LETTERS TO THE EDITORS

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Future of Anthropology

IN the discussion on the future of anthropology at the centenary meeting of the Royal Anthropological Institute, as reported in NATURE of November 20, there seems to have been a serious misconception of the natural scope of physical anthropology. In my presidential address to Section H of the British Association in 1939, I discussed the subject at some length, and suggested that the future of this important science may be seriously jeopardized if it is not allowed to develop naturally along progressive lines.

Dr. Firth is quite correct in his statement that physical anthropology is a branch of biology, and it may be added that it should therefore be in the hands of trained biologists. It is no doubt due to the neglect of this fact that the subject seems to have undergone considerable stagnation in recent years. The view was expressed at the centenary meeting that physical anthropology is entirely a historical science. Indeed, the writer of the report in NATURE goes so far as to suggest that as soon as physical anthropology is applied to practical problems it ceases to be physical anthropology!

This view can scarcely be too vehemently controverted. Physical anthropology is certainly a historical subject in so far as it studies the organic relation of the human species to lower animals, its evolutionary origin, its differentiation into races* and sub-races, and the relation of physique to the different conditions of life in the past. But it is equally certain that it also concerns itself with actualities by the comparative study of living races and their geographical distribution, and by the study of problems of growth and physique in relation to environment and of racial differences in physiological processes. The subject of comparative racial physiology (which is clearly a department of physical anthropology) has hitherto received little attention. Yet its importance must be obvious, and it is not too much to say that the future of physical anthropology will depend almost entirely on its due recognition.

Probably no adequate and complete survey has been made of any native population living under primitive conditions to ascertain from random samples what level of physical efficiency is possessed by its members, how far this is related to inborn racial differences, or to nutrition, climate and other environmental factors. It is important to know to what extent physical efficiency can be improved by higher standards of diet, hygiene and so forth, how human races vary in their adaptability to different environments and different conditions of life, whether there are racial differences in susceptibility to disease or dietetic deficiencies, in ability to resist physical stresses and strains, in relative rates of growth and maturation, in fertility and longevity, in their reaction to extremes of temperature and humidity, etc. We require data regarding the functional efficiency of different physiological systems (cardio-vascular, respiratory, nervous, excretory, digestive, etc.) in different races, and the physical anthropologist of the future must be acquainted with the various physiological and biochemical techniques by which this efficiency can be gauged.

It is scarcely necessary to say that problems of this kind must be answered as a preliminary basis for the social, educational and economic advancement of the more primitive and backward races of mankind, and are thus of considerable practical importance. At the same time, since the physical efficiency of different races must have repercussions on their social and cultural development, it is clear that in the future physical anthropology must keep in close contact with other branches of anthropology, so that the study of mankind remains a properly integrated subject.

If the science of physical anthropology is allowed to follow its natural development along the lines suggested, it will open up a progressive and active field of study which is likely to attract students who are both able and enthusiastic. If, on the other hand, it confines itself to the narrow laboratory study of crania and other parts of the skeleton (a study which is rapidly becoming sterile in spite of new statistical methods) it will soon cease to earn any respect from workers in other branches of anthropology.

Dr. G. M. Morant has pointed out that the three whole-time posts in physical anthropology in Great Britain before the War are now not actively occupied. I would suggest that this provides an excellent opportunity for the complete re-orientation of the subject along functional lines, and that efforts should be made to promote this natural development as soon as possible.

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* The term "race" is used here in reference to the main ethnological groups of mankind, and without prejudice to its application otherwise.

An Ankle-Bone of the Ape-Man, *Paranthropus robustus*

EVERY addition to our knowledge of the structure of the ape-men of South Africa is likely to be welcomed even though the addition may appear to be a very small one. The Taungs ape, and those discovered at Sterkfontein and Kromdraai, have revealed a group of higher Primates which are very much nearer to man than any living anthropoids, or any of the fossil forms previously discovered. Though the brains are sub-human in size, they are much nearer in structure to that of man than are the brains of the gorilla and chimpanzee, and the dentition is practically human. All the fragments we have of the post-cranial skeleton are so nearly human that had they been found isolated most anatomists would probably have maintained that they were human.

We know the distal end of the femur of the Sterkfontein ape-man, and a perfect os capitatum (os magnum); and of the Kromdraai ape-man we have the distal end of a humerus, the proximal end of an ulna, a metacarpal and a number of phalangeal bones of the hand, and a few toe bones.

In the block of matrix in which the Kromdraai skull lay, there was seen a piece of very badly weathered bone. It looked very unpromising; but when cleaned out it proved to be the most important part of the right talus. The fragment consists of rather more than half the bone, and it shows the greater part of the proximal or upper side. The articular surfaces for the tibia and fibula are nearly