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## JOURNAL OF

# THE TRANSACTIONS

# The Victoria Institute,

# Philosophical Society of Great Britain.

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EDITED BY THE HONORARY SECRETARY, CAPT. FRANCIS W. H. PETRIE, F.G.S., &c.

## VOL. XIX.



#### LONDON:

(Published by the Enstitute) INDIA: W. THACKER & Co. UNITED STATES: G. T. PUTNAM'S SONS, N.Y. AUSTRALIA AND NEW ZEALAND: G. ROBERTSON & Co., LIM. CANADA: DAWSON BROS., Montreal. S. AFRICA: JUTA & Co., Cape Town.

PARIS: GALIGNANI.

1885.

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#### ORDINARY MEETING, MARCH 2, 1885.

W. N. WEST, ESQ. (HON. TREAS.) IN THE CHAIR.

The Minutes of the last Meeting were read and confirmed.

#### WAS PRIMEVAL MAN A SAVAGE? By J. HASSELL, Esq., A.K.C.Lond.

TO the question at the head of this paper an emphatic affirmative is given by many of the leading men of science in the present day. Professor Haeckel, for instance, says, "As the twentieth stage in the human pedigree, next to these tailed apes, we must rank the tailless man-like apes (anthropoides), under which name the most highly-developed catarhines, those most nearly related to man, have been grouped. They originated from the tailed catarhines by the loss of the tail, the partial loss of their hairy covering, and a further development of the brain. It is evident that no single one of these existing man-like apes is among the direct ancestors of the human race; they are all the last scattered remnants of an old catarhine branch, once numerous, from which the human race has developed, as a special branch and in a special direction. Although man ranks next to this anthropoid family, from which he doubtless directly originated, yet the ape-men (Pithe canthropi) may be inserted here, as an important intermediate form between the two, and as the twenty-first state in our ancestral series."

The learned Professor goes on to say: "In the Natural History of Creation" (vol. ii. p. 293) "I have applied this name to the speechless primitive men who made their appearance in what is usually called the human form, VOL. XIX. ' P

that is, having the general structure of men; but yet being destitute of one of the most important qualities of man, namely, articulate speech, as well as of the higher mental development connected with speech. The higher differentiation of the larynx and of the brain, occasioned by the latter, first gave rise to the true man."\*

Passing from Germapy, let us listen to the answer to the question as given by some of the leaders of scientific thought in England. What say the disciples of the late Charles Darwin? You ask us, say they, was primeval man a savage? We answer, of course he was; for "man is descended from a hairy quadruped furnished with a tail and pointed ears, probably arboreal in its habits, and an inhabitant of the old world. This creature, if its whole structure had been examined by a naturalist, would have been classed amongst the quadrumana, as surely as would the common, and still more ancient, progenitor of the old and new-world monkeys."†

Now, if what these men say be the truth, it is clear that, unless the particular family of the apes from which man descended had made some advance towards civilisation, while still in their apish condition, then man, as the direct descendant of the ape, must have commenced his career as an untutored savage, the son of a brute beast. But let us pass from German professors and English savants, and interrogate the inspired writer of the book of Genesis. What say you, Moses? Does man owe his origin as a man to the struggles of some ape-like creature to improve its condition? Did he commence his career as an untutored savage? Mark the "No!" an emphatic "No!" "For answer which is given. God said, Let us make man in our image, after our likeness." "And God created man in His image, in the image of God created He him, male and female created He them."

Let us now put the question to one of the heathen poets, Ovid. What say you, ancient sage? Was primeval man a savage? Here is his answer:—

"A creature of a more exalted kind

Was wanting yet, and then was man design'd: Conscious of thought, of more capacious breast; For empire form'd, and fit to rule the rest. Thus, while the whole creatures downward bend, Their sight to their earthly mother tend, Man looks aloft, and with erected eyes Beholds his own hereditary skies."

<sup>\*</sup> The Evolution of Man, 1879, vol. ii. pp. 180-2.

<sup>+</sup> Descent of Man, Part II. ch. xxi.

Here, then, we have a direct antagonism between the sacred narrative and the dictum of modern thought-science so-called. The one tells us that man was created; the other asserts that he is simply a development, an improved descendant of some particular family of apes. The one declares that man was created by God as a distinct race; the other that he was evolved according to natural law, and that he can claim no higher origin than any other animal. The one says that God made man in His own image; the other asserts that he has a community of origin with the brutes. Which are we to accept as the truth? Are we to give up the Old Faith, and embrace the New, or keep to the old paths and refuse to walk in the new? As for ourselves, we have made up our minds that the "old is the better." But, for the sake of others who may be halting between two thoughts, we propose to question the advocates of the new on the nature of the proofs that man has descended from the family of the apes. Here is their answer.

You ask us, say they, why we assert that man is a direct descendant of the anthropoid apes? "Because in his embryonic state he passes through all the intermediate stages between the lowest and highest members of the animal kingdom, and in his anatomical structure he is closely allied to the quadrumana."

In reply to this, we beg to say that the first reason given is not conclusive. It is very probable that many of the supposed embryonic resemblances to the lower forms of animals are present more in the imagination of the observers than in fact; and, in the next place, the fact of the similarity of structure in man to the apes does not prove the identity of origin. When speaking on this subject, the Rev. Alexander Stewart well remarks: "To argue, however, that because there is physical similarity there must also be identity of being, is to proceed on the basis of a manifest fallacy. We might as well conclude that, because the bodies of two men are the same in kind, their moral character must also be identical. Have we not what is known in chemistry as isomorphous bodies,—bodies which are alike in form and similar in chemical constitution, yet different in their properties? The salts formed by these substances, with the same acid and similar proportions of the water of crystallisation, are identical in their form, and, when of the same colour, cannot be distinguished by the eye; magnesia and zinc sulphate may be thus compounded. In these isomorphous substances the identity of shape is so complete that they all possess the same crystalline form (octahe-

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dron, eight sides). No scientist, however, will presume to say that they are identical in kind or in qualities; or that the one has been evolved from the other. Why, then, should we be expected to believe that, because physical resemblances exist more or less between man and the higher apes, he and they should therefore be one save only in the degree of development?"

And then, as to the second, it may fearlessly be asserted that, while man's physical nature may connect him with the mere animal creation of which he is a part, the last in order but the head of all, that nature is not, to use the expression of Archbishop Whately, his dominant, it is not even his stronger part; it is subordinated to and controlled by his moral and intellectual powers, the spiritual part is his guiding principle.

As a natural corollary of the assumption that man has descended from the anthropoid apes, it is asserted that he has existed on the earth for many thousands of years, and that, of necessity, he commenced his career as an untutored savage.

Such being the case, let us next examine the evidence adduced to prove man's great antiquity and evolution from the lower animals.

First. When did man appear on the earth? It may be as well at starting to say that we do not consider the date, 4004 B.C. of the margin of Genesis i. of any authority: it is only one of the many systems of chronology which have been adopted by which to measure the period which elapsed between Adam and Christ. Passing, therefore, outside the Bible, let us see what light may be thrown on the subject by early human history.

Out of all the various nations which either now exist or which have existed, and which have a written history, there are but few which can lay any claim to be called ancient; these are the Hebrews, the Assyrians, the Egyptians, the Hindoos, and the Chinese. Taking the last of these first, let us examine their records to see what light they throw on the subject. One of the historians of the Chinese Empire, Soe-ma-thsian, who lived 100 B.C., compiled, from every recognised authority, a work called *Sse-ki*, or historical memorials, which embraces the history of China from the year 2637 B.C. up to the commencement of the dynasty of Han in the second century before Christ. This work has been continued by the different dynasties, and forms a complete collection of the annals of the empire up to the termination of the Ming dynasty in 1643 A.D. It is known under the title of Niam-eul-sse, or the twenty-two histories. The entire collection of the official annals from 2698 B.C. to 1645 A.D. comprise a period of 4343 years. Here, then, we have one of the most ancient histories of an ancient people, carrying us back to a period less than three thousand years before Christ.

Passing now to the Babylonian records, what evidence do we get of man's great antiquity? Certainly not very much. The clay tablets which have been discovered in the ruins of the tower of Belus are generally supposed to date from about 3750 B.C., and at this period of human history man was in a highly-civilised state, being learned in the arts of war and manufacture and in law.

Let us now pass on to the Hindoos, and here it will be well to note that Hindoo literature itself is almost without known dates, owing either to the peculiar organisation of the Hindoo mind or to the convulsions of Indian history: hence the various dates which have been assigned to the subject by different writers must be received with great caution.

The Vedas or sacred writings of India are undoubtedly very ancient. The most ancient of these documents is the Rig-Veda, which is probably the oldest literary document in existence. It is next to impossible to fix a date to this document. While some writers have claimed for it many thousands of years before the Christian era, others have been content with 1000 to 1200, while some have assigned it to a date as late as 800 or even 60 B.C. Thus, then, it is clear that no valid argument for a high antiquity for man can be drawn from the ancient writings of the Hindoos.

However much the various systems of chronology vary in length, none of them make the period from Christ to the commencement of human history more than 4,000 or 5,000 years, thus giving man an existence of somewhat less than 7,000 years. But this period is considered by many scientific men of the present day to be wholly insufficient, and so one pleads for 20,000 years as the human period, another wants 27,000, while a third asks for 100,000. Professor Haeckel maintains that man has existed on the earth for a very much longer than the longest of these periods, or all of them taken together, while the writer of an article in a London daily paper claims billions of years since man's first advent on this earth.

Of course, the chief evidence of man's antiquity produced by its advocates is drawn from pre-historic times, and the period of this is held to be of immense length. But, before we give up the Bible history of man's advent on this earth and of his exalted primitive condition, we would ask the advocates of man's antiquity and former degradation for their proofs.

When thus questioned, this is what they say :---

1. A vast number of flint implements have been found in caves and in certain gravel deposits of Europe, and from the very nature of these implements they must have been fashioned by the hands of man when he was in a state of savagery.

2. A large number of human remains have been found under the stalagmite deposits in the caverns of the limestone rocks both in England and on the Continent of Europe, and, since these stalagmite deposits must have required many thousands of years to form, the human remains which are found beneath them must be older than the period when these deposits first began to be laid down. Here, then, we have two premises from which the conclusions as to man's antiquity and former barbarism are drawn. If either of these premises can be shown to be false, then the conclusions drawn from them must of necessity be fallacious.

Let us, therefore, examine them.

And, first, as to the flint implements found in the drift. While we do not assert that none of these flint flakes were fashioned by some primitive race of men, we do say that many of them could have been produced by natural causes, such, for instance, as violent concussions which may have occurred when those great physical changes took place on the surface of the globe which resulted in the formation of the drift.

Some may even have been formed by the effects of sand drifts, such as have been known to have taken place a few years ago in some of the bays of New Zealand. Either or both of these causes are not at all improbable, and would account for the number of such flints that are found together, a number so great, be it remembered, that the ratio of lost axes to the savage populations must have been very great.

Secondly. As to the evidence drawn from the nature of the cave deposits, Mr. William Pengelly, in his lecture on Kent's Cavern, delivered at Manchester, December 18, 1872, when referring to the antiquity of the human relics found in that cavern, said, "Coming to the question of time, we have gone back some two thousand years at least,—that is the minimum, it may be more,—before we get through the black mould. We enter then the granular stalagmite, and we know from the nature of the case that that thickness of stalagmite

must indicate an enormous length of time, inasmuch as the stalagmitic floor cannot be formed faster than the limestone is dissolved overhead, and the solution of that limestone is due to the presence of carbonic acid, and there is no possibility, under existing conditions, of any other water entering that cavern than what falls on the hills as rain. I do not ask you to take the thickness of the stalagmite as a chronometer. but will tell you a fact. There is in one part of the cavern a high boss of stalagmite rising up from the floor. That boss betokens that its formation was comparatively very rapid. Take that rapid rate as the measure. There is on the boss an inscription :- 'Robert Hedges, of Ireland, Feb. 20, 1688.' For 184 years the drip has been going on, and it has failed to obliterate that inscription. The film of stalagmite which has accreted on it is not more than the twentieth of an inch in thickness. Nearly 200 years for the twentieth of an inch, and you have 5 feet to account for! But whatever may have been the time necessary for the formation of the stalagmite, the cave-earth is older still. There is another and more ancient stalagmite, thicker still; below that there is another deposit older than all, and in that we find human implements."

Now, what is the sum of these periods in the stalagmitic chronometer? Let us see: At starting, there are 184 years for 1-20th of an inch of the boss, or 3,680 years for one inch, and this + 60, the number of inches deposited, gives us no less a period than 220,811 years for the whole deposit. To this period must be added some thousands of years for the deposition of the cave earth, and then for the five feet of underlying stalagmite another 220,800 years. Then another layer of earth, and another layer of stalagmite, in some places 12 feet thick, which, at the same rate of deposit, would require about 528,820, and to this again must be added some thousands of years for the formation of the breccia, which lies at the bottom of all. Putting these periods together, we have 2,000 + 220,800 + (sav) 2,000 + 528,820+2,000, or 976,420 years as the time since man first used this particular cavern.

It will at once be seen that the validity of the argument drawn from these deposits as to the antiquity of man stands upon the assumption that the rate of the deposition has been the same in all ages. Now, if the rate of deposit has been the same, the conditions must have been the same; but what proof is there that this has been the case? According to some authorities, we are led to conclude that Kent's Cavern has not

always been at the same elevation above the sea-that, in fact, at one time in its existence it may have been submerged. If so, then a much larger quantity of water may have percolated through its roof than there does at the present time ; and, further, the amount of carbonate of lime held in suspension in the water may have been very much greater than that at the present time, and the condition favourable to the evaporation of the water, and so of the deposition of the lime, may have been different. In the first place, the amount of carbonic acid gas in the air may have been much greater; and, in the second place, the temperature of the earth or the water, or both, may have been higher than at the present time. If such were the case, there might have been a very rapid deposition instead of a very slow one. The specimen which I hand round to be examined is a deposition of carbonate of lime, which, in its thickest part, is 11 inch. Now, according to the estimate of Mr. Pengelly, if laid down in a cave, it would have required 5,520 years for its deposition. But, as a matter of fact, this particular piece was deposited in a few months. It is a deposit taken out of a boiler in a metropolitan factory, and was laid down in a few months.

It will be well here to give a few facts as to the rapid deposition of stalagmite in our country in modern times and under ordinary circumstances. Mr. John Curry, in an article in Nature, December 18, 1873, p. 122, referring to Mr. Wallace's review of Sir Charles Lyell's Antiquity of Man, when speaking of the opinions of the reviewer as to the great antiquity of man, based on the rate of stalagmitic deposit, says, "Some thirty years ago I procured a piece of lime deposit from a lead mine at Bottsburn, in the county of Durham. It measured about 18 inches in length, 10 inches in breadth, and fully  $\frac{3}{4}$  inch thick. It was compact and crystalline, and showed distinct facets of crystals on its surface, over which the water was running. I had indisputable evidence that the deposit had taken place in fifteen years. The water from which it was produced issued from an adit driven in the little limestone, which is about 9 feet thick. After leaving this adit the water ran down the perpendicular side of a rise for some fathoms on to some rock of débris which was lying on the bottom of a hopper. whence it proceeded from the upper part of the hopper mouth, then perpendicularly down over two narrowish deals, which were set on edge and put across the mouth of the hopper to retain the worked material. It was from these deals I obtained the specimen just described. On its under side the form of the deals was well defined; on the upper side the crystals were best developed where the stream was most active."

In accordance with the above rate of deposit,—namely,  $\frac{3}{4}$  inch in fifteen years,—5 inches would require 100 years. M. Pengelly's rate would require 220,800,—4 feet 2 inches in 1,000 years, and 41 feet 8 inches in 10,000 years.

Thus, then, it will be seen that the premises laid down by Mr. Pengelly and others are so unreliable, and hence the conclusions drawn are equally unreliable. We think we are right when we say that the estimate formed of the age of man by the time taken to lay down the cave deposits is very misleading, and that over the assertion that man has existed on this earth for untold thousands of years must be written "unproven."

It is now time to pass to the consideration of the second part of our subject, namely, What was the condition of primeval man? If he was an improved ape, then, of course, he must have been an untutored savage. But, if he was a separate creation, then he could have commenced his career as an intelligent being, possessed of a certain amount of knowledge, and with faculties and powers capable of adding to that knowledge. A child, it may be, when compared with man of to-day, but a human child for all that, and not an improved monkey.

If man started on his journey as a modified ape, then the nearer we can get to his starting-point the clearer ought to be the evidence of his apish condition. Is it so? In order to answer this question, let us look at some of the relics which the so-called pre-historic man left behind him. On the supposition that the relics of what has been termed the "Stone Age" are the most ancient, then in the knives, spear-heads, hammers, &c., we have traces of art.

But does the possession of stone implements by a people prove that they are emerging out of a state of apish savagery? Stone implements are still used by some of the native tribes of America, and there can be no doubt that these peoples are anything but apish in their condition. The ancient moundbuilders of South America used the same kind of material for their implements. Dr. Schliemann has laid bare five distinct periods in connexion with Trojan history, and in each of these are found human relics. In the most ancient —namely, in pre-historic—Troy, at a depth of 53 feet from the present surface, were found stone implements, polished and chipped; millstones, copper nails, pottery, bone implements, and terra-cotta discs.

In the next above, at 33 feet from the surface, the *Homeric Troy*, destroyed by the Greeks about 1300 B.C., implements and weapons of copper, bronze, and stone; pottery, fine gold, jewelry, and gold and silver vessels.

In the third from the rock, at 23 feet from the surface, relics of a barbarian people who occupied the site of Troy, rude stone implements and pottery.

In the fourth from the rock, at 13 ft. from the surface, the relics of a second barbarian people were found. Here very coarse pottery implements of copper and bronze, stone knives and saws, were obtained.

In the fifth, at 6 ft. 6 in. from the surface, the Greek Ilium, various works of art were found. Here, then, we have a succession of the Stone Age from an early to one of comparatively high civilisation. Again, there are many evidences of skill in the pre-historic man. Thus, in the Dordogne caves, were found drawings done on bone and stone. In some cases there is even an attempt at shading. Among other examples found was a cylindrical piece of reindeer horn, found at La Madelaine, on which are carved two outlines of fish, one on each side. The representation of the animal is so accurate that even the lateral line of scales is marked. Another example is that of a spirited group of reindeer, drawn on the palmated tine of reindeer's horn.

Again, there is abundant evidence that the people of the so-called Bronze Age were acquainted with the art of smelting metals; otherwise they could not have fabricated their implements of war and articles of daily life which they left behind them. But it may be asked, Is the metal of which these implements are made really bronze? Dr. John Evans shall answer this question. At p. 421 of his Ancient Bronze Implements of Great Britain, he gives the result of the analysis of no less than thirty separate examples, taken from all parts of the kingdom, and they were in every case found to consist of true bronze-that is, of an alloy of copper and tin; and the average amount of the latter metal was found to be about 10 per cent. Clearly, then, the metal of which the articles was made is true bronze. Then it may be suggested that the metal of which they were made was found ready for use. Let us see. There are no ores of this metal, and, although tin does sometimes occur in copper ores, it is chiefly as an oxide, the greater part of which, says Dr. Percy in his Metallurgy, p. 477, would pass into the slag by fusion, and so would not produce bronze. But may not the ancient races have produced the bronze by smelting the ores of copper and This has been held by some writers as the only answer tin? to the question, How was the bronze produced? Dr. John Evans, when dealing with this question, says, "Though some bronzes may have been produced directly by smelting a mixture of copper and tin ores, the usual mode of making them was by treating fused crude copper with tine stone, p. 420; and then he adds the following important note:-"Dr. Percy, F.R.S., and other practical metallurgists, have shown that this view is untenable." (See Lubbock, Prehistoric Times, p. 621.) There remains, therefore, the fact that the people who prepared the bronze-whoever they may have been-must have known both how to have reduced the ores of copper and tin to the metallic state, and have had some standard of weight by which to have mixed those metals in the proper proportion. Here, then, we have a clear evidence that at whatever period these people lived they possessed a very considerable amount of knowledge of metallurgy.

But this was not the only art which the men of the Bronze Age possessed. Sir John Lubbock, in his charming work of *Pre-historic Times*, pp. 49–51, gives an account of the opening of a tumulus near Ribe, in Jutland, in 1860, in which was found a stone coffin, 9 ft. 8 in. long and 2 ft. 2 in. broad. In the coffin were found various woollen garments, one of which was a shawl, 5 ft. long and 3 ft. 9 in. broad, and ornamented with a fringe. If this was a genuine find, then it proves that either the people of the Bronze Age in Jutland were considerably advanced in the knowledge of manufacture or were in communication with a people who were much more highly civilised than themselves and who did possess that knowledge.

Again, the ancient tribes which inhabited the Scioto Valley, Mississippi, constructed earthworks which were not only accurate squares and perfect circles, but were, in most cases, of corresponding dimensions, each square being 1,080 ft. a side, and the diameter of each of the larger and smaller circles a fraction over 1,700 ft. and 800 ft. respectively. "This," observes the author of the *Smithsonian Surveys*, "is a coincidence which could not possibly be accidental, and which must possess some significance. It certainly establishes the existence of some standard of measurement among the ancient people, if not the possession of some means of determining angles."

When speaking of these mound cities, Dr. Wilson, in his *Pre*historic Man, p. 271, says, "It is no less important to note that it establishes the use of instruments. A standard of measurement could not otherwise exist, still less be applied on a large scale in geometrical construction; and the very simplest instrument that we can conceive of constitutes no less certain evidence of a condition of intellectual development attained by this ancient people very different from anything achieved by the most advanced Indian tribe." Thus, taking the present state of the native tribes of America, and comparing them with the mound-builders, we have a clear case of degradation, not of evolution.

Then, again, these people were artists of no mean order. On their stone pipes found in their tumuli are carved the forms of most of the animals common to the valley. Each creature is represented in its characteristic structure and habits. For instance, one of the pipes is in the form of a goose's head cut in hard black stone. On looking at it from the back, the figure becomes a human skull.

Here, then, we have evidence of the possession of cutting tools. More than this, the animals whose forms are carved on the objects do not all belong to the region, but include some whose habitat is the South continent, such, for instance, as the opossum. This suggests either arts derived from a foreign source, and intercourse maintained with regions where the civilisation of ancient America attained its highest development; or else indicates the migration into the Northern continent of a race of ancient people from the central and southern parts of America, who brought with them the arts and models derived from animals familiar to their fathers in the original home of the race.

It may also be mentioned that the people of these buried cities were skilled in the art of making pottery, and were acquainted with the use of the potter's wheel. In a word, they were very far removed from the immediate descendants of apes.

In the next place, we have to ask the important question, What evidence is there that barbarism was man's original state, and that he raised himself by the exercise of his own faculties?

To help us to answer this question we must study the records of modern savage races. If the modern savage has made no progress towards civilisation, what evidence is there that the primitive races did? What say the travellers who have visited these races? Let us hear. Mr. Darwin, when speaking of the savages of Tierre del Fuego, says "that in one respect they resemble the brute animals, inasmuch as they make no improvement. Their canoes, which are their most skilful work of art,—and a wretched canoe it is,—is exactly the same as 250 years ago."

Again, the New Zealanders were visited by Tasman in 1642, and he left a record of their barbarous state. After a period of 127 years these people were visited again by Capt. Cook, and the account which he gives of the people entirely corresponds with that given by Tasman. A century and a quarter had wrought no change for the better. Nor had they made any advance towards civilisation when visited by the Rev. S. Marsden in 1814.

Take, again, the case of the natives of New Holland: when they were first visited they were found to subsist on wild roots, which they procured with great difficulty, and were often half starved, yet they never conceived the idea of procuring the roots at the proper season and planting them round their huts. They did not even do this after the settlers had done so. Even this most necessary thing was not invented by themselves.

If, then, man in his natural state, as far as we know, never has, and seems as if he never could, raise himself, the question arises, when and how did civilisation originate? Mark, *originate*, not how it was improved, and made perfect.

It must not be forgotten that the bodily organs and conditions of the ape are much better fitted to the wants of the animal than are those of man. The ape needs no artificial covering to protect it from the vicissitudes of the climate, and its food is procurable with the least possible trouble. Not so with man : he must make his covering and labour for his food.

Then, again, the instincts of the brutes are far above those of man. Archbishop Whately well remarks, "Let a quadruped be thrown into the water, and it swims naturally by the same motion as that of walking; but if man is immersed he is drowned unless he has *learned* to swim by an action quite different from that of walking." Many people know from actual experience how very difficult it is to learn this particular art, and the extreme satisfaction which is felt when they are able to swim a few yards in deep water.

We think we are right when we say that, as we find things now, the first introduction of civilisation among savages is, and must be, by *man* in a more improved state. But, according to the position of the advocates of man's original savagery, there was no man to do this. Their position is this. An ape; an improved ape; a man-like ape; another improved semiape; and then a savage man, who gradually improved himself, and in the course of time the result is the highly-civilised race of to-day.

But against this theory we place the fact that everywhere we find that before a race is elevated there is a revelation made to it by another race superior to itself,—an instructor; and we think we are perfectly logical when we argue from the known present inability of a savage race to raise itself to the unknown past; the inability of apes to do the same, and therefore perfectly logical when we say that at first there must have been a Divine Instructor.

This was the opinion of the great Humboldt,—as good a name by the bye as Haeckel, and he says, "The important question has not yet been resolved whether that savage state which even in America is found in various gradations is to be looked upon as the dawning of a society about to come, or whether it is not rather the fading remains of one sinking amidst storms, overthrown and shattered by overwhelming catastrophes. To me the latter seems to be nearer the truth than the former."

To the same effect are the words of President Smith of the College of New Jersey, N.S., ---as good a name as any of those who advocate the apish origin of man,--- "Hardly is it possible that man, placed on the surface of the world in the midst of its forests and marshes, capable of reasoning indeed, but without having formed principles to direct its exercise, should have been able to preserve his existence unless he had received from his Creator along with his being some instructions concerning the employment of his faculties for procuring his subsistence and inventing the most necessarv arts of life. Nature has furnished the inferior animals with many and powerful instincts to direct them in the choice of their food. But man must have been the most forlorn of all creatures, cast out as an orphan of nature, naked and help-He must have perished before he could have learned to less. supply his most immediate and urgent wants." Of course, it is conceded that, given the possession of a certain degree of mental culture, man is able to improve himself.

We do not contend for a high state of what is called civilisation for primitive man. We know from the Bible records that it was otherwise. But what we contend for is this, man started on his career with a certain amount of knowledge, that he began his existence as a man endowed with reason and conscience, and in conscious communication with his Maker, who instructed him in those things which he never could have found out for himself. And then, having been so endowed and so instructed, he was left to use his faculties and add to his knowledge. So, while there may have been what may be called the infancy of civilisation, followed by its childhood and youth, leading up to its manhood; it was, however, an infancy of *human nature*, whose origin was from God and not from the unconscious efforts of unreasoning brutes. If otherwise, how did man become possessed of the knowledge of the art of producing fire? How came human language?

When speaking on the subject of human language, Professor Max Müller well says, "Language still bears the impress of the earliest thoughts of man, obliterated, it may be, buried under new thoughts, yet here and there still recoverable in their original outline.... I may here express my conviction that the science of language will yet enable us to withstand the extreme theories of the evolutionist, and draw a hard-andfast line between spirit and matter, between man and brute." —Selected Essays, vol. i. p. 3.

Again, the Professor, in his Science of Language, pp. 13, 14, makes the following important statement :--- "Now, however much the frontiers of the animal kingdom have been pushed forward, so that at one time the line of demarcation between animal and man seemed to depend on a mere fold in the brain, there is one barrier which no one has yet ventured to touch,-the barrier of language. Even those philosophers with whom penser c'est sentir, who reduce all thoughts to feelings, and maintain that we share the faculties which are the productive causes of thought in common with beasts, are bound to confess that as yet no race of animals has produced a language." Where, then, the difference between brute and man? What is it, then, that man can do, and of which we find no sign or rudiments in the whole brute world? I answer without hesitation: the one great barrier between man and brute is Language. Man speaks, and no brute has ever uttered a word. Language is our Rubicon, and no brute will dare to cross it. This is our matter-of-fact answer to those who think they discover the rudiments at least of all human faculties in apes, and who would fain keep open the possibility that man is only a more favoured beast, the triumphant conqueror in the primeval struggle for life. Language is something more palpable than a fold of the brain or an angle of the skull. It admits of no cavilling, and no process of natural selection will ever distil significant words out of the notes of birds or the cries of beasts."-Science of Language, p. 356.

In conclusion, let us ask,—If man be a mere improved ape, whence did he derive his knowledge of religion? It matters not how far we go back in the history of man, the elements and roots of religion are formed with him as a part of his nature; and what are these elements? They are, to use the words of Professor Max Müller, "an intuition of God, a sense of human weakness and dependence, a belief in a Divine government of the world, a distinction between good and evil, and a hope of a better life. These are some of the natural elements of all religions. Though some time hidden, they rise again and again to their perfect form. Unless they had formed a part of the oldest dowry of the human soul, religion would remain an impossibility."—Selected Essays, p. 4.

Thus, then, to the question, Was primeval man a savage, a descendant of a particular branch of the catarhine apes? must be given an emphatic negative. And so, when the Christian is called upon by the advanced scientist of the present day to give up his old faith—his belief in the Divine origin and glorious future of the human race—and to embrace the new dogma—its evolution from the quadrumana—he should withhold his assent, and demand some better proofs than those at present offered that the teaching of Moses, of Christ, and of Paul, concerning the nature of man, is worthy only to be relegated to the keeping of the custodians of ancient relics.

THE CHAIRMAN (Mr. W. N. West) said he was sure all thanked Mr. Hassell for his very interesting paper, the discussion of which was now open to all present.

Mr. S. R. PATTISON, F.G.S., said it was scarcely needful that he should speak upon the subject, as he perfectly agreed with the Author, and had no objection to make to the paper and no observation which could add to the force of its reasoning. But there were other reasons which would, in his opinion, tend to the same conclusion as that to which the author had come. The relics that we have from language and customs as well as art make it appear to be utterly inexplicable that man arose from a previous savage condition; but the question was one which they might long debate, because there were savages and civilised people in all ages of the world. There were savages now, and progress was going on on the one hand, and degradation was going on on the other. Inasmuch as the matter was now regarded in two ways, if they threw one overboard, the evidence was so slight,-there was so little of it, that it was very easy to argue for conclusions which were at variance with the one they had thrown over. Hence it was difficult to arrive at finality on a subject like this, where there were no certain data, at least very little certain data to go upon. He thought the advocates of primitive savagery in the race had failed, and had singularly failed of late years, for recent discoveries strengthened the conclusion that the race must have been far more learned and accomplished in its origin than any savages with whose history we are acquainted. Setting aside the

Scriptures, they might conclude that there were very early states of civilisation. They all knew that the area of savage life in ancient times very greatly exceeded, and probably progressively exceeded, the area of civilised life. It was a very narrow stream of civilised life they had through the Hebrews, as compared with the enormous outflow of barbarism that prevailed elsewhere. That made the discussion of the subject one on which a great deal might be said, for, in proportion as they paid attention to the outer circle, they got one side of the impression, or, if they paid attention to the inner circle, they got another side of the impression. He thought those who advocated the credibility of the Scripture narrative might intrench themselves very completely, and might make raids into the outer country. He thought, on that ground, the proposition might be maintained which had been brought before them that evening.

Rev. F. A. ALLEN, M.A., said he always felt a delicacy in going into a subject like this because one could not help feeling that one trod on ground upon which it was for specialists to decide, notably when it involved geological evidence. He did not see why the author had brought in the remarks upon the antiquity of man before the real subject of his paper. He supposed he did it, thinking to strengthen his argument by presuming that it was not necessary to predicate such a vast series of years, if they did not admit that man gradually became a civilised being. He quite agreed with the conclusions Mr. Hassell had arrived at, and he thought that the leading scientific men of the day had come to the same conclusion, *i.e.*, that it was very difficult to decide on geological evidence as to the time man had been on the earth. Both the Scriptural and secular accounts seemed to agree that man did go on and make discoveries, and at a comparatively age in his history attained very great civilisation and refinement. He thought the latter part of the paper was very good and very cogent, and he quite agreed with it. With regard to the New Zealanders, it was true they did not make any progress, they were rather degenerating; it was said they were once in a more civilised state. The name of the man who introduced cannibalism had been handed down, and it only arose two or three centuries before the Europeans arrived there. The subject was a most interesting one; and he thought the practical lesson was, not to come to any final conclusions rashly, and be on our guard against the danger of falling into the bondage of the infallible professor.

Mr. C. HASTINGS DENT, C.E., F.L.S., in a few words, referred to a remark made by the Duke of Argyll in his recent work, that, if the number of years since the origin of man be taken as a multiplier in the process of elevation, it must be taken as a multiplier in the process of degradation. He (the speaker) thought that was not necessarily in the same ratio, because degradation went on much more rapidly than amelioration or elevation. As to the degradation of man, certainly, from the religious records, the inhabitants of Africa were the most ancient degraded nation. But they lived closer to the starting-point of the race than the inhabitants of South Africa, Tierra del

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Fuego, or Australia. What, then, could we expect to be the condition of these far-distant people? After mentioning instances that had lately come under his notice in the East End of London of utter degradation of men who had moved in better spheres, Mr. Dent alluded to the way in which North and South America had originally received some of its aborigines by streams from the Turanian race to the North, and from South-east Asia to the South.

A MEMBER said we might regard primeval man as a child in mental development, and unacquainted with the arts and sciences; but that was a very different thing from his being morally a degraded savage.

Mr. R. W. DIBDIN had listened with great pleasure to Mr. Hassell, who had treated the subject with so much lucidity. With regard to degradation, Mr. Hassell has mentioned the New Zealanders, and said, that up to the time of Captain Cook no improvement had been noticed in the native races. A very interesting paper in reference to the Lake region of New Zealand had recently been read at the Geographical Society, and it stated that, so far from the races having improved, there had been a considerable process of degradation, and that it was now a difficult thing to find the original noble savage alluded to by Captain Cook : they found his degenerated descendants, but these were by no means specimens of men who were improving or who seemed to be rising in the scale. They had gone down physically and also morally. It appeared, however, that this deterioration seemed to be almost entirely confined to the males.

Mr. W. P. JAMES, F.L.S.—As to the great antiquity of the human race, when they saw how fast nations developed, and how swiftly Greece ran through her brilliant career, à *priori*, it seemed difficult she could have risen so fast, as we knew she did, when the greatness of Athens was confined to seventy years. He thought Mr. Hassell could safely say that the records of history might be brought within the 5,700 years. The whole question was, to his mind, most fascinating.

Captain FRANCIS PETRIE, F.G.S., said a scientific writer outside the Institute had held that the Author had no possible scientific evidence to go upon in taking up the question of the condition of primeval man. In making such a remark this writer, an admirer of Dr. Darwin, had forgotten that the question was raised by that eminent man, who, in many a page of the last edition of his *Descent of Man*, professed to give a full description of the manners, and customs, and domestic life of "primeval man."

Mr. HASSELL, in reply, thanked the Members present for the attention they had paid to his paper. He wished it to be distinctly understood that, while he did not agree with those who claimed countless thousands of years as the human period, he did not argue for the 4,004 years of Archbishop Usher as representing that period. Indeed, considering our present limited knowledge, he did not think a date could be properly assigned to the first chapter of the book of Genesis. As to the word "savage," he had used that word in the sense of wild, brutal, uncivilised, a dweller in the woods, and, with this definition of the word, he asked and still asked. Was man a savage ? He must have been if he came He could not have been educated, nor tutored, and infrom an ape. structed, and therefore he must have been a savage. Putting together all the records of antiquity,-Babylonian, Assyrian, Chinese, Grecian, Roman, -they got only a limited period; a period, too, which in a remarkable manner corresponded to that of the Bible : whereas, according to the assumptions of the evolutionists, the period must be of immense length, as had been noticed in the early part of the paper. He maintained that the conclusions drawn respecting man's age were erroneous, because the premises laid down were false. As to what had been said respecting his remark, that man, as he first appeared on the earth, might perhaps be regarded as a child in his development, he would reply that the evolutionists do not admit that man came on the scene as a man at all, but as a man-like ape, then an ape-like man, and hence in no sense a human child. He had endeavoured in his paper to show that such an assertion of man's origin was a mere assumption, unsupported by proof. As for himself, he was not ashamed to say that he believed the Bible as a revelation from God to man, and that revelation declared that man was a separate creation; and he saw no reason why he should give up his faith in that revelation. He felt that, if he gave up his belief in the Bible account of man's creation, he must give up the New Testament, with its doctrine of the Atonement and Regeneration, for there could be no necessity for the Atonement if man had never offended, nor of Regeneration if he had never fallen, which he never could if he commenced his career as an improved ape.

The meeting was then adjourned.

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### REMARKS ON EVOLUTION AND DEVELOPMENT BY THE REV. J. WHITE, M.A.

#### (Head Master of the Royal Naval School, New Cross).

It is supposed that evolution and development explain how nature took its present form and order, without any need for the action and intervention of a Creator; but these theories of evolution and development only explain the course and manner of creation, but not how it commenced. Were the whole order and succession of existence traced without one missing link from the highest example of intellect in man to the lowest form of sentient existence in the amœba, and then further back still, from this dawn of feeling through vegetable existence, through inorganic matter to the first fortuitous concourse of atoms, from which, according to this hypothesis, grew out link by link the whole of being's endless chain, still the question would remain as unanswered, as unanswerable as ever : How did it begin? Who started this infinite, this amazing order ? Who gave the atoms of matter these inconceivably wonderful powers and properties ? The point to which I wish to direct your attention is the existence of man. It is around this that the interest of the theory of development is accumulated with perhaps greatest intensity, and that the "missing link" has been most eagerly and curiously sought. Now, in discussing this point, I will refer to the writings of one of the ablest of Darwin's followers and fellow-workers, one who has claims even to be called the co-discoverer with him of the origin of species—I mean Mr. Alfred Russell Wallace. In the ample way in which Mr. Wallace disclaimed all share in the merit of that discovery and even the ability to rival the power of him he is ready to call his master, while Mr. Darwin, in his introduction and in the very first page of his work, speaks of Mr. Wallace, much his junior, as his fellow-labourer, who toiled with equal advance beside him, in this we have a noble example of scientific chivalry, of unselfish love of truth, that would do honour to the highest instance of Christian character; and such examples, we may be happy and proud to know, are not rare among modern men of science. Also Mr. Wallace has been carrying on, in a manner that requires the highest philosophical and the best scientific instinct and knowledge, the further applications of Mr. Darwin's theory. In his Geographical Distribution of Animals, and his Island Life, we have examples of the inductive argument on the largest scale on which it could be attempted, and his works contain much that is fascinating to the general reader, as well as being full of scientific knowledge and discovery. For the case now in hand I am going to quote from a volume of his essays entitled Contributions to the Theory of Natural Selection, and particularly from the

last of them, that on The Limits of Natural Selection as Applied to Man. In this, to briefly summarise his argument, he shows, first, that the brain of savage man, including the remains of pre-historic races, is very much larger than it need be. In fact, so little difference is there between the size of the brain among the various races of men, that we might almost doubt whether the size of the brain is in any direct way an index of mental power, had we not the most conclusive evidence that it is so in the fact that, whenever an adult male European has a skull less than nineteen inches in circumference, or has less than sixty-five cubic inches of brain, he is invariably idiotic. Now, if we compare the brains of men and of anthropoid apes, it is found that if the brain or skull capacity in the latter is represented by ten, the proportion for savage man is twenty-six, and for civilised man thirty-two. Here is a great gap which requires many missing links to fill it up and unite the ends, and there is not a trace or hint of one. If man's brain is three times that of the animal nearest to him, how could the one be developed from the other? Where are the intermediate stages? Nature does not advance by leaps. But that is not all the difficulty, nor even the chief part of it. Natural selection can only account for the development of organs and powers that are useful and that are wanted and brought into action. Now, the brain of the savage, present or pre-historic, is almost entirely unused; he does not want the skull capacity that he possesses. To exercise the faculties and feelings of civilised man would be injurious to him, since they would to some extent interfere with the supremacy of those perceptive and animal faculties on which his very existence depends in the severe struggle for life he has to carry on against nature and his fellow-man. Natural selection, evolution, and development can only explain the existence of any organs by slow advance through use, benefit, and necessity; how, then, can they explain the large unused brain capacity of the savage ? Here the theory wholly fails, in fact, demands another cause-calls for Him who "breathed into man's nostrils the breath of life, and man became a living soul." Mr. Wallace pursues the same line of argument with regard to the absence of hairy covering in man, his erect position in walking, the marvellous power of his hands. None of these things were useful to man in his supposed primitive state, and therefore could not have been developed. All these are inexplicable on the theories of natural selection, evolution, and development; in fact, they are contradictions to it. He also discusses briefly the difficulties, which I have elsewhere considered, of the origin of man's moral sense and of any conscious existence; and the conclusion arrived at by this strictest scientific argument is that this theory (of Darwin's) "has the disadvantage of requiring the intervention of some distinct individual intelligence to aid in the production of what we can hardly avoid considering as the ultimate aim and outcome of all organised existence-intellectual, It, therefore, implies that the great laws ever-advancing, spiritual man. which govern the material universe were insufficient for his production, unless we consider that the controlling action of such higher intelligence is a necessary part of these laws." It would be impossible now, and I think unnecessary, to pursue the subject farther in detail. But you will see that there are many gaps where not only is there room for the action of a Divine Being, but where such action is imperatively called for.

To one point more have I to advert, and that is the origin of civilisation. It is an old argument in defence of revealed religion, and one which affords a strong presumption that a revelation must have come to man, that no nation has ever been known to civilise itself. All that we can learn from the history of civilisation is that it has not been self-evolved in any land or race, but has been received from some other. Whole systems of civilisation have been lost and have perished, and races have relapsed into barbarism. But there is no example of any race already barbarous discovering or inventing any system of civilisation ; in fact, it would seem that, when man is placed at a certain standpoint of progress, he can go on; but, if he has not gained that or has sunk below it, he always declines and sinks deeper into savagery. The impression will, doubtless, be strong upon the minds of many that development and evolution, which explain the origin and transmutation of species, can surely and more easily explain the dawn, the rise, the progress of civilisation, whose new developments we are ourselves every day witnessing. Now, on this point I will take the utterances, the most recent utterances, from an article in the Nineteenth Century of January, 1885, by This testimony is of the ablest, for there is no more Professor Max Müller. distinguished philologist in Europe, and the languages, the religions, the myths of histories of early races and primitive peoples have been his special study. The article to which I refer is entitled "The Savage." I will endeavour briefly to indicate its line of argument. The Professor states it thus: "One of these point-blank questions which has been addressed to me by several reviewers of my books is this, 'Tell us, do you hold that man began as a savage or not ?' To deny that man began as a savage, and that the most savage and degraded races now existing present us with the primeval type of man, seems to be the shibboleth of a certain school of thought, a school with which on many points I sympathise." After discussing at considerable length the difficulties of defining the meanings and limits of the words "savagery" and "civilisation," the writer adverts to the very strong arguments advanced by the Duke of Argyll in his book, The Unity of Nature, on geographical grounds, that present savages are degraded races, and are not specimens of primitive man; and this argument he discusses from a philological point of view, and arrives at the conclusion that the languages of savages also show signs of degradation, and give evidence of having fallen from a higher and nobler condition. Without going further into this essay, I will just read in full its two concluding paragraphs : "Disappointing as it may sound, the fact must be faced, nevertheless, that our reasoning faculties, wonderful as they are, break down completely before all problems concerning the origin of things. We may imagine, we may believe anything we like about the first man, we can know absolutely nothing. If we trace him back

to a primeval cell, the primeval cell that could become a man is more mysterious by far than the man that was evolved from a cell. If we trace him back to a pro-anthropos, the pro-anthropos is more unintelligible to us than even the prot-anthropos would be. If we trace back the whole solar system to a rotating nebula, that wonderful nebula, which by evolution and revolution could become an inhabitable universe, is again far more mysterious than the universe itself. The lesson that there are limits to our knowledge is an old lesson; but it has to be taught again and again—'Canst thou by searching find out God? canst thou know the Almighty to perfection ?""

#### REMARKS BY THE REV. W. GUEST, F.G.S.

It has for some time appeared to me that there is no more important and even crucial point in relation to the appearance of man upon earth than that which will be brought before your meeting. If there is a single historical record of savages, unaided by contact with higher influences, developing, of themselves, a cultured civilisation, this must be known. There must be a proof which falls within a human and historic period, and no argument of the nexus failing investigators through vastness of time, or the absence of observation, can avail here. The matter might be put in a syllogistic form :—

If the doctrine of development be true, according to what is understood by Darwinianism, man must have first appeared upon the globe in a rude, untaught, and uncivilised condition.

There is an absolute and total absence of historical evidence that rude and uncivilised men, left to themselves, have ever emerged out of a savage condition, and risen into the arts and refinements of civilisation.

Primitive man, therefore, could not have been a savage, as Darwinianism demands.

Of course, if there is a case of human beings, unaided by the contact of civilising influences, developing cultivation of mind and manners, we ought to admit all that the fact fairly carries. But, if there be not, it is disingenuous for any evolutionist to deny the necessary inference. It seems to me, therefore, that the Victoria Institute never drew nearer the very heart of this great controversy than when it demanded attention to this very issue.