

The Reality of Race

By JOHN R. BAKER

In recent years there has been a tendency among social anthropologists in many parts of the world to treat man as though he were more distinct from other animals than in fact he is. Many of them accept the evolution of man intellectually without really facing the facts that man is basically an animal and that he resembles very many other terrestrial ones (including his nearest living relative, the chimpanzee) in being classifiable into races.

We need to look back to a period when there were great men who did not shrink from accepting and expounding the facts disclosed by sciences, however unwelcome these might be to many people. "Anthropology," wrote T. H. Huxley¹ more than a century ago, "is a section of ZOOLOGY . . . the problems of ethnology are simply those which are presented to the zoologist by every widely distributed animal he studies." In these words he expressed a fact that is indeed familiar to modern zoologists, namely, the reality of race. The study of man would become less inhibited and more realistic if every student of anthropology could have an opportunity to attend a course of instruction in the principles of taxonomy, given by an authority on this rather difficult but very important subject, on which a large body of knowledge and understanding has been built up by those who have devoted themselves to the study of animal life.

A *species* may be roughly defined as an interbreeding group. If a terrestrial species is very widely distributed, it may be found to differ in physical characters in different parts of its range. The technical term for the main divisions of a species is *sub-species*. It is convenient to use the word *race* as equivalent to subspecies, and this practice is followed in the present article. The Europids (so-called "Caucasoids"), Negrids (Negroes of Africa), and Mongolids (Mongolians and their relatives) may be quoted as examples of races. Most human races are divisible into subraces; for instance, the Nordids, Mediterraneanids, and Alpinids are some of the subraces of the Europid race. Here and there one finds "local forms" of mankind, recognizably different in trivial characters from other members of their race or subrace.

It follows, from the rough definition of a species given in the preceding paragraph, that hybrid individuals exist; for if races did not hybridize to some extent, they would not be races, but separate species (or separate *Formenkreise*). Hybrid individuals may show all degrees of intermediacy between one ancestral race

¹ T. H. Huxley, "On the Methods and Results of Ethnology," *Fortnightly Review*, Vol. 1, pp. 257-277.

and another. It has occasionally happened that interbreeding between races has occurred on a very large scale in the distant past; and as a result, there has been an opportunity for a certain degree of intermediacy to be favoured by selective pressure. In this way what is sometimes called a *Kontaktrasse* or "hybrid race" may originate. In such cases, the physical characters of one of the races usually predominate in the hybrid. If so, the hybrids are best regarded as forming a hybrid subrace of the race that they more closely resemble. Thus the Aethiopids of Ethiopia are probably best regarded as a hybrid subrace of the Europid race.

To describe a human race or subrace in its most typical form (commonly at some distance from the hybrid zone that intervenes between itself and neighbouring races or subraces), it is necessary to apply the principles that are universally accepted in the classification of animals: that is to say, to take into consideration, so far as possible, *all* the characters by which it tends to differ from typical members of other races or subraces. This principle governs every grade in classification, from the major divisions such as the vertebrates (with their allies) and molluscs, down to races and subraces (and indeed to local forms).

The satisfactory grouping of mankind into races was delayed, even into the first quarter of the present century, by the tendency of certain anthropologists to rely on methods that no one trained in the principles of classification would have accepted for a moment. The grouping was sometimes done on the basis of single features, such as the form of the hair or even the colour of the skin, without sufficient attention being paid to the numerous characters that should have been considered.

Many differences between races are found in various parts of the body, especially in the external characters and in the skeleton (above all in the skull), but others occur in less obvious regions. For instance, the Europids have large odour-glands under the armpits and are smelly as a result (unless they wash frequently), while in the Mongolid race these glands are much less developed, and indeed the Tungus of central Asia (Tungid subrace of Mongolids) are said to be altogether devoid of odour originating in this part of the body. It is scarcely necessary to add that there are many characters, most of them very much more obvious, that distinguish typical members of the Mongolid race.

The genes that control the blood-group systems lend themselves readily to analysis by the ordinary techniques of genetics. The Second World War gave an impulse to the study of these systems, owing to their importance in blood-transfusion; but the purely scientific value of work in this field, so far as racial problems were concerned, was not so great as it might have been, for two independent reasons. First, the people to whom blood-

grouping was applied were commonly classified by nationality, and thus not necessarily by racial affinity. Second, the genes that were studied were largely those that are found in human beings of most or all races, though they occur in different frequencies in different races. Interest was thus concentrated on characters that did not distinguish a particular person of one race from particular persons of other races. This necessarily spread the idea that races resembled one another more closely than in fact they do.

It must be remembered that although genetic analysis is scarcely possible in the distinction of the main classificatory grades from the species upwards (because interbreeding is generally impossible), an immense body of knowledge exists about the evolutionary relationships of more than a million species of animals, expressed by their classification into genera, families, orders, classes and phyla. If a geneticist works with a particular species of animal, he must state to what species it belongs; and he cannot do so unless he is willing to rely on distinctions between species based on knowledge that was not derived from study of the effects of single genes.

The principal characters that distinguish typical members of different races of man from one another are mostly controlled by "polygenes"; that is to say, by the combined action of many genes having small but cumulative effects. An enormous number of examples could be given. For instance, the length of the forearm in relation to that of the upper arm is considerably greater in Negrids than in Europids; and the breadth of the skull in relation to its length is much less in Australids (Australian aborigines) than in Mongolids. Such features as these are controlled by polygenes. It is very difficult to analyse polygenes genetically, because the effect of each is too small to be observed separately; and in the case of man it is nearly always impossible in the present state of knowledge, because controlled matings cannot be made and the reproductive rate is too slow. It is an unfortunate fact that the concentration of attention on genes that can be analysed genetically has resulted in loss of interest in those characters, controlled by polygenes, that make it possible to distinguish a particular person of one race from particular persons of other races. The proper course is to use these primary distinguishing characters in the classification of mankind; only then, after the races and subraces have been recognized, is one in a position to study effectively the frequencies of those single genes that can be traced separately from generation to generation, and which occur in all or most races but more abundantly in some than in others. When this has been done, the frequencies can properly be cited as secondary characters of the taxa in question.

Despite what has just been said, it is legitimate in certain particular circumstances for studies of characters determined by single genes to go forward concurrently with others in which morphological features controlled by polygenes are taken into consideration. This happens in somewhat isolated districts where hybridity has occurred in the distant past, but unequally in different regions within the district. A tendency to local intermarriage, continued from generation to generation, would preserve slight average differences. In such cases it may be impossible to place individual persons in separate taxa on the evidence of morphological characters, and there is therefore no question of recognizing different races or subraces or obvious local forms; but *average* differences may be revealed between the populations of zones, perhaps only some 10 or 20 kilometres in diameter, by statistical studies of haematological and morphological data.

The population of the little peninsula of Gargano, which projects about 45 kilometres from the Italian coast into the Adriatic Sea, appears to provide an example of what has been described in general terms in the preceding paragraph. This little peninsula is included in the large part of southern Italy that is inhabited by people who appear to be basically Mediterranean, modified to varying degrees by hybridization with Dinarids from the Balkan coast.² By means of a detailed statistical investigation of the people of this peninsula, Corrain and Pesarin³ have shown that its northern, eastern, southern, and central zones are inhabited by populations that are significantly different from one another, on average, in certain features determined by the action of single genes (for instance, the percentage of persons belonging to blood-groups A, B, and M) and also in certain morphological features controlled by polygenes (among them the principal dimensions of the head and face, the form of the ears and lips, and the span of the extended arms).

A very strange situation has arisen from the tendency of many anthropologists to rely on single-gene differences readily susceptible to genetic analysis, in *preference* to morphological evidence, in attempts to determine the racial affinities of man. An actual example will illustrate this point. Bodmer and Cavalli-

² C. S. Coon, *The Races of Europe*, Macmillan, New York, 1939; H. F. K. Günther, *Rassenkunde des deutschen Volkes*, Lehman, München, 1926, gives a photograph of Puccini as an example of a person of this type. He describes him as "Predominantly Mediterranean—probably with Dinarid influence" ("Vorwiegend westliche — wahrscheinlich mit dinarischen Einschlag").

³ C. Corrain and F. Pesarin, "La distribution des caractères hématologiques et métriques chez les populations du Gargano et des Iles Tremiti (Pouilles, Italie)," *L'Anthropologie*, Vol. 77, pp. 93-106.

Sforza⁴ remark that "The inheritance of the more conspicuous face and body traits . . . is complex and not well understood, which decreases their value for the biological study of race"; and they go on to tell us how much better it is to rely on gene-frequencies. As an example they quote the differences between Mongolid ("Oriental") and Europid ("Caucasian") populations in the frequencies of the genes that determine the blood-groups of the ABO system.⁵ But how did they know that the Mongolids from whom blood specimens were taken *were* Mongolids? The fact is that they were only able to give particulars about differences in blood-group frequencies *because* it was legitimate to rely on morphological evidence as to who was a Mongolid and who a Europid; and that is something that cannot be done by determining the blood-group in the ABO system of any particular person.

Some authors are inclined to draw the conclusion that there are no differences between two populations (i.e. that they should be regarded as parts of a single population) if the statistical methods they have chosen to employ have revealed no differences. There is serious danger of error in drawing this conclusion. In any general study of this kind, the investigator must decide in advance which characters he will measure or count. If any two populations are found by these methods to show significant differences, they are recognized as distinct, and to this there can be no objection. If, however, significant differences are not found, it should *not* be concluded that the two populations are indistinguishable, for they may differ greatly in characters that were not chosen for study. The reason for this is clear enough. The statistician chooses for study those characters that happen to be best suited for statistical work, whether or not, in particular cases, those characters are ones that actually distinguish one race or subrace from another. The taxonomist, on the contrary, concentrates his attention on every observable character that enables him to recognize differences between one race or subrace and another.

To illustrate this, let us suppose that when an investigator decides to choose a set of characters on which to rely, in a

⁴ W. F. Bodmer and L. L. Cavalli-Sforza, "Intelligence and Race," *Scientific American*, Vol. 223, No. 4, pp. 19-29.

⁵ It may be mentioned incidentally that the frequencies of the genes GA , GB , and G of the ABO system are somewhere near 0.28; 0.20; 0.52 respectively in most Mongolid populations. Bodmer and Cavalli-Sforza give the proportions as 49 per cent; 18 per cent; 65 per cent, which add up to the remarkable total of 132 per cent. There must be a misprint here. (The symbols used in the present article for the genes of the blood-group systems are those suggested by E. B. Ford in "A Uniform Notation for the Human Blood Groups," *Heredity*, Vol. 9, pp. 135-142.)

general statistical study of differences between races, he selects for the purpose three cranial characters and three concerned with the blood, as follows: 1, cranial capacity; 2, the greatest breadth of the skull; 3, its breadth expressed as a percentage of its length; 4, frequency in the MNL system of the gene Ag^M ; 5, frequency in the same system of the gene-complex Ag^{NLB} ; and 6, frequency in the Rhesus system of the gene-complex $C^A D^A E^A$. He uses these characters to determine whether there is any statistically significant difference between the native populations of parts of eastern Asia on one hand, and of remote districts of Australia on the other. On the evidence of every one of the six characters he distinguishes sharply between the populations of these two parts of the world. This is not surprising, since Mongolids differ obviously from Australids in many characters.

But now let us suppose that the investigator decides to compare the same populations of eastern Asia with those of certain parts of central Europe, by the use of the *same* six characters. If he were to do so, he would be seriously at fault; for he would be unlikely to find a statistically significant difference between them in any of the six characters, despite the fact that these two groups of people are so different from one another that they are not only distinguishable from one another at a glance by persons wholly untrained in physical anthropology (without regard to the rather slight difference in skin-colour), but are placed by physical anthropologists in different *racés*, the Mongolid and Europid (Alpid subrace) respectively.*

The example just given is an extreme one, deliberately chosen to illustrate an important source of error that causes differences between populations to be minimized or overlooked. More numerous characters are ordinarily selected for study in work of this sort, and the risk of making such a serious error is thus reduced; but it is not eliminated.

* This paragraph and the preceding one are based mainly on data extracted from tables of measurements and frequencies published by G. M. Morant, "A Study of the Australian and Tasmanian Skulls Based on Previously Published Measurements," *Biometrika*, Vol. 19, 1927, pp. 417-440; M. Reicher, "Untersuchungen über die Schädelform der alpenländischen und mongolischen Brachycephalen. 2. Vergleich der alpenländischen brachycephalen Schädel mit den mongoliden," *Zeitschrift für Morphologie und Anthropologie*, Vol. 16, 1914, pp. 1-64; A. E. Mourant, *The distribution of human blood groups*. Oxford Blackwell Scientific Publications, Oxford, 1954; and I. Schwidetzky (editor), *Die neue Rassenkunde*, Gustav Fischer, Stuttgart, 1962.

It must be mentioned that no figures are available for the frequencies of the gene Ag^M or for that of the gene-complexes Ag^{NLB} or $C^A D^A E^A$, among persons actually identified as Alpidids. One must form a general impression from the data obtained in those countries and districts in which Alpidids form a considerable part of the population.

In many mammals there are considerable differences between one race and another, but it is doubtful whether there is any other mammal in which the races differ so much as do those of man. In this respect there is a genuine difference between us and them. Many human subraces differ more from one another than the races of other mammals do; of this the Nordids and Alpinids provide an example. If the reader is inclined to doubt the extent of physical interracial differences among mankind, he may care to look at the chapter on the anatomy of the Sanids (Bushmen) of southern Africa, in a recently published book.⁷ One may doubt whether there is any species of wild mammal in which interbreeding between races would occur, if they differed so much in physical characters as do those of mankind: the races would have become incipient species.

The fact is that man is a self-domesticated animal; and domestication, in man and other mammals alike, tends to reduce sensitivity in the recognition of "own kind" in the selection of sexual mates.⁸ In the circumstances of tribal life or other forms of local segregation, there is little opportunity for hybridization, except at the fringes of racial or subracial territory; but when tribes gather into larger communities and thus become strong enough to roam widely, opportunities occur more frequently for interbreeding between peoples differing markedly in physical characters. Technological advance acts in the same direction as domestication. Already in 1885 Dr John Beddoe,⁹ a British anthropologist, remarked that the extension of railways would "inextricably confuse" the various subraces (or "races," as he called them) of Europe. Although at the present day one may see many typical Mediterranean, Alpinid, and Nordid as one travels through western Europe, one does not fail to notice the considerable proportion of persons who cannot be assigned to any particular one of these three subraces of the Europid race. It seems quite possible that if present tendencies continue, anthropologists of the distant future will recognize and name a triple (or multiple) hybrid subrace. The same tendency to intersubracial fusion has occurred on a larger scale in the U.S.A., and interbreeding has indeed gone much further in that country, since a massive population of interracial hybrids has been formed.

Self-domestication, aided in recent times by technological advances, is not the only difficulty with which the taxonomist is confronted in his attempts to classify mankind. There is also the fact that the differences ordinarily regarded as racial might

⁷ J. R. Baker, *Race*, Oxford University Press, London, 1974.

⁸ J. R. Baker, *op. cit.*

⁹ J. Beddoe, *The Races of Britain: A Contribution to the Anthropology of Western Europe*, Arrowsmith, Bristol, 1885.

be thought to rank more properly at some higher taxonomic grade. This might be the *Truncus* of Peters,¹⁰ in whose classification such taxa as the Europids, Mongolids, and Negrids belong to this grade, while the Nordids, Mediterraneanids, and Alpinids are races instead of subraces. If this were allowed, "species" might be regarded as an unsuitable term for a *group* of incipient species, partly linked together as a side-effect of domestication. The only term that seems appropriate for the purpose is the *Realgattung* of Kant,¹¹ who defined it simply as an interbreeding group. Kleinschmidt's *Formenkreis*¹² is a possible alternative, since it did include incipient species; but it has the disadvantage that he applied it not only to interbreeding forms but also to those that replaced one another geographically but did *not* interbreed. Kant rejected the term "species" altogether, regarding it as a product of what he rather contemptuously called the *Schulsystem*.¹³ In this particular matter, few taxonomists of the present day are likely to agree with the great philosopher; but it may not be unreasonable to regard *Realgattung* as the proper taxonomic term to replace "species" in the case of *Homo sapiens*.

The ideas put forward in this paper may be briefly summarized as follows.

Certain methods used at the present time in anthropological research lead almost inevitably to an underestimation of the reality of race. The concept of race, in its application to man, is in fact valid; indeed, the question is not whether we should discard the concept, but whether we should upgrade the race to a higher taxonomic rank; for the races of man, in their typical forms, differ more from one another in physical characters than do those of other mammals. The degrees of difference between many human subraces of the same race (for instance, those between a Nordid and an Alpinid) correspond more nearly with those who separate the races of most mammalian species. It may perhaps be best to regard the subspecies or races of man as potential incipient species that have become blended together by an amount of interbreeding that would not have occurred

¹⁰ H. B. Peters, "Die wissenschaftlichen Namen der menschlichen Körperformgruppen: eine Zusammenstellung nach den internationalen Nomenklaturregeln," *Zeitschrift für Rassenkunde*, Vol. 6, 1937, pp. 211-241.

¹¹ I. Kant, "Bestimmung des Begriffs einer Menschenrace," 1785, reprinted in *Kant's gesammelte Schriften*, Vol. 8, Reimer, Berlin, 1912.

¹² O. Kleinschmidt (no title to paper), *Journal für Ornithologie*, Vol. 45, 1897, pp. 518-519; *Die Formenkreislehre und das Weltwerden des Lebens*, Gebauer-Schwetschke, Halle-S., 1926.

¹³ I. Kant, "Von den verschiedenen Racen der Menschen," 1775, reprinted in *Kant's gesammelte Schriften*, Vol. 2, Reimer, Berlin, 1912.

among the incipient species of any wild mammal. The extent of this interbreeding is to be attributed to domestication, which leads, in man as in other animals, to a reduction of sensitivity in the selection of sexual mates.

It is for the men and women of the present day and of the future to decide whether some voluntary limitation of inter-marriage between widely divergent stirpes* would act for the benefit of the *Realgattung* of mankind.

* The word "stirps" (plural stirpes) has recently been introduced as an inclusive technical term to cover the race, subrace, and local form, wherever it is not wished to specify any particular one of these three taxa (J. R. Baker, *op. cit.*). If the term *Truncus* is acceptable, it must be included with the other three under the general term of stirps.

OUR CONTRIBUTORS

NATHANIEL WEYL

855 Oleander Street, Boca Raton, Florida 33432, U.S.A.

ALAN G. LaFLAMME

Department of Sociology and Anthropology, State University College,
Fredonia, New York 14063, U.S.A.

T. DAN SOEN

The Technicon, Israel Institute of Technology, Haifa.

DONALD SWAN

c/o I.A.A.E.E., Box 3485, Grand Central Station, New York City
10017, U.S.A.

G. M. MES

P.O. Box 234, Krugersdorp, Transvaal, South Africa.

JOHN R. BAKER

The Mill, 26 Mill End, Kidlington, Oxford, OX5 2EG.

R. L. MACKAY

5 The Parklands, Finchfield, Wolverhampton.

HENRY H. REITER

16 Sunnywoods Drive, Hartington So., New York 11746, U.S.A.

Christian Name Patterns of the Men of the Principal Clans in Sutherland 1678-1834

by ROBERT L. MACKAY

It has been shown by Withycombe¹ that the commonest Christian names for men, after the compulsory registration of baptisms in England, beginning 1850, were and still are, William, John and Thomas. This finding has prompted a study of the Christian names favoured by the 11 most numerous clans in Sutherland in the late seventeenth, eighteenth and early nineteenth centuries. An earlier survey of 2,181 Mackays² showed that nine names each occurred with a frequency of over 4 per cent, followed by a gap, and then by a few names between 2 per cent and 1 per cent, and thereafter by a great variety in fractional percentages. This result indicated the form this present investigation should take, and further suggested that the Mackays, numerically the strongest clan in the county, should be used as a basis for comparisons among the other ten clans.

Available for analysis of Christian name patterns are six acceptable lists of names³ covering the county area well in the period 1678-1834, approximately five generations, and including the Jacobite rebellions of 1715 and 1745 which did not greatly affect the county, and the Highland Clearances which disturbed it considerably. Clans with headquarters or main bases outside the county are included only so far as their numbers resident within the county boundary are concerned. These clans are named and their numbers shown in the table. Other clans

¹*Oxford Dictionary of English Christian Names*, 1960, pp. xxvii and xlvi.

²THE ARMORIAL, Vol. 6, No. 3, December 1974, pp. 203-211.

³A list of the names of 2060 men, aged 16 to 60, in the nine parishes of the Sutherland Estate, 1745, deemed fit for military service to the Government in that year. From the Muniment Room in Dunrobin Castle by Courtesy of the Countess of Sutherland, and of Mr R. J. Adam, M.A., St Andrew's University; Judicial Rent Roll of the Reay Estate, 1789, containing 232 names, in Angus Mackay, *The Book of Mackay*, Norman Macleod, Edinburgh, 1906, pp. 475-480; I. H. Mackay-Scobie, *An Old Highland Fencible Corps*, Edinburgh, 1914, pp. 370-375. A Muster Roll of the Reay Fencibles, 1794, containing 776 names; James Loch, M.P., *The List of Subscribers to the Memorial to the First Duke of Sutherland*, 1834. This list was printed privately and contains 2200 names. A gift from Dr Ian Abrach Mackay of Glasgow; *The Book of Mackay*, *op. cit.*, pp. 471-475. A list of 223 names of 1678; Judicial Rent Roll of Bighouse Estate, 1819; *The Book of Mackay*, *op. cit.*, pp. 480-482. A list of 98 names.