

Recent Advances in Anthropology in Africa*

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Twelve years ago I selected as a topic for my Presidential Address to the Anthropology section of the South African Association for the Advancement of Science the subject of "The Present Position of Anthropology in South Africa." That was shortly after the discovery of the Taungs skull, which provided our first knowledge that a very advanced type of ape, nearly akin to mankind, inhabited Southern Africa about a million or so years ago, before the coming of man.

Prior to 1925 the state of our anthropological knowledge in South Africa was very meagre indeed; even to-day we have only skirted the fringes of the subject but a retrospect, however inadequate, over what has happened can serve the useful purpose of noting the progress already made and envisaging the future that lies before investigators in this amazing Continent in the ample field of Anthropology.

At that time (1925) confusion existed as to the constitution of our indigenous population. It was realised that the Bantu differed from the Bushmen, and that both differed from the European physically, but the so-called Hottentots were a great mystery. Some thought they were another race entirely, others that they were a hybrid race formed by the mingling of Bushmen with Bantu. The Bantu themselves were a problem because they resembled the Negroes of the Soudan and West Africa, and yet differed so markedly from them that it was thought they might represent a different type of Negro race. Another problem was the Pygmies of Central Africa; were they still a further race or were they first cousins of the Bushmen?

It became obvious that if these questions were to be answered years of labour lay before a large body of men and women. It was necessary that as great a collection as possible of skeletons of all these groups of people should be made—skeletons concerning which the age, sex and race were precisely known. A beginning was made, and during the intervening period some 200 such specimens have been gathered into our anthropological collection. Instead of 200 in all we need a minimum of 200 (100 men and 100 women) of each tribe before we can know the physical differences of adults from tribe to tribe

and as there are some fifty or more tribal groups in the Union, we therefore require a minimum collection of 10,000 complete skeletons, collected for present enquiry and preserved for posterity. At our present rate of progress this work will take 100 years before it is completed.

For simplicity's sake I only refer to the study of Bantu adults; but any of you, who have thought about the matter, will appreciate that human individuals grow and their structure alters from year period to year period. For the proper study of growth changes in the skeleton we need equally large collections for every month of the year until the end of the first year and after that collections of children of under five years of age, under 10, 15, 20 and 25 years of age and, finally, for the study of senility, of adults in the last decade of life.

Further, I am referring only to bones; equally large collections of every organ in the body are wanted. I refer, too, only to gross anatomical study. What of the histological or microscopic study of all the parts of the body? Even then we have only dealt with the normal structure. There remains the whole realm of abnormal structure due to maldevelopment, malformation and actual disease with which the physical anthropologist must be acquainted if he is going to interpret precisely the things which confront him during his researches. In a real sense the whole of medical knowledge and practice is but a single field within the vastness of anthropology. The same may be said of every branch of human knowledge—everything we do or know being but another aspect of human affairs.

When I began to collect skeletons of kaffirs in 1923, people looked upon me as a mild kind of lunatic. They were only kaffirs! We had to make our containers out of old petrol cases and we still have to do it; after great difficulty I had a small piece of the dissecting room partitioned off to hold these boxes. Enterprising medical students, badly in need of a skull or other bones, clambered over the partition in my absence and made their own personal choices. Then each box and bone had to be marked and labelled and finally, a safer storehouse had to be devised so that the minimum of damage should accrue to these precious relics. There is no need to recall—indeed, it would be impossible for me to remember the thousand tragedies through which

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that tiny collection has gone. It is better to look on the bright side of its achievements. From it specimens have gone to St. Louis in America in exchange for Red Indians, to Florence in Italy in exchange for Europeans, to Madras in India in exchange for Indians, and to Kyancutta in South Australia in exchange for Australian aborigines, so that our local investigators of living South Africans should have at least a little of the necessary material for comparison with other races of mankind.

Bit by bit these skeletons have been investigated; the practical importance of and the justification for such a collection and the work that has been done upon it has been exhibited recently by the analysis of the skeletons found at Mapungubwe in the Northern Transvaal. Owing to our having collected fifty odd Transvaal Basuto skeletons it was possible to compare the pre-historic gold-mining and bead-fashioning population of Mapungubwe with our modern living Bantu, and to prove that they were not Bantu at all but a race of people who lived there before the great invasions of the Bantu. The significance of this discovery for prehistory in South Africa cannot be exaggerated. Still more recent work on the Bambadyanalo site in the vicinity of Mapungubwe shows that similar culture was due to a group of people still less like the Bantu than are the folk of Mapungubwe.

This leads us to the question of what people inhabited South Africa before the coming of the Bantu? This involves our speaking about the Bushmen and Boskop Man. In 1913 a skull-top and a few other fragments of a fossilised skeleton utterly different from the Negro, Bushman or European was found by two farmers digging an irrigation trench along the Mooi River valley at Boskop. In 1923 the same type of skeleton was found eighteen feet below strata containing Bushman in the Zitzikama forest caves. Since that time variants of this Boskop type of man have been found at similar depth in the Matjes River cave of Eastern Province and in the Fish Hoek Cave on Cape Peninsula; so we know that the big-limbed, big-brained, Boskop type of man preceded the Bushman all over Southern Africa.

Other remains of this Boskop type have come from Kalomo and from Mumbwa in Northern Rhodesia, from deposits in Kenya Colony, and from Asselær along the River Niger, inland from the Gold Coast of West Africa. At Asselær they come from an ancient stranded river terrace of great age. Obviously we have from all these records information of a widely-spread human type of great antiquity, perhaps coeval with Neanderthal Man in Europe 25-50,000 years ago, dispersed over Africa from North to South.

Now the very interesting part about Boskop Man is that the physical features in which he differs from the Bushman are those in which the so-called Hottentots differ from the Bushman. Further, we know that the so-called Bushman levels of our coastal caves are not occupied by purely Bushman skeletons only but by skeletons of hybrids that are partially Bushmanoid, and partially Boskopoid. The proportion of Bush or Boskop qualities present vary from individual to individual, but where statistical data have been collected, it seems that the respective characters are mingled in the proportion of approximately one Bush to one Boskop, or what we would expect if in hybridising the Bush and the Boskop features mingled according to the law of averages. A lot of work will need to be done before we can be certain of this, but the vital piece of knowledge we possess is that the Boskop Race did not die out; it was quite capable of fusing with the Bush Race and their hybridised descendants are still with us. From these hybrids Boskop types sometimes crop out in a remarkably pure form, so much so that within the same year as Boskop Men were found 18 feet under the surface of the cave at Zitzikama, Professor Drennan found one in his dissecting-room at Cape-town, and we are practically certain now that the big-boned, big-skulled "Hottentot" types are no other than our *living Boskops*. This was one of the aspects of our somatometric investigation of the Bushman group brought to the Empire Exhibition here during 1936, and I hope that, when those studies are completed and published, no doubt will longer remain on the matter.

The amazing thing that confronted Dr. Galloway and his band of collaborators in the Mapungubwe skeletons was, that they, too, were fundamentally Bush-Boskop hybrids or, if that term be preferred, "Hottentots." Hence from the physical point of view the Mapungubwe civilisation was a Hottentot or Bush-Boskop civilisation, and, as far as the work has proceeded with the Bambadyanalo population, it differs merely in having a more extensively primitive or more thoroughly Boskopoid facies than the population of Mapungubwe. This Bush-Boskop, pre-Bantu population is characteristic of our coastal middens and out cave shelters, and it was amongst them that the foreign gold-seekers came to form their settlements, communicate their arts and establish the relatively advanced cultures that the Bantu subsequently debased and finally destroyed.

There now lies in front of us the business of determining with more precision the distribution of this Boskop people before the Bushmen came

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amongst them and mingled with them; the time of arrival of the Bushmen and the factors which were responsible for the emergence of this flourishing and long since vanished civilisation. In these studies the analysis of pottery, of stone-ruins, of paintings, and engravings on stone, of burials, of Pre-European domesticated plants and animals and of every type of evidence in human arts and crafts, that can afford a clue, is of fundamental significance.

Work of this type is being done. Drs. Epstein and Curzon have added greatly to our knowledge of South African cattle, tracing their distribution and showing their origins in Egypt and India. Major Gwatkin has shown how the ridge-backed, Rhodesian, lion-hunting dog comes from the Hottentot dog, whose nearest living relatives are the dogs of Phu-Quoc, an island in the East Indies. The fat-tailed Hottentot sheep is related to those of Afghanistan, the black-faced one probably came from Persia. Much more work is required on all these animals and on the goats before we will know precisely where the various types came from, and more especially from where they arrived in the country. Incidentally the immunities to diseases these animals must have developed during their long sojourn in Africa, may well prove to be of economic value to the country by suitable breeding experimentation.

Professor Kirby's works on Bantu, Hottentot and Bushman music and musical instruments, Professor Watt and Mrs. Breyer Brandwyk's publications on native medicines and poisonous substances used by them, Dr. Fox and his co-workers' analyses of the plants used by S.A. natives for food, Professor Maingard's studies on the distribution of the bow in South Africa, Mr. B. H. Dicke's papers on beads and weapons, Mr. Goodwin's on weapons and native handicrafts, Dr. van Hoepen's, Dr. Laidler's, Dr. A. Y. Mason's, Dr. Well's, Mr. Trevor Jones's, Professor van Riet Lowe's and Dr. Galloway's on stone ruins—these are all examples of the means whereby our knowledge of past culture in South Africa is being accumulated. They also make evident the immensity of the labour confronting the science in these fields, which they have merely sampled.

In language the activities of Miss Bleek, Professors Doke, Maingard, Engelbrecht, Lestrade and others have resulted in a great expansion of our information, much of which is incorporated in the journal "Bantu Studies" published in this University. Vocabularies, folk-lore, grammars and other linguistic data gathered by workers now dead, have seen the light at long

last in that publication to the lasting advantage of all students of language. Living remnants of ancient Bushman languages have been rescued from the Sandawi and Hadzapi tribes in Tanganyika Territory; the close affinities of the Bushman and Hottentot language groups have been demonstrated, and the Bantu languages has been found to incorporate a great wealth of ethnological information, which can be unlocked by the comparative philologist. Best of all, perhaps, is the growing determination of present students to be familiar with and even to master at least one native language. The Students' Medical Council even went so far as to recommend to Faculty that the inclusion of a native language in the curriculum be made compulsory. The resolution led to the establishment of a voluntary course; it was attended by 60 students who dwindled to 20, and only 5 took the qualifying examination. Still the experiment was made, and from that start development can proceed. As a sign of growing alertness in the relatively unexploited field of African language it constitutes a landmark.

The publication of Mr. Duggan Cronin's photographs of native types in the various tribes throughout the Union has preserved for all time a vast amount of ethnographical and physical anthropological information. Van Warmelo's statistical and other data relative to the distribution of the living natives in his compendious "Preliminary survey of the Bantu Tribes of South Africa," published in 1935, is also a monument of industry. Elsdon Dew's analysis of blood-grouping in over 5,000 Bantu natives following on Dr. A. Pijper's earlier studies of Bantu, Bushmen and Hottentots has also illuminated our understanding of the physical structure of our indigenes from another vital aspect. Dr. Charles Berman's researches upon the distribution of "Primary Cancer of the Liver in South African Natives" and Dr. Dreosti's studies on the physiology of native mine workers provide information on the medical side. These and other similar products illustrate the rapidity and diversity of our increasing knowledge of the living population.

Perhaps more immediate to our interests in the Department of Anatomy and probably the reason for your request that I should address your Society are the advances in our knowledge of the remoter past of man in Africa. Here progress has been very conspicuous indeed. I have already referred to the Boskop type and its wide African distribution. Even more amazing is the Rhodesian type of early mankind in South Africa. Found 80 feet underground under an age-long accumulation of bone breccia consolidated by zinc and

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lime salts, this unquestionably ancient human type shows the most ferocious type of human visage known to science. Neanderthaloid in type, many scientists have expressed the view that it is of relatively recent date. Mennell, the Rhodesian geologist, on the other hand, is confident that it is of great antiquity and probably coeval with Neanderthal man in Europe.

Of unquestionably great age is the Neanderthaloid man found by Professor T. F. Dreyer, twenty-five miles north of Bloemfontein at Florisbad, under some seven layers of alternating sand and peat, some of which contained Moustierian implements. That skull must date back to Middle Pleistocene times. Owing to its incompleteness we cannot define the exact relationship of Rhodesian Man to Florisbad Man, but it was probably fairly intimate. In any case, taken together they show that Neanderthal Man must have been dispersed over the whole of Africa for his remains to be recovered on the one hand here in South Africa and yonder there in Rhodesia and, on the other hand, at every pleistocene point of entry into Europe and Asia from Africa, namely, Gibraltar, Malta and Italy, and finally Palestine. This Neanderthal type is known also in France, England, Germany, and most recently of all has been discovered near Moscow in Russia. We therefore know that the whole of Africa, like Europe, passed through a Neanderthal phase, and that Africa was one of the principal homes, if not actually the birth-place of this amazing race.

There is considerable reason for regarding Boskop Man, and the Australoid peoples of Tasmania, Australia and India as derivatives from a common stock intermediate between *Homo sapiens* and *Homo neanderthalensis*. The probability that this ancestral stock will be discovered in Africa is heightened not only by the known facts of the distribution of Sapiens and Neanderthal man, but also by the facts, firstly, that Boskop, Florisbad and Rhodesian Man are somewhat intermediate forms between the two, and secondly, that we find in Africa both in the fossil form (as at Mistkraal, Barkly West and the Cape Flats) and also amongst the living population, almost true Australoid types. We can confidently look forward to numerous discoveries up and down the country, which will gradually throw detailed light upon these central problems of human evolution, during the remainder of the present century. The Rhodesian and Florisbad types appear to represent offshoots from the Neanderthal type, after it was evolved. Coeval therewith a type must have existed from which later the sapient and—if we like the term—these “quasi-sapient” human types emerged.

We find Africa richer than any other part of the world in her possession of early sapient types, such as the Negro, Bushman and Pygmy. She is richer also in her treasure of what we have elected to call the “quasi-sapient” types such as Boskop Man (of Boskop, Zitzikama, Matjes River, Fishhoek, Asselar, etc.) and Australoid Man (of Mistkraal, Cape Flats, Barkly West, etc.). She promises to be richer in her store of Neanderthal types (now typified by those of Rhodesia and the Orange Free State). Now, there is a phase of human evolution prior to these, which may for convenience be termed the pre-Neanderthal stage. It is represented elsewhere by forms such as *Pithecanthropus*, the ape-like man of Java, and by *Sinanthropus*, the early form of mankind found in China. Up to very recent times, however strongly we suspected them, no such types had been found in Africa.

During 1934-36, however, Dr. Kohl-Larsen was searching the north-east end of Lake Eyassi in Tanganyika Territory, where a fossil deposit of great age had been exposed by the recession of the waters during the dry season. The deposit contained three strata, the top and bottom ones carrying fish bones, the middle one portions of three human skulls associated with stone artefacts of Levallois type and fossilised remains of zebra, giraffe, warthog, hippopotamus, rhinoceros, baboon and the like. The remarkable feature about the human remains is that when joined together they exhibit the most primitive type of man yet discovered in Africa—a form not far removed from Peking and Java man. This discovery is fundamental as supplying a further link in the chain of evidence for Africa as the true cradle of mankind. When further discoveries of this human type have been made in the Continent we will be able to appreciate much more clearly Africa's part in the human story. It is evidence upon this particular phase which is especially needed because, as soon as we proceed backward beyond it to the pre-Pithecanthropus stage of human evolution we have, as it were, left mankind and confronted the ape, that became man; we are dealing no longer with the ape-like man, but are searching for the man-like ape.

It is precisely in this more remote search that Africa has helped anthropology most. There is no need for me to recount the story of *Australopithecus*, and how it taught us to expect even in the inhospitable Kalahari desert fragments which, assembled in a wider mosaic, would illuminate the epic of mankind. All of you know to-day that every lime-deposit in Southern Africa is a potential museum of early humanity. Within the last two years Dr. Robert Broom has found

two of these man-like apes, one of them as near as Sterkfontein in Krugersdorp district. It is a characteristic of dolomite areas, that they are riddled with caves. Earliest man and pre-man were so weak and defenceless that they took advantage of every shelter. They were troglodytes, cave-dwellers. For them a dolomite country was a heaven-like haven of refuge. Fortunately, too, for us, limestone preserves bones, the lime penetrating them and consolidating them in an external mausoleum. It is in such material that Peking Man was found in Asia, Rhodesian Man in Rhodesia, and all the Australopithecids in Bechuanaland and the Transvaal.

It is a glorious prospect for future anthropologists that this marvellous dolomite reserve in Africa is virtually untouched. It stretches east and west from the Kalahari across the Transvaal to Swaziland, and north and south from the Cape to the Congo. It will be a thousand years and more before we will know all that it contains, even if the whole population of this country were to concentrate on finding it out.

It is with this thought of what the future holds for us in anthropology, that I would like to leave you. I have spoken sketchily about certain of the things which have rendered it worth while for many of us to spend time on bones, fossils and stones during the last few years. But there are far richer discoveries awaiting us.

At the present time dozens of our students and graduates are busy in their spare time collecting anatomical, physiological, histological, medical and surgical and even economic data about the living Bantu. The steady progress of their working programme over the coming decade is going to result in an incalculable amount of scientific information, for which the world is waiting. Meantime, I am sure other students are going to analyse their languages and build up their literatures; still others are going to study their arts and crafts and interpret its message to mankind; others will concern themselves with their past, present and future living conditions—their houses, customs, laws, properties and organisation—and assist in remoulding them to the collective advantage of our African civilisation. They will find time, too, for those children of men—the Bush and the Pygmy peoples—and will succour, protect and preserve them for the instruction and delight of generations to come. They will delve into their past and reconstruct its bewildering story, and I hope I may be present with some or all of you in 1947 or 1957 or 1967, perhaps even 1977—doubtless as a doddering old fool—along with the hundreds of South Africans, some of them now in the schoolroom, others as yet unborn, who will by then have their rank and place in the army of anthropologists.

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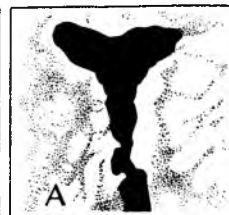
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