THE SEARCH FOR ADAM

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When the world was created in 4004 B.C. on October 23rd, at 9 o'clock in the morning, man, it must be assumed, was created on or about October 29th and he was presumably endowed with all those attributes which allow us today to distinguish him from his nearest cousins, the great apes.

Since this view was put forward in the 17th Century however, digging into the past has thrown up problems which will not permit such a simple solution to be propounded. The first, and most basic problem which has come to light is that of the definition of man.

Archaeologists, who rely on material remains, now define man in two ways. One is physiological - how big is the brain? did he walk upright? etc.; the other is cultural - did he make tools? Neither of these is particularly satisfactory, especially when we are investigating the earliest men. In both cases certain rather arbitrary lines have been drawn. This arbitrariness is perhaps best seen in the first case, when a lower limit of 750 c.c. is set on 'human' brain size. There are a number of creatures whose brains, on the average, are just around this size. Are they men?

To answer this question, we turn to the other criterion - did this creature make tools? Now a chimpanzee can reason out that he must use a handy stick to poke a banana out of a tube, that is, he can use simple tools. We might say that if he broke off the side twigs, to make a straight stick, then he was making a tool. And it is probably that the earliest tools were of this type - old sticks and stones which were used in immediate situations, either directly, or very roughly knocked into shape. This being so, such tools are extremely difficult to distinguish from natural materials.

Thus evidence from either of these classes of tools labours under two difficulties: Not much of it survives over the 4 of a million years or so which separate us from the earliest men, and it is frequently difficult to tell a naturally fractured rock from one which has been purposely shaped in a very rough way.

These problems come into particular focus when we consider the case of Australopithecus, numerous skeletons of which have been found in southern Africa. The brain capacity of this being was larger than that of any ape, but a little below the arbitrary limit we have set. The shape of his pelvic girdle (hip-bone to you) makes it appear likely that he walked upright for some of the time, or perhaps, ran upright. His teeth were similar to and worn down in the same way as, those of man, which suggest that he had an approximately similar diet. Further, the jaws, neck and teeth being so man-like, it is unlikely that
Australopithecus used these to fight with, as, for example, baboons do. Since he did not use his natural weapons, it is argued that he must have had extracorporeal weapons, or tools.

This brings us to the second criterion. Here, although obvious stone tools have been found in a few of the Australopithecine caves, these are in a small minority of the total number of caves. Further, it has been argued (a) that those caves which do contain tools are geologically later than the ones which do not, and/or (b) that these tools are the artefacts of a 'more developed being who lived at the same time as Australopithecus, and who, from time to time, ate him. To support (b) it is pointed out that many Australopithecine skulls have been found bashed in with a blunt instrument in order to remove the brain; but it is worth noting that no material evidence whatever of this more developed being who ate Australopithecus has been found.

Australopithecus has been found mainly in South Africa. From various other parts of Africa we have a number of relatives - Paranthropus, Atlanthropus, Zinjanthropus, and so on. Because of two major difficulties we cannot say much more at the moment than that these creatures are related to each other in some way. One major difficulty I have already mentioned - the survival of evidence in many cases we have to rely on the odd skill or bone.

The other difficulty is chronological. Already in the case of Australopithecus we have seen one case of how the lack of a basic chronology may affect our understanding. This handicap has not yet been overcome in any case involving the most primitive man. The time involved is perhaps 800,000 ± 200,000 years and we really need to be able to measure age in units of not more than 10,000 years, that is, to within 1% accuracy. There is as yet no scientific method which approaches this degree of accuracy at this distance with some sort of chronological framework. Without a chronology of this degree of accuracy, we are very limited in our thinking.

In the light of these difficulties, a recent attempt at investigating early man from quite a different angle is of interest. This is the attempt to compare the social life of man's closest relations - monkeys and apes - with the social organisation of primitive societies. Here too there are of course problems; in particular, there are no living primates which can be equated directly with man's ancestors, nor are any contemporary primitive peoples identical with our ancestors. We can therefore work only in generalities.

A fundamental difference that we discover by this method is that primate social behaviour is biologically determined, whereas human social behaviour is at least partly, culturally determined. That is, the social life of a particular primate species is un-
changing in an unchanging environment, unless the species itself changes in some way. This is not true of man, whose social orders obviously vary independently of environment and the minor biological differences between us. Human society, that is, controls biology by culture.

One of the important parts of society in which this difference can be observed is in the field of sexual relations. All human societies have developed a great many cultural controls over the use of sex, and many of these controls act to suppress competition in order to allow the social group to function with less friction. In no primate societies can we observe a similar phenomenon.

This type of argument has not, as yet, been carried far, and there is so far no attempt to explain why or how this change towards humanity should come about. And we must be careful in our use of this argument, for none of its findings can be checked by any material evidence, since these facets of society do not leave archaeological evidence. Still, there is no doubt that this sort of investigation can help to pinpoint the ways man differed originally from the primates, and, when taken in conjunction with other evidence, it may be useful to us in our search for Adam.