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SOME ARGUMENTS AGAINST THE HYPOTHESIS OF HUMAN EVOLUTION FROM ANY ANIMAL SPECIES.

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THE hypothesis that the human race has arisen by evolution from some animal species, though accepted as true by very many present-day naturalists, is not sufficiently supported by ascertained facts or strict scientific proof.

On the other hand there are certain valid arguments against it, some of which are considered in this short paper. Those who accept the above-mentioned hypothesis differ in their views as to the exact course of this evolution. There are two main groups of adherents : (i) Some think that this human evolution originated with some species of anthropoid ape, akin to that called *Dryopithecus*, whilst (ii) others assert that no ape species stands in the line of development of Man but that his true ancestor was a form of primitive mammal.

One point on which all evolutionists are agreed is that this evolution of Man must have taken a vast period of time from its initial stage of animal to that of the emergence of the true *homo sapiens*. In his address as President of the British Association at Leeds in 1927 Sir Arthur Keith puts that transformation period at about " a million years on a modest scale of reckoning."* The evolutionists have not, however, followed out to its necessary consequences their large draft on the Bank of Time in this assumption of a vast period taken for granted as essential for the transformation of some form of animal into that of true Man. Meanwhile there are several important questions to which no clear answer has yet been given, viz. :—

(1) What was the effective driving cause of this evolutionary transformation of animal to Man ?

(2) Why has that process apparently come to an end ? There does not seem to be any continuance of it at the present time.

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* The text of this Address by Sir Arthur Keith is given in a small book by him called "Concerning Man's Origin," published by Watts & Co., Fleet Street, London.

(3) Was that evolution carried out by a small or very large group of animal forms changing simultaneously? It would seem to be necessary for a large number to take part in it, because a species small in number has a restricted area of operation and hence is liable to be exterminated by any large-scale catastrophe such as flood, drought, causing failure of food supply, or by sudden increase in predaceous animal foes.

Even if such danger does not quite exterminate the evolving animals it may greatly reduce their number and hence check the evolutionary process or stop it altogether.

At this point then it is necessary to discuss the law according to which population of animal or man increases with time in the absence of special catastrophic events, such as those just named, which may even cause a large sudden decrease of population.

If p denotes the population, animal or man, at any time and place and P the increased population n years later then if p increases by $\dfrac{1^{\text{th}}}{r}$ part in a year, at the end of 1 year it would have become $p(1 + r)$, and at the end of two years it would be $p(1 + r)^2$ and at the end of n years it would be $P = p(1 + r)^n$. Taking ordinary logarithms of both sides we have

$$\log P = \log p + n \log (1 + r).$$

If the population doubles in N years then from the above equation we have

$$\log 2 = N \log (1 + r)$$

or

$$\log (1 + r) = \frac{1}{N} \log 2 = \frac{1}{N} \frac{3}{10}$$

since $\log 2 = 0 \cdot 30103$. Hence we can write the first equation in the final form

$$\log P = \log p + \frac{n}{N} \frac{3}{10}.$$

This last equation enables us to find the value of P when the the values of n, N and p are given. Thus, if we start with a single couple, one of each sex, we have $p = 2$ and if the average time of doubling ($= $ N) is 200 years, we can see that after a period of 6000 years ($= n$) the final population P will be such that

$$\log P = 0 \cdot 3 + \frac{6000}{200} \frac{3}{10} = 9 \cdot 3.$$

But 9·3 is the logarithm of 2000 million. The average time in which the world population of mankind doubles is dependent amongst other things on the causes which act to preserve or destroy human life. These destructive causes have no doubt been much greater in the past than at present, when of recent years it appears to be doubling in about 100 years or less. Also catastrophic events such as plagues have had a serious effect in the past. Thus during the Black Death plague in 1349 A.D. the population of England fell to half, in a few months. On the other hand our modern medical and surgical skill as well as improved sanitation and infant care, have abnormally decreased the time of doubling, but perhaps leaving the average period over all historic time still moderate in amount.

Returning then to our evolution problem it will be seen that if we assume (with Sir Arthur Keith) a very large time, say a million years, for the time of evolution of animal to man, and if during that time the slowly transforming animals increase in number by interbreeding, and also assume that the food required to keep the vast multitude alive is available, then according to the equation above given, the final population P will have reached an enormous number no matter what value, within reason, we take for the average time of doubling, even say as much as 10,000 years.

Thus, putting into our equation for log P the values $n = 1,000,000$ and $N = 10,000$, we have

$$\log \frac{P}{p} = \frac{10^6 \cdot 3}{10^4 \cdot 10} = 30 = \log 10^{30}.$$

But 10^{30} is a gigantic number, viz., a billion times a billion times a million. There would not be standing room for such a number of animals on the earth. It is certain, however, that the gradually evolving animal to man population could never have reached the number just named, because long before the end of the supposed million years of transformation they would have been all starved for want of food. The growth of population is always controlled by food supply. Animals can only obtain such food as Nature supplies. Intelligent Man alone can multiply food by agriculture of cereals, fruit, and vegetables. Hence it will be seen that it is futile to assume a vast period of time for the slow evolution of man from animal without taking into account the correspondingly great increase in the number of evolving animals and obtaining certainty as regards the food supply required to keep them all alive during that time.

There is also another line of argument in addition. If we assume a vast period of evolutionary time and if during that time the gradually evolving group of animals are multiplying, and therefore also dying in due course, there ought to be a correspondingly large number of fossil remains of these partly transformed animals to man. Instead of this, exploration over a lengthy time has only given us a relatively small number of such fossil " missing links." Even if we add all the remains of Palæolithic and Neanderthal man to those mere fragments called Java, Heidelberg, Piltdown and Pekin " man " the discordance between the fossil remains and the immense number which must have existed when alive as a result of the long evolutionary or transformation period is very surprising. There is certainly an unsolved problem in this connection, viz., the paucity of the fossil remains of the partly evolved links between the animal and man.

It seems to point strongly to the erroneous assumption of a vast time necessary for that evolution and therefore to an error in the hypothesis itself. The consideration of the questions raised in this short paper should give the thoughtful reader reasons for hesitation in accepting as proved this widely propagated evolution hypothesis. Also it may show the great mistake made in allowing it to be taught to the young or expounded to the public as a demonstrated scientific truth.