation, aided by the selective factors of the geographical conditions, has ensured the elimination of the type which has not belonged to that region. Therefore, speaking in general terms, the major race and stocks have remained in the regions, to which they naturally belong, largely uncontaminated by any permanent admixture from other stocks.

When we come to the borderlands of the major stocks the situation can be quite different. For in such situations we have climatic conditions which may not be so clearly marked that they favour one or the other. To meet this criterion I have enunciated the concept of *Racial-Breeds*. These are analogous to the breeds which breeders of animals create, which combine traits from more than one stock, and, because of selection, have come to breed true. Among human beings, I am of the opinion that the so-called Ethiopic, or Cushitic, stock is a case of this sort. Originally its habitat lay throughout north Africa, on the northern fringes of the Sahara, when that was a land ranging from savannah to well watered pastures, and this region swept in an arc round to the Sudan and into North East Africa — the so-called Horn of Africa. In my view it is a cross, originally, between the Caucasoid stock and an Australoid strain, with, later, perhaps, some Negroid admixture — but this latter is not a strongly marked characteristic. In other words, between the no man's land of hot equatorial and tropical Africa and cold Europe, there arose a cross-breed strain, which, with continuing selection, produced the Cushitic type which is adapted to this intermediate belt between the very hot, and the cold, lands. That is why in the Sudanese, Nubians, Ethiopians, and So-

malis, one sees peoples whose features are close in form to those of the Caucasoids, but who have the protective black colouration which is common to the Australoids and Negroids.

This, then, is the general anthropological background against which we must study any people's ethnology. When we come to consider the Maltese, we have to place them not only in this general racial setting, but also in that of the Caucasoid people, of which they form an element, and to discuss them in that complex of peoples which involves north Africa as well as Europe.

The first thing to be made clear is that while Malta today is a warm Mediterranean country, with a dry northern Africa lying immediately to the south, this was not the real situation when the first of the Maltese began to settle in these islands. North Africa was a far less hostile region than it is today, and the climate must have been somewhat cooler. The second factor, which must ever be before us, is that when we think of North Africa we have not to think of Black or Negroid Africa. "African" today is treated as synonymous with Negroid. So much so that there are all kinds of propaganda efforts being put out to suggest that since "African" is Negroid, then the Libyans and Ancient Egyptians, being also Africans, were Negroids! The fact of the matter is that the ancient name of the continent of Africa is that which was applied to what is now North Africa. This was a White, or Caucasoid, region of the world, and, at least to a very large extent, still is. There are Negroid elements, but they are mainly in the lower social classes, and are the result of Arab slave traffic in the past.

Before going on to discuss the settlement of the various racial elements in Malta, it is desirable to state what are the main branches of the races with which we shall have to deal. These are recognised as being characterised by certain definite traits. While these are the characters which most impress when we see any of these populations, they are not invariably those of every member of the race concerned. There is a degree of

polytypy in all stocks, as in all living things. That is, there is variation from the average type, which is the classical form of that race or group. Thus, where the Nordic is concerned, the impression is overwhelmingly of a light haired, light eyed, and fair skinned, stock. This does not mean that all Nordics have yellow hair, bright blue eyes, and very light skins. There will be deviation from this type. But that deviation will not be so great that it includes black hair, brown eyes, and sallow swarthy skins. The variation itself is not usually due to racial crossing, unless some very distinctive evidence indicates that that has occurred, but is because of that constant variation which arises, through genetic mutations, so that no stock absolutely conforms to a master pattern, or mould, of identical individuals. We can only find such absolute uniformity in identical twins. The members of each racial group, for all that there is a certain degree of polytypy, will come very close to a common master pattern.

The descriptions which I am now about to give should be understood in the light of those remarks. While aware of a minor degree of variation, we are able, for all that, to describe the principal Caucasoid racial groups. These form the basis of the various peoples who have, from time to time, appeared in, or near, the Mediterranean basin, and so become elements which have had a greater or lesser impact on the Maltese Islands. These groups are:—

The Nordic. This is characterised by tall stature. Five feet eight inches is an average which is to be expected, and it will probably become higher as living conditions are improved. The Nordic is rather long legged for Europeans. It has a tendency to lighter, rather than heavier, bodily form. The stock has a long face, with fair hair, fair skin, and light eyes, which are blue or grey. The nose tends to be long rather than short. The proportions of the skull are *dolichocephalic* — that is, the skull when viewed from above is narrow and long. The supraorbital ridges are reasonably well developed. The jaw is not heavy and square, although

at the same time, it is well developed. The blood groups found in this population are, in such as the ABO series, mainly A and O.

The Mediterranean. At the southern climatic extension of the Caucasoid races we have the Mediterranean racial stock. In general bodily build, this is very much like that of the Nordic. It is not too much of an exaggeration to say that in structure it is a more feminine type of Nordic. That is, the bones are lighter and generally smoother in form and outline. The proportions of the skull are much the same, although it should be observed that G. Sergi, in his extensive study of *The Mediterranean Race* has made many classifications on the basis of the shape of the skull, quite apart from its relative length to breadth. The essential difference between the Nordic and the Mediterranean is in the short stature, (about five feet four inches in the males) the dark eyes, hair and sallow skin. The blood groups tend to be A and O as in the Nordic.

The Atlantic Race. Most writers in the past have confused this with the Nordic. This is the racial element which seems to be largely responsible for the men of the Magdalenian period, in the upper palaeolithic. It is found mainly distributed along the west coast of Europe and in western North Africa, and occurs in the Canary Islands. It is, perhaps, seen at its most typical in Ireland. In the ABO blood group series it is marked by a predominance of the O group. It is interesting to observe that we know the Irish were settled in Iceland before the Norsemen. Today many Icelanders are clearly Atlantic in type. What is more the O blood group is characteristic of the Icelandic population. So despite the history book saying that when the Norsemen came in they wiped out the Irish Christian civilisation, they evidently did not.

In my opinion these are the three basic Caucasoid stocks, and I am inclined to think that the other Caucasoid races have some element of crossing with an early Mongoloid type to have produced the broad skulled Europeans. This view

is not generally accepted. The broad skulled Caucasoids are looked upon as mutants. However, while I do not deny that mutations could have arisen which favoured the evolution of a broad-skulled group of races in Eastern Europe and Western Asia, my view is that when an actual *cline* is found, as in this case, which shows a gradual transition from a broad-skulled centre in Asia to a long-skulled one in Western Europe, it pre-supposes that crossing is involved, even if it does not entirely account for the origin of the brachycephalic type. I would look, therefore, to western Asia as a region in which the crossing between Caucasoid and Mongoloid occurred, which produced a series of racial breeds, which had something to do with the creation of some of the elements to be found in the broad-skulled white races. I will readily admit, however, that these stocks are basically Caucasoid, since selection would appear to have bred out most of the Mongoloid traits, excepting those which have influenced the breadth of skull and face, and also some of the characteristics to be found in the blood groups. The Mongolian blue spot found among people in Eastern Europe would favour my theory.

The broad-skulled Caucasoid races are:—

The Alpine. This stock is located throughout the higher lands of central and eastern Europe, and is found as a significant part of the population as far west as central France. It is characterised by a broad skull, broad face, short stature, in comparison with the Nordic or Atlantic, and a heavy build. The hair and eyes are dark, and the skin tends towards the sallow. Although no hard and sharp lines can be drawn socially, it can be said that the peasant societies of the countries of eastern and central Europe, and of France, tend to be Alpine in character. This is largely because the conquering peoples, dating from the *Völkerwanderung* period, were mainly of the Nordic type, and this type tends still to be more heavily represented in the aristocracies of those countries than any other. My own view is that it is probably more closely related to the Mediterranean than either of the

other two long-skulled Caucasoid races.

It might also be observed that since the central European countries tend to be mountainous, this is a type which is to be associated with mountainous country, and that is why it was given the name Alpine in the first place. It is entirely erroneous, as some once thought was the case, that the strain was created by a mountainous environment, although it might be better adapted in some respects to that kind of habitat. That the broad skull was not the result of mountainous environment is proved by the fact that the mountainous countries of Norway and the Highlands of Scotland all have been inhabited by long skulled peoples.

The Dinaric. This is another broad-skulled stock. It differs from the Alpine in being tall, and having a long face with the short skull. In build it is very much the same as the Atlantic race, being big-boned and heavy, as distinct from the lighter build of the other tall Caucasoid stock — the Nordic. In complexion it is similar to the Alpine. It has, however, a marked characteristic in the high bridge to a long nose. The so-called "Roman", is in fact a Dinaric type of nose. Its area of characterisation is the Dinaric Alps but it is found throughout north-eastern Italy, in Austria, Bavaria, and elsewhere. It certainly is to be found in Spain, and it is not unimportant in Malta. In my opinion, the so-called *Beaker Folk* who invaded Britain in the second Millennium B.C. belonged mainly to this stock. The type is to be found with a fair frequency in Aberdeenshire.

The Armenoid. This race has a broad skull and a long face, as in the case of the Dinaric, and also a high bridge to a long nose. It differs from the Dinaric nose because, whereas that race produces the so-called "Roman", the Armenoid produces the so-called Jewish type of nose. This is not confined to the Jewish stock, but is found wherever the Armenoid type is well-represented in the population, as among Parsees in India, the Armenians themselves, many people of Anatolia, and, in a marked degree, among many of the Arab peoples of Palestine and Arabia in particular. It is also a marked feature

among many groups of Pakistanis. The nose is aquiline but also has curved-round alae. Judging by a mask from Carthage of the fifth century B.C. there was some of this strain in the Carthaginians.

Another feature of the Armenoid is the tendency to a high dome shaped skull. This is particularly seen among many Kurds. The Armenoid stock is heavily built but not tall like the Dinaric. There is also a tendency towards a greater degree of apparent flat-footedness, in that there is a less springy step than in the other Caucasoid races. The complexion is dark, with dark hair and eyes.

In contrast with the Dinaric, it is my view that whereas the cross with a broader skulled strain and the Nordic and Atlantic, produced the Dinaric, in the case of the Armenoid the same stock crossed rather with the Mediterranean long heads to create what I regard to be the racial-breed which we find in the Armenoids.

East Baltic. This stock is another heavily-built broad-skulled one which is characterised by a short stature and broad face, similar to that of the Alpine. It differs from the Alpine in that the skin, hair, and eyes, are all light. The eyes tend to be a very light blue, much lighter than in the average Nordic, and decidedly lighter than in the Atlantic (which tends to have a deeper blue than the Nordic). The hair is so light that it is almost a white type of yellow, and comes close to the colour which one sees in the albino as found among the Negroids.

The distribution of the stock is in north-eastern Europe, round the shores of the Baltic Sea, in eastern Germany, and penetrating right into Russia to the Urals.

The combination of considerations arising from this distribution and the type itself, rather suggests that there might have been a cross with some protonordic stock, perhaps helped by selection to produce the necessary light colouring for a people living originally in even more severe cold environmental conditions than those in which the Nordics evolved.

Arctic or Chancelade. In the palaeolithic period the Chancelade type existed in Europe, and elsewhere, in the arctic

conditions of the Ice Age. It is characterised by a narrow skull, but with very narrow nostrils. It rather suggests that it was some offshot from the evolving proto-Nordic stock, which became more adapted to very severe conditions. This stock hardly exists today, as it appears to have been absorbed into others. Among some Anglo-Saxon skulls a few have been found with Chancelade characteristics. It is possible that elements of this strain became absorbed into Arctic peoples such as the Lapponoids, and even the earliest Eskimoid tribes — although these are now all basically Mongoloid.

These, then, are the basic stocks into which anthropologists in the past have divided the Caucasoids. Each one seems to have had its own area of characterisation during its evolution in the northern hemisphere. Later, after migration into Europe, each has tended to come to occupy regions where each type is the dominant one. This is indicated by the distribution maps of racial traits. Therefore, to the extent that such races are associated with specific parts of the Caucasoid world they can be called geographic races. But the borders are much more blurred, and considerable interbreeding has taken place where there has been the impact of one of these races on others. Nevertheless, for all that, these divisions are valid. All (with the exception of the Chancelade, which has disappeared) represent types which have marked hereditary characteristics which have persisted as racial stocks to our times.

I have not burdened you with anatomical detail and figures, because these can be found in the easily obtained textbooks of classical anthropology, and, in any case, they make for a very dull exposition of the subject. I have used anthroposcological methods instead, and described to you what each stock looks like. This is a method which I have long advocated as more practicable outside the laboratory than the anthropometric methods. This is especially so now, when we have a very fine tool in the camera. Even in handling large populations it can be used to obtain both the average types and the deviations. By overprinting many photographs of a

population on top of each other we can arrive at the type which predominates in the stock with which one is dealing. The blurred edges give us the degree of deviation from the average. If these are narrow the population is very nearly homogeneous.

Some have divided the Mediterranean into a western and eastern section, and I think there is some justification for this. Thus the Mediterranean racial type, found in Palestine, Irak, Arabia, and as far away as India, tends to be different, in some measure, from the European Mediterranean. This has some importance for Malta since it is this eastern type of Mediterranean which overthrew the Roman and European civilisation of North Africa. Consequently those later Mediterranean racial elements coming from North Africa will show some differences in type from earlier European Mediterranean in the Maltese population.

These, then, are the groups which form the complex of the Caucasoid races, and it is against this background that we have to approach the ethnological problems of Malta.

The Prehistoric and Historical Evolution of the Maltese

I have dealt with the prehistoric development of Malta at some length, as some of you may have read in *Scientia*. Therefore I do not consider that it is necessary to go over that field in detail. It is sufficient merely to pick out the main developments as they affect the ultimate racial type of these islands.

Ghar Dalam People

Between about 3800 B.C. and 3600 B.C. we have the *Ghar Dalam* people. They belonged to an early Neolithic stock which was settled in Italy, Sicily, and Malta. There is no evidence that Palaeolithic man occupied Malta. Had he been settled here he would probably have been either of the Neanderthal or the Magdalenian types — the latter being ancestral, in my opinion, of the Atlantic race. The reason why we conclude that these earliest Maltese belonged to the stock

found in Sicily and southern Italy, at that time, is because their pottery was almost identical with the impressed ware from Sicily, which is there called the Stentinello type.

The colonisation of Malta was not African in origin but European and eastern Mediterranean from the start. The Stentinello people belonged to a stock which had its origin in the eastern Mediterranean. They can be traced from Greece, and may have come from the Middle East. In the Near East this culture was brought to an end by the arrival of the much more evolved cultures of Tell Halaf and Samarra, a little before 4000 B.C. (Margaret Guild, Sicily: An Archaeological Guide, Faber and Faber, London, 1967, P. 36). This is where our Civilization first began in the Fertile Crescent of the Euphrates valley. We can assume that these people were of the Mediterranean race at this time, and, if so, it follows that these first settlers in Malta were of the same stock.

Skorba and Zebbug Cultures

The next culture which appears in Malta is that which started about 3600 B.C. and is called the Skorba. This, again, is thought to have come from Sicily and so probably involved the same racial stock as that of their predecessors. By 3200 B.C. we have reached the Zebbug period of Maltese prehistory, which is also the change from the Neolithic to the Chalcolithic — from the late stone age to the copper age.

Mġarr and Ġgantija Cultures

By 3000 B.C. we are in the Mġarr period, which was quickly followed by the Ġgantija. This is important as up till then there had been a dependence upon Sicily. Now, however, the pattern of the connections is different. By this time this central part of the Mediterranean had passed under the influence of peoples from the eastern Mediterranean such as those of Greece and the Aegean. By the time this archaeological period had ended these influences from the east had come to be an integral part in the culture of

Malta. Any strain from the eastern Mediterranean is likely to have had some Armenoid, as well as Mediterranean, elements in it.

However, the relations with Sicily and beyond to the north would probably involve quite another racial influence from that which we have been tracing. There are evidences in the culture of contact from lands of the Western Mediterranean, and in the megalithic buildings there is reason to see the influence of peoples associated with megalithic techniques and religious ideas elsewhere. Since we have a string of Megalithic civilizations from Sardinia westwards as far as the British Isles and beyond, which are to be associated wholly, or in part, with the Atlantic race, it would seem that there must have been some of this racial stock in the early Maltese population. We have already seen that the Atlantic is a tall and heavily built type, and this could have accounted for Homer in the "Odyssey" still carrying, by that time, the tradition of a race of giants (Phoenicians) as being the earliest inhabitants of Malta. This matter I have dealt with at greater length in *The Ethnology of the Maltese Islands* in *Scientia* (Vol. 33, 154).

The result of this is to suggest that at one stage the ancient Maltese were an Atlantic-Mediterranean people, and in racial characteristics must have had some affinities with the race of that name described by Deniker. I have suggested elsewhere, that the genetic isolation of Malta had much the same effect on early man as it had on the fauna, and consequently this type degenerated in stature, and thus lost one of the principal characteristics of the Atlantic, which is its tall and heavy stature.

Tarxien Cemetery Period

By the time we come to the Tarxien Cemetery Period, 1800 B.C. (or according to others 1500 B.C.) a new civilization characterised by the introduction of bronze and the cremation of the dead, had taken possession of the islands. There is a radical change of religion, and with it, in all probability, a new racial

element was involved. Since some look to its ultimate source as the north-eastern Mediterranean and Anatalia (Troy and Cilicia) it seems clear that this element must have been of a different racial type. One would incline to assume that such people had Mediterranean and Armenoid elements, perhaps with some Nordic.

The Borg in-Nadur and Bahrija Periods

The Borg in-Nadur period (1400-1200 B.C.) appears to have brought in warlike elements associated with Sicilians and Italian elements of culture. If so, this may well have meant more Mediterranean, accompanied perhaps by some residual Atlantic elements as well. By the time we come to the Bahrija period (1000 to 800 B.C.) we have the arrival of another martial people. The probability is that they were Mediterranean with some influence from Dinaric or Nordo-Armenoid.

As there are many elements in the civilisation which show megalithic culture affinities, it means that there must have been, even if indirectly, a constant trickle of Atlantic strains, entering into the Maltese amalgam. Up to this time the Maltese appear to have been Atlanto-Mediterranean with some additional Armenoid, Nordic and Dinaric infusions.

Phoenician Period

From 800 to 218 B.C. Malta passed under Phoenician domination, much of it under their colony of Carthage. Inscriptions of this period are found not only in Phoenician but also in Greek. Phoenician stock appear to have been a cross-bred Mediterranean-Armenoid with some element of Nordic, and the Greek was more pronouncedly Nordic. However, the Phoenicians were probably only people belonging to the official classes, and the Greek were trading elements. It is doubtful if either materially affected the genetic type of the Maltese people which had been established throughout the preceding millennia.

The Roman Period

The Romans extinguished Punic authority in Malta by 242 B.C., and by 218 B.C.

Malta had become a Roman colony under Roman law. The Roman influence would be largely official as in the case of the Carthaginian, yet so far as it influenced the ethnology of Malta it would introduce Nordic and Dinaric strains.

At the collapse of Roman rule there is the possibility that the Vandals may have made a settlement, and, if so, this would have reinforced the Nordic in the Maltese population. The Vandal period was succeeded by interludes of Roman rule, including that of the Byzantine Empire, which would add nothing new to the existing racial matrix.

The Arab invasion

Then in 870 A.D., the Arabs overthrew the Byzantine power, the local population having slaughtered the Byzantine garrison, and became the masters of these islands until ejected by Roger the Norman in 1090 A.D. This appears to have been a dark period in Maltese history, but we have reasons to believe that Maltese and Greek Christian communities survived in the islands. In so far as the Arabs influenced the genetic character of the Maltese, which would have occurred through some of them becoming Christians on the defeat of Islam by the Normans, as well as to a certain amount of promiscuity, it would have reinforced the Mediterranean element. This would be mainly from the Eastern Mediterranean branch of that stock. With it would come in some Armenoid, and so far as any Berber elements were involved, some Atlantic.

The Norman Conquest and the Angevin and Aragonese successions

One result of the Norman conquest was that Malta, having become a Christian country, began to receive refugees from Christian communities under Islamic rule. Among these were such as the Melchites from Palestine. If in those days the Melchites were in any way similar to those of today, then, as I have pointed out elsewhere, they are largely a Nordo-Dinaric people, who are still to be found in the hills of Galilee.

The Norman conquest would lead to the implantation of a Nordic element in Malta in the way of nobles and officials. As a fief of Sicily Malta would be successively under Norman, Angevin and Aragonese influence. This would reinforce the Nordic element all the time, with some accompanying Dinaric, especially from Spain. The coming of the Knights of St. John did little to change this situation from an ethnological point of view.

The Order of St. John

As far as the knights were concerned they tended to be French, Spanish, Italian, and Portuguese, and since they were derived from the aristocracy, would tend to be Nordic. Consequently, in so far as they and their followers had any effect on the local population it was to reinforce that element which already existed in Malta.

Another fact is that when the Knights settled in Malta they brought with them their own civil service, and many of these appear to have been Greek. This may account for such surnames as Grech — but as there were Greek Christian communities tolerated under Moslem rule, some of them may come from an earlier Greek origin. The Greeks genetically are a matrix of Mediterranean-Dinaric-Nordic origin, and so no new element was added by these people, whether they came in earlier, or were brought in as part of the following of the Knights. If the latter, they may have been Rhodians, and in so far as they were, an Armenoid element would be involved.

With the passing of knightly rule in Malta there came a considerable British settlement, so that British surnames are to be found among the Maltese population as a whole. Thus Prof. Griffiths of this Department has a Welsh surname, Prof. Craig had a Scottish surname. To that might be added such other surnames as Harding, Strickland, and Montagu, which are English, Littlejohn, which is Scottish, and so on. There are also some German names amongst persons who have been long settled in Malta, perhaps from the time of the last Grand Master, Hompesch, who was a German, and also some French

and Spanish names. Such names as Scicluna are of Spanish origin. All these elements must have brought in some Nordic especially the Scottish elements. The Germans and Spaniards would introduce Nordic and Dinaric. A little Alpine would be derived from some of the settlers.

The Synthesis of Maltese ethnology

If we stand back and try to analyse what all these elements have brought to the Maltese population, we realise that, while, in Malta, may well be found genes of all the major races of the Caucasoid stocks of Europe, nevertheless, the basic matrix is Mediterranean. With it will be found an early Atlantic element, and a superstructure composed of Nordic, Dinaric and Armenoid. There is very little Alpine, and no East Baltic as far as one can see. This is the stock which we would expect to find on the basis of its historical ethnology.

When we come to study the Maltese population, we find that it largely conforms to these facts of historical ethnology. We find a distinctly Mediterranean population, but one which has traits, in certain areas or classes, of the main intrusive racial elements which have been brought in during five thousand years of settlements and conquests. The Dinaric type is found quite well marked in some of the middle classes. The light eyes occur in areas where they indicate some old intrusions of Nordic or Atlantic, and in certain classes where they indicate a later origin.

There is one feature of Maltese ethnology which cannot be too strongly stressed. I believe that the Maltese are one of the most intensely inbred populations which I have ever studied. This has led to a constant reduplication of types. It might not be going too far to say that one could set out to classify the Maltese population in about six facial and physical types. This would indicate that the genetic segregation involved is working on a relatively few intrusive elements. The population is not a mongrel one, derived from innumerable and different infusions, but one which is firmly based on the Mediterranean type with just that

amount of infusion of other Caucasoid strains which has enabled, in the course of genetic segregation and assortative mating, a restricted number of specialised types to appear in the population. For instance, there is a type of Maltese, mainly found in the middle classes, which shows clear affinity with that Dinaric type which one finds among the Spaniards. In Spain it is one which tends, perhaps, to have more Nordic genes than in Malta, where it is more a Dinaric on a Mediterranean basis — nevertheless, the relationship is perceptible.

This inbreeding over such a long period of settlement, confined to a very small land area, must have made for selection to have acted much more effectively than would have been the case in a greater land-mass. Therefore, just as the mammals grew smaller in Malta during the period immediately prior to the settlement of man, so selective forces in the same direction have affected man — and this would account for the fact that the Maltese Mediterranean type tends to be smaller than the average Mediterranean elsewhere.

Thus far I have spoken throughout of the Maltese as a Caucasoid people. On the facts I see no reason to think otherwise. However, it is obvious that, under Moslem rule, where slavery prevailed, and then under the Knights who were taking Moslems prisoners, a slave population grew up in Malta. This we must now consider briefly before concluding this survey of Maltese ethnology.

The Arabic civilisations have always been avid slave-raiders, until recent years, when the traffic has been largely put down by the European powers, as a result of their control of the seas during the nineteenth century. While the Arabs would take slaves from any sources, including the coasts of Europe, their most fruitful sources were in Africa itself. Such slaves tended to be Cushitic (such as Nubians), Nilotics, and Negroes. This introduced into the slave classes of all Islamic countries a black population, derived from one or the other of these Melanoid stocks. Some of these slaves must have been introduced

into Malta during Islamic rule. When the Knights became the effective occupying power their galleys brought back Arab captives, and, among them, some of their slaves.

Therefore, there must have been a slave element in Malta which was partly of Black racial origins. This, however, would not have as marked effect on the ethnology of Malta as might be thought at first sight. In days before the concepts of the welfare state, natural selection was fully operative, and this meant that it was eliminating as fast as they were created, elements in the population which, for one reason or another, were not successful, and unable to compete equally with the rest, whatever was the cause of that inequality, whether genetic or social. The die was heavily weighted against successful survival for any black-skinned slaves who found themselves in Malta, or in any other European country for that matter. This accounts for the fact that in Malta today there is very little trace of Negroid genes in the population as a whole. Occasionally one sees them, mainly in the lowest social classes, but one would expect that, in course of time, even these will disappear completely, as conditions are against a successful establishment of a non-Caucasoid stock in a country where people are so clearly adapted to the geographical environment in which they have been so long settled. In a similar way, to digress for a moment, this must be the ultimate outcome of the heavy Negroid settlement in the United Kingdom at the present time. Nature will, in the course of time, eliminate it, as it is not suited to the geographical habitat into which it has thrust itself.

Because of the fact that all races, and all racial amalgams, in order to survive must be in harmony with the regions in which they settle, Malta will always remain a predominantly Mediterranean racial land, since natural selection is weighted in favour of that race in preference to other stocks less well adjusted to the environment. I noted, for instance, when I made a study of Sicilian ethnology, that although historically the Normans

were probably the most significant single element in Sicilian history in the Christian era, yet on all the lowlands of Sicily the type had practically been extinguished, and it only seemed to survive more or less successfully in the higher mountain areas of that country. A further digression which will reinforce this point, and which will be of interest to Maltese in particular, is the case of Australia. The sub-continent ranges from tropical in the north to Mediterranean in the south. Speaking generally it is an environment which is not ideal for Nordic settlement for a long period of time. I expect, therefore, that in the course of time, selection will be in favour of the more Mediterranean elements and against the Nordic. Thus the Mediterranean strain which occurs in England (although the English are more Nordic than Mediterranean) and the intrusive Mediterraneans, such as the Maltese, who have been settling in Australia in big numbers, will, in the end, come to breed more successfully in such an environment, than the type which settled in Australia in the first place. Perhaps a thousand years from now Australia in racial type will be much more a Mediterranean country, with many of the characteristics we now associate with the Maltese populations, than a Nordic one.

I have said that the Maltese are basically a Mediterranean people, and will remain such. Nevertheless, since there is a certain amount of genetic segregation on a social basis, especially in the middle and upper classes, where the population is typically less Maltese, because of intrusive races such as Dinaric and Nordic, it is unlikely that these stocks will be bred out. The very fact that these intrusive genes belong to classes best able, for social reasons, to survive, they will tend to survive such as they are today. On the other hand, if these intrusive genetic strains had formed the former slave class, and now were mainly the under-privileged, their survival would be very much in doubt.

I have said nothing, so far, about mental and emotional qualities associated with races. This is too large a subject to

go into it in this lecture. I mention it here only so that I should have made the point that, in the study of races, we are not confined solely to those phenotypic qualities which we see readily as racial traits, whether we are evaluating them anthroposcopically or anthropometrically. We must remember that there is a whole range of data of an intellectual and psychological nature. This, in part, depends on brain structure, which I have gone into at some length in my paper on this subject entitled *Practical considerations which are fundamental in Bantu Affairs in Rhodesia and for an Understanding of Negroid-Caucasoid Problems Generally*. This affects intelligence qualitatively and quantitatively. It is easiest to estimate and evaluate where we are dealing with the major specific stocks of mankind. Where we are dealing with races within any major stock, such as the Caucasoid, differences, on *a priori* assumptions alone, must be very much less well-marked, and so the more difficult to classify. On the other hand, on the basis that there are differences between the major stocks in these respects, there must be differences, if nothing like so marked, where the various races within a specific stock are concerned. This has always been a general belief from common, what I would call, folk observation, and theoretically I see nothing fundamentally unsound in such views, although I may dissent from the claims which may be made concerning the actual qualities of each of the races concerned.

The reason for mentioning this is to emphasise that there are temperamental differences due to these genetic causes, and so the qualities of mind and character, which are observed in any very old nationality, such as the Maltese, is not something which is just the product of the culture and the environment, but is something which is inherent within the stock. I have no doubt that the generally held belief in the basic artistic aptitudes of the Mediterranean peoples is true, as true as that thrusting dynamism is equally characteristic of the northern European peoples. At some stage there should be a study of the Maltese people in respect of their intellectual and emotional qualities.

This brings me to the statement that I think the time has come for a study of the Maltese people in depth. R. N. Bradley wrote *Malta and the Mediterranean Race* in 1907. This was an early attempt, which has some merits, and should not be brushed aside too brusquely. There have also been other discussions on the Maltese, all of which have varying degrees of merit.

Nevertheless, none of these carries the investigations far or deep enough. A proper study of the Maltese is called for, and it seems to me that this is something which I can properly commend to your society, and for this department within the competence of this centre of learning, and I hope that you will be responsible for initiating it, and lending your weight to it to bring it to a successful conclusion.

I have given you the *a priori* reasoning, on the basis of which we know in a general way, what to expect from a survey, but now we want to have the factual evidence which will, I have no doubt, confirm what I have elaborated, modifying and amplifying it, in this or that respect, as the investigations delve deeper than I have been able to do.

My view is that such a survey should rest primarily on the physical data. That is, that an anthropometrical survey is needed, both of the fossil evidence and of the living population. This should be supplemented by an anthroposcopical one carried out scientifically, and not just by the methods of casual observation, on which I have had to form my judgement.

Side by side with such work there should be a survey of the blood groups, or hand-printing, dermatoglyphics, and tasting tests. Information collected by the blood banks could be of help if integrated with such a work.

At the same time there should be intelligence testing by more than one system. Culture free tests, and those based upon diagrams should be used, as well as the normal tests used by educationalists and sociologists for their investigations. Encephalographic studies should be called upon to give us some idea of the electrical discharges of the brain. In the purely anatomical field some conception

of the brain volume and weight in relation to stature and body weight should be investigated, and in particular the degree of development of the frontal lobes, the cortex, and the supragranular layers of the brain. Anthropological studies are particularly deficient of data in these important fields, although they have a very important bearing on intelligence, and on the quality of intelligence.

Inherent aptitudes should be included in such a survey. For instance, Havelock Ellis was able to show in his study of *British Genius* that the most important school of English painting was the East Anglian, and it was in this very region that from the middle ages to the present there had been a high degree of artistic craftsmanship and architectural ability. The work of Nathaniel Weyl, which I have published from time to time in *The Mankind Quarterly*, an association has been shown between certain stocks, certain classes, and even certain surnames, with particular types of ability. While he found the Jews, Scots, and Dutch, as evincing the highest intellectual records in the United States, he also found that bearers of English surnames, which in the middle ages indicated a person was of a literate class (such as Clark in all its variants, Draper, and so on), still were highest in ability among persons with English surnames in America — due, no doubt, to assortative mating through the ages.

These studies suggest that in any survey in Malta use should be made of such facts. It would be of interest to see how all the data, when analysed on a territorial, class, and surname, basis differed. Even in a country such as Malta there are fairly well-marked regional characteristics. It is not necessary to go as far as Gozo to observe this. Zurrieq has a well defined type, and a more than average degree of blue and grey eyes. This would suggest that the results should be classified parish by parish.

At the same time the data should be analysed by social classes. This might well be done by trades and professions. In addition, since you have a well-defined titled nobiliary class which has not been the subject of recruitment for a long time

now, this again should be investigated, to see how far it betrays any differences, in its genetic characteristics, from the mass of the Maltese people.

Surnames certainly should be the subject of careful analysis. Malta has probably the most restricted list of surnames of any country in Europe, not excluding the Celtic peoples who, because of the clan system, tend to have fewer surnames than the other linguistic groups. The performance of bearers of these surnames in intelligence tests, and any differences they may have of an anthropological nature, should be carefully analysed. It may well be found that certain names have an association with a certain physical appearance and particular mental qualities, which in turn are related to certain social levels and vocations. For instance, it would surprise me very much if there were not an association between the Armenoid type, the Lebanese, and Near Eastern, and certain surnames in Malta, referring to types of livelihood. In India I found it possible to recognise, with a high degree of accuracy, people of different castes.

What would be of particular interest would be to see how far the farming classes, as they exist today, conform to the original Maltese type.

The study of the people of Gozo would be a particularly interesting one. It is said that the Arabs carried off all the inhabitants. Such statements are usually an exaggeration, but it might be possible to throw some light on this, if Gozitans proved to have a higher than normal deviation from the average data of the people of the mainland.

Since so many non-Maltese have now settled among you, a large proportion of whom will, in time, become Maltese, as has always happened in the past, some regard to their types might well be worthy of some investigation. Even where the British who have settled among you are concerned, we do not really know their types and nationalities. I suspect that most of them are English, as the Scots do not seem to have settled in any number, which also applies to the Irish and the Welsh. However, we simply do not know these

facts, and cannot until a widespread investigation is carried out.

Certain anatomical peculiarities may be evaluated by such an undertaking. You will find reference, time and again, to the *steatopygy* to be observed in early Maltese statuettes, which is followed, by its being alleged to be a well-marked trait of Maltese women. These statements I do not accept. The only *steatopygous* females whom I know are the Hottentot, Bushmen and Andamanese women. Both the European Paleolithic female figurines, and those of the neolithic of Malta, are simply models of fat women — not *steatopygous* females. The fat Maltese women, to whom reference is made by such observers, are entirely of the same type, but are not *steatopygous*. In far ancient times, and even among the Arabs at present, stout women were admired. This was also the case down to the 17th century even in northern Europe, as such portraits as you find of those periods indicate. In the survey which I am recommending anatomical examination would settle once and for all this *steatopygous* allegation, which I do not believe is, in any way, true at all.

As I envisage it such a survey, while it must rest on an anatomical basis, must call upon the assistance of many other disciplines. Malta is, however, sufficiently small, its institutions sufficiently advanced, and the conditions so ideal for such an investigation, that I believe that Malta could produce an account of the people living in it, past and present, which would be a model of how such investigations should be made, and how the synthesis to be derived from the data, should be presented.

I commend this work to you and to the university, and I hope that you may be able to see your way to carry it out in the course of time.

QUESTIONS

Prof. J. L. Pace:

You mentioned that in the region of Zurrieq one finds a number of fair individuals who are fair-haired with blue eyes. I also notice that in Malta there are quite a few people who are black-haired with

blue eyes. How does one account for this group of people differing from the more generalized type? People of the present generation seem to me to be much taller and even fairer when compared with those of two or three generations back. I wonder whether you have the same impression?

Col. Gayre:

As regards these pockets of lighter-eyed people, I think we would have to make an investigation there to find out why they are so, and I would not like to venture an opinion at this stage without an investigation. I've heard various theories but they are rather like the theories one has for the western Highlands of Scotland. Whenever they find a Mediterranean type, they say of course he is descended from the shipwreck of the Spanish Armada! Well, the Mediterranean was there a thousand or more years before the shipwrecks of the Spanish Armada. Folk explanations I would prefer to put aside until one has carried out an investigation thoroughly.

As regards the black hair and blue eyes, this is interesting because this is the characteristic of the Atlantic race. The Nordic is fair-haired with light eyes, while the Atlantic is black-haired with blue eyes. This is in fact the type I would expect to find in Malta where there has been such a well-developed Megalithic civilisation because throughout Europe the Atlantic race is always found in association with a Megalithic civilisation.

As regards stature, this is relative between various races; there are tall, short, and intermediate races, and of course there are the very short races, such as the pygmies. But all these races can benefit to a degree by nurture. Although by nature they may have a normal standard, with better nurture children grow quicker and taller so that they become taller than their parents. Of course, under bad conditions they would go down again. However, you will never make a bushman, for example, no matter how good the conditions, grow into a tall Norwegian or Scot, in stature, because there are limits.

As regards the colouring, this of course I have not been long enough among you to observe, as I've only lived in Malta for about 5 years, but you must remember that in the earlier days malaria and other diseases were picking out and killing off in childhood the more Nordic, the fairer; but with the development of a better medical system more equally applied to the population as a whole, those children who would normally have died early in life tend to survive. And so you would get a situation in which one would expect a lightening of the colour, to some degree, to take place though it would never displace the dark hair of the Mediterranean type.

Prof. V. G. Griffiths:

How much skeletal material from pre-historic times is available for study at the National Museum? How much of the 7,000 skeletons excavated from Hal Saflieni are still available?

Mr. C. Mallia:

Not all the 7,000 skeletons were actually found whole at the Hypogeum and this number was calculated from the amount of skeletal material found in a small unit volume and is therefore an average figure. The material from the Hypogeum is practically the only pre-historic material we have except for the contents of occasional specimens found in our collections or are on exhibition. The best 6 skulls from the Hypogeum are on show at the National Museum. As far as I am aware only parts of skulls are on exhibition in Gozo. It is said that one must have at least 500 skeletons for an anthropological study so that we still have not enough material for such a study, though as Col. Gayre said, one can make assumptions, at least from the associated archaeological material, such as pottery. The situation is different when we consider the stage of literate civilisation in Malta, viz. the Carthaginian and the Roman tombs, where significant parts of the human skeleton have been found. All this material is always available to the Department of Anatomy for any research purposes necessary.

Prof. V. G. Griffiths:

I seem to get the impression that Gozitans have a typical appearance, rather undefinable, which one could call "a Gozitan face", and which is probably due to the marked inbreeding which occurs there.

Col. R. Gayre:

There is quite an erroneous idea that inbreeding is a bad thing; inbreeding is only bad if the stocks you are inbreeding are bad as this would result in a quick reproduction of the bad types. Where, however, the stock is normal and healthy, then inbreeding is not only not bad, but probably an advantage. With the Maltese one is dealing with normal and good stocks which, because of the inbreeding, have by class, probably by name and surname, and certainly by regional characteristics, developed their own types. You get this in all countries: for example, in Scotland you can often tell an Aberdonian by his appearance, and, in England a Yorkshireman. There is the same situation in Malta though in a much smaller area of land than either England or Scotland.

Unidentified speaker:

Diabetes is a very common condition in Malta. As the cause of diabetes is known to be genetically dependent, do you feel that the local increased incidence could be due to excessive inbreeding?

Col. Gayre:

Theoretically yes, inbreeding could influence the situation, though a specific investigation would be required to see if that is in fact the case. After all, the incidence of malaria, to give an example, among certain African tribes is related to the particular blood groups to which they belong. Heterozygotes for the sickle-cell gene have a selective advantage in relation to this disease. If, therefore, in the stocks contributing to the Maltese amalgamation there is a relationship of a gene to diabetes, then, either inbreeding people with this gene would increase its incidence; or, if it occurs in the heterozygotes, then cross breeding between the types would increase the occurrence. Obviously, here is a fruitful medico-ethnological field for investigation.

Mr. C. Mallia:

This brings us to the end of Question Time, and as Chairman, on behalf of everyone here, I must thank Col. Gayre for his most interesting talk. Col. Gayre has this evening given us a blueprint on which the University, particularly the Department of Anatomy, and those of the National Museum who are engaged on archaeological studies can work in the future. Thank you very much.