

THE EMERGENCE OF RACIAL GENETICS

BY R. RUGGLES GATES

The desirability of founding an additional scientific journal to discuss the problems of race may be questioned by some who are concerned with other aspects of anthropology. But everyone agrees that races or ethnic groups exist and that they are in fact the raw material by means of which human evolution has taken place. The increasing rate with which racial disturbances have been occurring in many parts of the world since the end of the second world war makes it abundantly clear that the subject needs discussion, even though some of these disturbances are the result of propaganda, and others of race antagonism which has old historical foundations.

A scientific approach to racial questions, free from sentiment, propaganda or bias, may lead to a more reasonable attitude to the problems which agitate considerable sections of mankind. This need for a calmer approach to problems of race on the part of civilised peoples as well as more primitive tribes makes it desirable that a journal should exist in which the problems of racial origin and racial relationships can be quietly discussed, without rancour or bigotry and with the primary aim of elucidating facts.

My own contributions to the study of race began many years ago with an interest in the racial significance of the blood groups. An expedition down the Mackenzie River in 1928, financed by the Hudson's Bay Company, had as one of its aims the blood grouping of Indian tribes and Eskimos. It also yielded a study of families derived from Eskimo x Nordic which gave striking evidence of genetic segregation in racial crossing (Gates 1929, p. 336.)¹ The factual evidence regarding human racial genetics has grown gradually since that time. My interest in this has led to travels and observations in many parts of the world. Eugen Fischer's well known study of Dutch x Hottentots came much earlier (1913).

In 1952 a study, financed by the Wenner-Gren (Viking)

¹ *Heredity in Man*. London: Constable, pp. 385.

Foundation, was made of families in Eastern Cuba with a Negro mother and a Chinese father. As the Negro and the Mongolian race both have a flat, depressed nose, this led to a study of the origin of the high, narrow European nose. Studies were also made of the Indian remnants which still exist in Eastern Cuba. In 1953 hybridization between Negroes and American Indians was studied in Southern Mexico and the very Mongoloid Indian tribes on the coast of British Columbia were further examined, but the enigmatic result that they do not have the B blood group remains unexplained.

An invitation to visit Japan in 1954 resulted in a study of the Ainu remnant in Hokkaido, now being rapidly absorbed into the Japanese population. This Caucasoid outpost with long head, white skin, hairy body, and heavy brow ridges with sunken orbits in the male, shows similarities in the latter features to the Australian aborigines. Archaeological evidence regarding the earlier history of the Ainu is very much needed. Perhaps it might be supplied by excavations in the Amur Valley.

In 1955, many parts of Africa were traversed with my wife. Especially may be mentioned the Kalahari desert and the region around Walvis Bay where Bushmen and Hottentots, now greatly mixed in some areas, were studied and their hair forms analysed in genetical terms. A study of the Pygmies in Western Uganda, on the borders of the Ituri forest, led to definite views of their origin as an achondroplastic dwarf race from tall ancestors with mahogany (not black) skin colour (Gates 1958.)¹

In 1958, a long-cherished desire to see the Australian aborigines eventuated in a voyage around the world in the Southern hemisphere, during which extensive travels were made on the Australian continent. The Arunta tribe and their hybridization for three generations with Whites was fully investigated at Alice Springs (Gates 1960.)² Other tribes and their hybrids were investigated at Darwin and elsewhere. The publication of colour photographs has added much to the value of these results. This represents the fullest genetical analysis of any racial cross which has yet been made, and the results yield a clear picture of the relations between the Australian aborigines and their Caucasoid ancestors.

This relation is a much closer one than has been previously supposed, although the Australians are geographically almost as remote from Europe as they could get. They have probably occupied the Australian continent for at least 10,000 years. In contrast to the African Negroes, where there appear to be four

¹ The African Pygmies. *Acta Genet. Med. et Gemell.* 7: 159-218.

² The Genetics of the Australian Aborigines. *Ibid.* 9:7-50.

genes for skin colour, the Australian aborigines have only one main gene, and a minor one which produces brunet-European colour. The first cross (F₁) with Europeans has very light skin colour, and moreover, much of the aboriginal skin colour is the result of tanning. This is shown when they wear clothes, the covered parts of the body becoming near white.

A dwarf tribe with curly hair in Northern Queensland, near Cairns, is regarded by Tindale and Birdsell¹ as a Negrito remnant. My observations (Gates 1960)² strongly support this conclusion. The tribe is now partly mixed with the aborigines, but they probably represent the first inhabitants of Australia, who were driven down into Tasmania during the last phases of the ice age when the Murrayan Australians entered Australia from New Guinea through York peninsula.

New Guinea was visited with the permission of the Australian Government, which is actively engaged in pacifying the native Papuans. Their methods of introducing civilization to people who were until recently (and some of them still are) savage head-hunters and cannibals, are worthy of careful study. Patrol officers cover much of the country, investigating homicides and other breaches of the law.

The first men to fly over the interior of New Guinea in the '30s were astonished to see a quite dense population with extensive vegetable gardens laid out in squares and surrounded by narrow trenches twenty feet deep, dug with a long, pointed stick. Their "clothing" was chiefly for purposes of adornment and their stone tools, adzes and axes were Paleolithic. Thus, while technically Neolithic in that they have gardens in which plants are cultivated for food, yet in mentality they are in the Stone Age, using stone implements and the bow and arrow with, until the recent advent of the white man, an established system of tribal warfare.

The success of this enlightened attempt to induce these "savages" to adopt permanently civilized ways will be watched all over the world. If the method succeeds, without any recrudescence of war and barbarism, it will probably be the first time this has happened in the history of the world.

Probably the greatest source of danger for the future is the rapid increase in population which is likely to follow from the suspension of head-hunting and tribal warfare. How will they react to the economic pressures which are likely to follow from over-population?

¹ Tasmanoid tribes in North Queensland. *Rec. S. Austr. Mus.* 7: 1-9. 1941.

² Racial elements in the aborigines of Queensland, Australia. *Zeits. Morph. Anthrop.* 50: 150-166.

Race crossing of Papuans with Europeans has just begun. An Englishman who took three native wives had two children by each of them. Their skin colour was quite as light as the F1 of the Australian x European cross. Some of the children even had fair hair, although the mother's hair was always black or nearly so (in press.) Other evidence, which cannot be detailed here, indicates that the genetics of skin colour in the Papuans is similar to that of the Australian aborigines. The overhanging nasal tip (the so-called Semitic nose) is as characteristic of Papuans as the beetling brows are of Australians, but transposition of both these features to the other race has been seen, indicating a period of intercrossing when the Australians were on their way across New Guinea into the Australian continent.

Many other problems of racial relationship in this part of the world are involved, but they need not be touched upon here. A detailed study of a dwarf tribe in the mountains of Northern New Guinea (unpublished) leads to definite conclusions regarding their origin from the surrounding tall type. Thus the whole question of dwarf races in man requires a new approach.

These and many other observations show that racial genetics has gradually emerged as a new branch of genetics. Its principles are fundamentally different from those of medical genetics (the inheritance of abnormalities, which occur in all races) and it can be used in the genetic analysis of all modern races. Its successful application, however, requires adequate experience and knowledge both of modern genetical methods and of physical anthropology. In one aspect, this requires further development of the theory and practise of quantitative inheritance.

TOPICAL EVENTS

The attention of our readers is drawn to the CONGRESS INTERNATIONAL DES SCIENCES ANTHROPOLOGIQUES ET ETHNOLOGIQUES, of which the vith Session will be held in Paris at the (Musée de l'Homme) Palais de Chaillot, 16e from 31st July to 7th August 1960.

KLINEBERG'S CHAPTER ON
RACE AND PSYCHOLOGY
A REVIEW

BY HENRY E. GARRETT

In 1956 the United Nations' Educational, Scientific and Cultural Organization (UNESCO) published a symposium entitled *The Race Question in Modern Science*. This book contains nine chapters dealing with race and racial relations from the viewpoints of the biologist, the anthropologist, the psychologist and the sociologist. The chapter on "Race and Psychology" was written by Professor Otto Klineberg, social psychologist of Columbia University. Klineberg sets himself the task of showing that racial or ethnic differences, when they appear, can be attributed to environmental and cultural factors. He concedes that immediate and remote ancestry may play a small role; but the environment, not the genes, really causes racial differences.

It is fair to assume, I think, that Professor Klineberg has made out the strongest case of which he is capable, and one which he believes will be convincing to his readers. Just how strong is the strict environmentalist's position? This review undertakes to answer this question by examining Klineberg's evidence.

Social and Cultural Factors

Klineberg begins by intriguing his readers with anecdotes showing how home environment, special training, deprivations and cultural restrictions may affect the responses of a child to various items on a mental test. He cites the case of the Negro child who has never been in a library and hence did not know that silence is observed therein; of the mountain boy who had never eaten "store bought" candy; of the Australian natives who insisted on working co-operatively on a test rather than as individuals; of Samoan children who reportedly drew pictures instead of following directions and tracing a path in a diagram. Interesting materials of this sort are effective in nudging the reader gently over to the view that ethnic differences are, after all, only a matter of cultural differences. Since individuals are so obviously influenced by social factors, why not racial groups. So runs the argument.