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A Doctor Looks at the African*

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In this talk I should like to discuss the African, giving the point of view of the medical man who, because of his close contact with him and knowledge of his behaviour in sickness and of his ailments themselves, may be in a better position than others to understand him. By studying the body and mind of the African the medical man is well able to assess the intellectual capacity of these people in the light of present knowledge and compare it with that of the European.

Whoever deals with any study in the African is always faced with two aspects to his make-up, and it is not easy to decide which is operating in any particular case. Whenever we record a fact about him we are concerned to know how much on the one hand it is determined by racial, genetic or anatomical causes, and on the other by environment. The environmental factor is largely one of culture and in which both disease and climate play their part. Are there any anatomical and physiological differences in the viscera and particularly in the brain of the African and the European? And if differences exist, can they be attributed to environment? For instance, we know that Africa is the hottest continent with an enervating climate, and in most parts of Africa one is struck by the large open spaces with a low density of population. The scenery tends to be monotonous and the tempo of life is greatly dictated by whether there is rain or not. The diet is predominantly carbohydrates, and with a few exceptions protein is lacking from it and its vitamins content largely defective. Included too in the environment would be the culture and religion of the people—a very important matter which can greatly

affect their drive and quality of effort. And last but not least, disease can affect the organ or gland in the body, and in Africa there are a number of diseases which are particularly liable to affect the brain.

Medical authorities have studied the effects of disease on the body and mind of the African. For instance, Carothers in Kenya considers that, in his experience, 15 per cent. of African admissions to a mental hospital can be attributed to infective diseases, such as syphilis, which is the most important offender in this respect. Many hold that permanent mental impairment results from cerebral malaria. We know too that bilharzial and hookworm diseases lead to debility, which in its turn, it is argued, can affect the mental capacity of an individual. The brain capacity can be markedly affected by disorders of nutrition. Pellagra is a classical instance. Protein lack can affect many organs, including perhaps the liver and the blood. The diet of the African is notoriously low in certain vitamins. The frequency with which the liver is damaged in the African, often leading to cirrhosis, no doubt accounts for many of the mental or psychological disturbances we meet. In my hospital practice at least 10 per cent. of the admissions have cirrhosis of the liver and many of them suffer from states of anxiety and confusion. We see far more cases of enlargement of the breast in the African male than in the European one, and notable authorities like Professor J. N. P. Davies, of Uganda, speak of feminisation of the African male. One of the reasons given for this is the inability of the liver to inactivate endogenous oestrogens.

Many authorities attribute the different patterns of disease seen in the African to the fact that his life bears less strain and, perhaps too, less anxiety than that of the European. The pressure or strain of work is not as marked for him as for the European. Thus psychosomatic disorders such as coronary thrombosis, thyrotoxicosis, gastric ulcer and eczema are rarely met with or not as severe in him as in the European.

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But there are certain definite structural differences between the African and the European. For example, the African baby is smaller and lighter. A large number (nearly half) are born with a mongol spot over the sacrum—a rare phenomenon in the European. Their bones close at a different age from those of the white child. Certain differences exist in the frequency of the Rhesus factor. An Rh negative mother is uncommon, and therefore the many complications resulting from this in the European are much more rare in the African. Very interesting too is the presence of the sickle cell trait in the blood of the African. This trait, for practical purposes, is never seen in the European. Much fewer Africans are colour blind and the myope is exceptionally rarely encountered.

Arguing along these lines, one might conclude that structural differences might well exist between the brains of the two peoples. There is good evidence that the brain of the African weighs only 89 per cent. of that of the European. Its volume too is 165 c.c. less. In the American negro too the volume of the brain is less than that of the white man. The African brain is also supposed to be relatively long and narrow when compared with that of the European. In the Bantu the frontal and occipital regions occupy a slightly smaller portion of the brain, whilst the parietal region is slightly larger. These differences in the frontal lobe are said to account for the idleness of the African. There seems to be general agreement that there is a greater degree of fissuration in the white man's brain. Very little work has been done on the histology of the brain, but the research on this subject that stands out is that done by Vint in Kenya. He found that the supragranular layer of the cortex, the last to be evolved, is only 84 per cent. of that developed in the European and that the thickness of the cortex of the African brain is narrowed because of this.

If Vint's work is correct and is corroborated by others it would seem to indicate that the brain of the African is not as highly developed as that of the white man. But many criticisms can be made of Vint's work. One is that he was dealing with Africans who may have been suffering from or who had suffered from various illnesses such as nutritional disorders, which are known to be capable of affecting the brain.

Two recent observations indicate that the brain of the African is not deficient in structure, and that if there are any differences between the brains of the two races, they are of no significance.

In Uganda, Marcelle Geber and R. F. A. Dean have found that up to the age of three years the psychomotor development of the African child was usually in advance of European standards and that the advance was greatest in the youngest children. It was established that at the age of two or three weeks the development of the infant was as good as twice or three times that age in the European. Previously Geber had shown that in the first year of life the African passed the accepted milestones of development, such as raising the head, sitting, standing and walking, at an earlier age than the European child. In their joint researches amongst the Buganda tribe, Geber and Dean found that a new-born baby corresponded in activity with a European infant of four to six weeks. It could even raise its chin, and when placed on its belly on a table could scrape it with its fingers. There was less flexion in the African child and remarkable control of the head.

The second observation which has provided much useful information is that of Dr. Verhaegen, of the Congo, who studied the EEG patterns in the Congolese Bantu. He found that the EEG patterns differed in no important respects from those of the European and American groups. This work corroborates that carried out by Mundy-Castle *et al.* in 1953 in South Africa, where these workers obtained EEGs in the Bantu identical with those in the European. Earlier work by Callais showed the presence of gross changes in the EEG patterns in the French Congolese, but again his findings were criticised because it is alleged that many of his patients could have suffered from illnesses such as trauma, infection and nutritional disorders, which had not been excluded.

Both Verhaegen and Mundy-Castle noticed a slightly lower frequency of the beta rhythm and the disappearance of the alpha wave on the opening of the eyes. It is thought that a relationship might exist between this observation and the fact that the African finds it difficult to concentrate.

Thus the findings of Geber and Dean and the results of the recent EEG work in the Congo seem to me to indicate that no significant structural differences exist between a European and an African brain and that any differences that arise in their brains are due to variations in culture and environment. Therefore the African brain, given the same opportunities for development and impression as the European, is equal to it.

There is a world of difference between the pre-literate African and the one who has had a good modern education. In America the evidence reveals that the better the home and school background of the negro, the closer does he approach the European. Therefore most of the intelligence tests which have been carried out in Kenya and South Africa are not acceptable because they do not take into account the environmental differences between the two races. As will be expected, their figures show the African child or adult to be at least 15 per cent. below the European (Fick, 1929; Oliver, 1932). The same criticism can be made of the aptitude tests carried out to show fitness for certain tasks. These tests demonstrate that the African child has a lower ability to manipulate spacial relations, especially in three dimensions. The mean achievement of the adult too is lower than the European mean.

I agree that the psychological development of the African infant up to the age of two is perhaps as good as that of the European. The African infant lives in close relationship with its mother, carried on her back in a rhythmic and happy association. It is breast-fed on demand for at least 18 months, and in this respect is superior to the European. Neuroses are less frequent as a result of this more natural method of feeding than by the clock, as favoured by the European. Thumb sucking is very rare in them.

After the first two years, cultural differences between the two races become very striking. From an early age the European child is introduced to balls, building blocks, letters and mechanical toys. He sees mechanical devices around him and soon becomes familiar with spacio-temporal relations and mechanical devices and causes, and soon realises that the material world works on general laws and that he will not progress very far without personal striving. He is encouraged to integrate his knowledge and he knows that what he does in this world is largely of his own making. But how different this is with the African child and adolescent, who is at a great disadvantage. His thought is dictated by a closely woven network of rules and taboos and events are explained as magical processes, and so natural inquisitiveness is frowned upon. His whole being is dictated by "Which spirit has been offended?" In African culture as we know it all think and act alike. The education of the African is by verbal instruction, and his creative outlets are confined to song and dance. His culture is musical, verbal,

emotional and dramatic, and he lives in a world of sound rather than of sight. What sort of man or woman does this culture produce?

The African adult is said to have a monoideic consciousness in contrast to the polyideic consciousness of the European (Carrothers, 1953). Monoideic consciousness depends on the perception of external matters only, whereas polyideic psychology requires not only realisation of what is seen, but also the memories of past experiences. For instance (as Carrothers quotes), if one looks at the faces of passers-by in a town in Western Europe, most of the people are impelled by some inner purpose, but are also alert to what is going on around them. But if one looks at a crowd of Africans, most of the faces express complete interest in what is happening around or else show complete apathy. The result of this leads first to a mental uniformity; secondly, to a good rota memory; and thirdly, to a consciousness in which attention is undivided and concentrated on external stimuli, especially to those of the spoken word, corresponding almost, at times, to a prehypnotic state, and this is probably one of the factors which has to be considered when attempting to explain their spirit possession.

Thus African culture has developed on lines which demand ability for memorising detail and for behavioural conformity. It frowns upon the expression of originality or profundity of reason.

But there is also a credit side to this monoideism. It explains the African's personal charm, his full attention, his quick sympathy and the ability to continue in dull routine work. His manners and poise are better than the European's. He swiftly forgets his wrongs and shows far less psychiatric disturbances than those with a polyideic consciousness.

In the United Kingdom in 1938 four persons per thousand of population were notified as being insane and under care. In the Gold Coast it is 0.3 and in Nyasaland it is said to be 0.06. In South Africa it is also low. Even making allowances for inaccuracies in the African figures, they show a significant difference from those of Great Britain and America. There appears to be a lower incidence of mental derangement in rural Africa as compared with Western Europe or North America. Further, as one would anticipate, there are differences in the psychiatric categories of disease. Mental deficiency is rare and mongolism exceptionally so. In the affective disorders—that is, the manic depressive psychoses—the mania is commonly seen, but depression is rare. We know that

suicides are uncommon, attempted suicides rare and self-mutilations extremely rare. Obsessional disorders and stammering are rare too. Common in the African, however, is schizophrenia. But here again there is a difference, as systematised delusions are often lacking. Epilepsy is very common, as are hysteria and the psychopathic personality.

In America, as he approaches the European in culture and environment, the negro tends to develop the same psychiatric disturbances as the European. The net result of all this information is that no scientific proof has so far been produced to show that there is a racial difference in intelligence. Any differences encountered are due to his educational and cultural environment, and as the African progresses (if that is the right word to use), these differences will become less. Of one thing I am certain. With time, and given the opportunity, the African's brain should be able to compete on equal terms with

that of the European. But how soon this will be is another subject which does not concern us to-night.

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The Amoeba and I or-Wot! No Cure?

*I've got a small amoeba
 That thinks it's got to heaven,
 It's been living in my colon
 Since nineteen forty-seven.
 It's multiplied exceedingly
 For many generations,
 And is living there in comfort
 With its friends and its relations.*

*Though I am not a gourmet,
 I'm fond of food and wine,
 And having friends for luncheon,
 Or going out to dine;
 And isn't it annoying
 Of these horrid little pests;
 Wherever I go—they come too
 As uninvited guests.*

*It somehow takes the joy away
 From all I have to eat,
 To think that I'm providing
 The amoebae with a treat.
 I don't deny them anything,
 I give them bite and sup.
 And still they are unsatisfied;
 It's me they're chewing up.*

*Of course I've tried to kill them;
 In fact, it's total war,
 But though they die in thousands
 There's always thousands more.
 And if I get the upper hand
 Alas—about a score
 Retiring into crevices
 Strategically withdraw.*

*Now if in desperation
 You go and ask for aid,
 You'll find that your physician
 Will start a great crusade;
 He'll put you into hospital
 And give the amoebae H—,
 The only trouble being
 You'll be having it as well!*

*They rush at you with needles,
 And when your spirit quails
 They wash away your wickedness
 With tubing and with pails.
 They give it not a moment's rest
 From scientific skill;
 They blast it with a capsule
 Or pursue it with a pill.*

*They give you double vision
 And stand you on your head.
 No wonder that they've got to keep
 You lying flat in bed.
 And if you get sciatica—
 Well, what's a spot of pain;
 Just thank the Lord you haven't got
 An abscess on the brain.*

*Now with the humble guinea pig
 I'm proud to share a place
 In the battle to extinguish
 The amoebae as a race.
 But alas, the more I'm treated
 The plainer do I see
 That the death of my amoeba
 Will be the death of me.*

OLIVE ROBERTSON,

(With apologies to my physician.)