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JOURNAL OF
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his views, the discussion of the same to terminate not later than half-past 8 o'clock. For these purposes all Ordinary Meetings shall be considered Special."

During the discussion alluded to, Dr. Haughton expressed an opinion that, if passed, the resolution would afford all members increased opportunities for considering the Institute's work, and so might tend to promote still greater interest in it. Several others having spoken, the honorary secretary, in reply to a question, stated that the resolution could in no way open a door to any alteration in the constitution of the Institute, for the rules effectually prevented that.

The following paper was then read by the Author :—

THE EARLY DAWN OF CIVILIZATION, CONSIDERED IN THE LIGHT OF SCRIPTURE.
By JOHN ELIOT HOWARD, F.R.S.

a. Civilization of Eden, Moral and Intellectual, more than Material.

THE origin and the early history of mankind have recently been discussed without any reference to the history of the human race embodied in the scriptures of the Old and New Testament. It is the ambition of many "thinkers" to start anew with unfettered and unimpeded course on the quest of information, ignoring entirely the claims presented in the Bible to afford historical information on these subjects. In so doing, our philosophers find themselves returning to the speculations of ages past, and discover that every possible phase of thought has been exhaustively pursued to its legitimate results by those who certainly were not their inferiors in mental power—the philosophers of Greece and Rome, and before these the sages of the East. Such a course does not indicate progress, but a real retrocession to the interminable metaphysical disquisitions of the past. It is not a little interesting to see that the newest and most remarkable reveries of scientific imagination return to the conceptions of the sophists of India. Even the notion that "the living body of a man is not a continuous whole," but "made up of a multitude of parts," has its counterpart in the teaching of Gotama Budha.* The President of the British Association (1874) is compelled to exhort that learned body to abandon the idea of a Creator and of creative force, and to change the Darwinian notion of a quasi-divine force of "natural selection" for a system of atheism more logically based, in accordance with the doctrines of Epicurus, who also derived his inspiration from the East.

* See Appendix (A).

“We need *clearness* and *thoroughness* here,” he exclaims. “Two courses, and two only, are possible. Either *let us open our doors freely to the conception of creative acts*, or, abandoning them, *let us radically change our notions of matter.*”

2. For myself, whilst entertaining the greatest admiration for, and full belief in, the atomic theory of modern chemistry, I am not at all disposed to adopt the second alternative, and to “change our notions of matter” to those advocated by Lucretius. I have already shown, to the best of my ability, the stable foundations on which the atomic theory rests; and also the entirely imaginary and unsound theories to which Professor Tyndall would lead us if we follow him in this portentous change, involving all our views of what is divine as well as of what is human and material.

3. I will therefore invite the learned Professor to decide upon his first alternative. There can be nothing unworthy of a philosopher in “opening our doors freely to the conception of creative acts.” On the contrary, every prejudice that would keep the door closed against the examination of such a conception must be regarded as unworthy of the impartiality of a philosophic mind.

4. We find in ourselves a power altogether superior to the things on which our meditation is fixed, and of an entirely different character to the clod on which we tread. And yet we have no ready-formed answer to the inquiry, What is the mysterious *ego*, the all-controlling essence, which in us thinks and wills and reasons? So, in the very first verse of Scripture, the existence of “the Elohim” is assumed as a proposition already conceded; and the action is asserted of a power originating and dominating over all that meets the observation of our senses. As ourselves possessors of a spiritual nature, we are informed that there is a spiritual Being above us. Not having the competence to sound the depths of our own being, neither can we know the One of whom the Bible speaks unless He reveal Himself to us.

5. There can be nothing unphilosophical in such a disquisition. The only question is, whether the proposition be true or not. If admitted, then must the power of the Almighty Being to work miracles or to perform acts of special creation also be allowed, as even flowing necessarily from the analogy to our own nature. What is there (unless it be himself) that man cannot absolutely rule and dominate by virtue of the energy that dwells within him; and this must be conceded, *à fortiori*, of an Almighty Being.

6. The formation of man is ascribed in Scripture to a work of *special* creation, the result of *special* consultation.* Certainly all must admit that man, in his destinies, as head of creation, should

* “And God said, Let us make man in our image,” &c.—Gen. i. 26.

have called for such special thought, if we may so express the formation of the purposes of the Divine mind.

7. We are told that the Elohim made man in *his own image*. Surely the Professor, whose views have so much affected society, must cherish some similar view of the nobility of the nature inherited by man when he asserts that* “the bribe of eternity itself, were it possible to offer it, could not prevent the human mind from closing with the truth.” What is more godlike than the love of truth? But the resemblance does not stop here, for man is, by his very being and nature, a *king*, delighting in dominion; a *poet* (*ποιητής*), finding a joy in the creations of his own mind; a *husbandman*, sharing with his Creator in the satisfaction of making the earth yield her increase under the control of his wisdom; being permitted also in a vast variety of cases the satisfaction of improving for his own benefit the bounteous gifts of God.

8. All this, and much more, he was originally by *creation*, and not by *evolution*, if we are to receive the testimony of Scripture. He is consequently to be looked upon as a civilized man from the outset. He is even a naturalist, having the task assigned to him by his Almighty Creator of naming, and that, according to their essential qualities, every beast of the field and every fowl of the air. It must also be understood, by the account in Genesis, that the Creator was pleased with this exercise of the powers which He had bestowed upon His creature.

9. According to this conception of the original constitution of man, there can be nothing in science—that is, in *knowledge*—unfriendly to *religion*, or, in other words, to his relations with that Being who gave him power to acquire this knowledge. All his acquaintance with the universe would tend to make him increasingly admire and adore the Originator of such marvels. He is a religious being. Adam, the noble, the unfallen, the head of creation, without whom all would seem to have been made and ordered without any logical connection or result, is the one who is specially appointed to hold communion with his Father in heaven. He is the high-priest of the world, and the friend of its Almighty Architect.

10. He is in the purpose of God to be the head of a race to whom redemption in the second Adam is about to be promised. But how shall this be effected? He is alone, and no heart beats responsive to the emotions which oppress his full soul. Evolution can do nothing for his help; but God still cares for him, and his Almighty Friend provides an help-meet for him, and this not in a second-rate and copied creature, an Adam of inferior structure,—

* *Crystalline and Molecular Forces*, by Prof. Tyndall, p. 13.

as Plato and our modern theorists take woman to be; but in a perfect model of beauty and of grace, in everything contrasted, and in every respect the fulness of that which was not found in himself. We will not say the complement of what was found lacking in Adam, for the creative mind delights in variety, albeit this variety is blended into delightful harmony. So we see, in the well-arranged Kosmos around us, the robust oak and the fruitful vine having each their own proper place in creation, and we know that the vine would be in no wise benefitted by a self-supporting stem, nor would the oak be graced by bearing aloft on its branches the clusters of the vine. Thus we hold that the mind of the woman is equally perfect with the mind of the man, but perfectly different. No amount of education will obliterate this essential difference; and no theories of our modern scientists to the contrary will do other than introduce mischief into the hive of the commonwealth. When we read the noble poem of the German Schiller on the praises of woman, we see that we are not alone in believing that woman is the great civilizer. Woman's love of what is decorous and beautiful supplements well man's love of truth, and his admiration of practical wisdom. Yes, woman in her right place is the great civilizing power; but alas for civilization if she should adopt the theories objected to.

11. The conception that we are taught to entertain as to the genesis of man brings before us at once the nobility of his original and his association with all that is lowly in creation. The Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul. "The Adam" * is elaborated "dust of the [ādamah] ground," † but after the breath of lives ‡ [natural and spiritual?] has been breathed into his nostrils, this clod of the valley becomes a *living soul*. This is the contrast, and in our opinion a satisfactory contrast, to the opposing doctrine summed up in one line by Lucretius:—

Nullam rem ex nihilo gigni divinitus unquam, §

which denies alike creation and evolution. It is also the declaration of his being a *person*, and not a mere congeries of architectural and sentient atoms.

12. It seems inevitable that I should here take up briefly the discussion of the conception of the existence of a *pre-Adamite race*, and the relation of Genesis to modern theories of the duration of the period of man's existence on the earth.

13. In the first place, then, I object to the notion of a pre-

* אֲדָמָה

† מִן־הָאֲדָמָה

‡ חַיִּים

§ *De Rerum Naturā*, lib. i. 151.

Adamite race, since Adam is the *Biblical* name for *mankind*; and though it is quite possible that the first two chapters of Genesis may embody different accounts (since in the first Elohim is the name of the Almighty agent, and in the second Jehovah Elohim), yet they are obviously accounts of the same creation. If doubt could exist,—as it does exist,—on this point, it would seem to us to be quite set aside by the very name assigned in the first chapter to the ancestors of the human race, as well as by consideration of the nature of the being thus created. It is *emphatically* “*the Adam*” * that is made by Elohim in the course of the sixth day or period, and apparently towards the close of it. His being ushered into the scene prepared for him (or rather “*them*,” v. 28), is the completion of the work which God pronounced very good. God called their name Adam in the day they were created. There is no time after this for the creation of another Adam, and the possibility of any previous formation of such a being is set aside by the very tenour of the document itself.

The identity of the creation of man in Genesis, chap. ii., with that in chap. i. is irrefragably proved by our Lord’s quoting the two together verbatim (see LXX.) in Matt. xix. 4 (Gen. i. 27) and 5 (Gen. ii. 24).

14. On the fifth day the waters were commanded to bring forth abundantly shoals of living creatures and fowls at the same time to fly in the open firmament of heaven; but coincidentally with these huge Saurian monsters (the whole race of Tanninim†), so called from the *length* to which their dragon forms were extended.‡ With these filling earth, air, and waters, the globe was obviously unfitted for the abode of man.

15. It is not till the sixth day that the congeners of man are introduced,—beasts of the field and wild beasts, water-oxen (the whole race of *Behemah*) and creeping things of the earth:§ serpentine some of them, but those formidable dragons are seen no longer. On the evening of this sixth day the Adam was formed; and then came the Sabbath, and creation work ceased.||

* אָדָם Gen. i. 26.—(See Appendix B.)

† “It seems to apply to some large amphibious animal, serpent, or lizard.”—De Sola, *in loco*. אַתְּתֵינִים

‡ See Ges. Lex. *sub voce* תַּנִּינִים Comp. Isaiah xli. 9, Ez. xxix. 3, “The great dragon that lieth in the midst of his rivers,” &c. § קִשָּׁשׁ

|| “God blessed the seventh day and sanctified it, because thereon he rested from all his work which God had created, *thenceforth to act*.”—(De Sola, Genesis.) “The older commentators, the Talmud, Aben Ezra, &c., properly render לעֲשׂוֹת to continue acting.” We find, in accordance with this view, the course of nature acting from that time to this, but *nothing new added* to the course of nature. It is overwhelming to think how much

16. I conclude this part of my subject with the forcible expressions of Carlyle:—"But this I do say, and would wish all men to know and lay to heart, that he who discerns nothing but mechanism in the universe has in the fatallest way missed the secret of the universe altogether. That all Godhood should vanish out of men's conception of the universe seems to me precisely the most brutal error. I will not disparage heathenism by calling it a heathen error that men could fall into. It is not true; it is false at the very heart of it. A man who thinks so will think *wrong* about all things in the world; this original sin will vitiate all other conclusions he can form."*

b. The Loss of such Civilization through the Fall. Early Degradation of Mankind.

17. I accept the declaration in Genesis that man was made in the image and after the likeness of Elohim, and this in connection with having dominion. I shall not, therefore, err (as I trust) in regarding the power and wisdom of the Infinite $\Delta\acute{o}\gamma\omicron\varsigma$ as "shadowed † forth" in the masculine mind, and the grace and sense of harmony so manifest in nature, as reflected ‡ in the feminine understanding. Perhaps it ought scarcely to be taken for granted in this argument that beauty and harmony are inwrought everywhere in nature for their own sakes; but some other occasion may be given for showing why the utilitarian theory of the world's constitution, in denying this proposition, does not appear to be other than "false at the very heart of it."

18. No utilitarian reason can be assigned for the fatal gift of beauty bestowed on the daughters of Eve. The able author of the Victoria Institute paper "On the Principles of Modern Pantheistic and Atheistic Philosophy" has very well (though incidentally) shown that the world would have gone on quite as well in the above sense without this endowment; and we directly trace the connection of,—I will not say the fall of our first parents, but *the depravation* of their descendants to this proximate cause; for "it came to pass when men began to multiply on the face of the earth, and daughters were born unto them, that the sons of God saw the daughters of men, *that they were fair*, § and they took them wives of all that they chose."

of the creation coeval with man has already perished, and how rapidly he is exterminating what remains of his "poor earth-born companions"; excepting those that minister to his desires.—(See Appendix C.)

* *Sartor Rosarius*, p. 160.

† רמות

‡ v. עָלַם in Ges. Lex.

§ טָבַח

19. It has ever been found that the "corruption of the best things yields the most evil" results; so we find that Eve, the fruitful mother of all living, the one in whose perfect frame life was, as it were, embodied, becomes the channel through which death enters into the world, and all our woe; and through some strange and ill-understood series of events, which has its counterpart (be it remembered) in all the stories of the early world in heathen lore, the earth became *utterly corrupt* and *filled with violence*.

20. Such is the narrative of Scripture; and if we are to attach any credence to the examination of kitchen middens* in Denmark, or to the inferences derived from relics of poor humanity inhabiting caves in our islands, when these were overspread by herds of the Irish elk or of the reindeer, and when the death-dealing blows of the savage human being came in aid of the wolf or the cave-bear, to exterminate the mammoth, the woolly rhinoceros, and all the monster progeny of earth; we have ever the same unpleasant conviction of the then state of the human race forced upon our minds. Partially, if not universally, *cannibals*,† delighting in nothing so much as in cracking the bones and feasting on the marrow of his fellows, men or women were of such an order that we are compelled to admit the justice of the sentence, which led to their being all swept away by the waters of the Deluge.

21. As illustrative of the probable state of civilization of the then age of stone, I present here a transcript of a drawing originally published by M. de Baye, of a flint arrow,‡ deeply imbedded in and still adhering to a human vertebra. This was found in the caverns of La Marne, together with some 500 more of the formidable weapons in the use of which these savages delighted. One of these flint arrows was discovered in the Grotto of Éyzies (Périgord), lodged in a vertebra of a reindeer, which it had pierced through from one side to the other, after having traversed all the body of the animal § Professor Nilson has found one imbedded in the skeleton of an aurochs, and others in the skulls of stags. This savant has described a human skull, found in an ancient place of sepulture at Tygelsjö, which had been transpierced with a dart made of the antler of a stag.

22. No doubt the rude life of the sportsmen of that day was not without its charms, and amongst these might be accounted the

* I think the reader will prefer this word to the Danish *Kjækken-mæddingen*.

† *Bull. de l'Ac. Roy. des Sciences de Belgique*, t. xx. p. 427, *exceptionally* in France, Lenormant, p. 32; *Cave-hunting*, by W. Boyd Dawkins, F.R.S., pp. 215, 253, 259, 260, 147, &c.; and see the Plate of the scraped human thigh-bone, p. 260.

‡ *Études sur l'Antiquité historique*, p. 385. Chabas. § *Ibid.*, p. 384.

sense of personal danger; since, with all the resources of intellect on the side of man in this war with the brute creation, the advantage must sometimes have preponderated in favour of the huge beasts whom he daringly encountered.*

“Some doubtless oft the prowling monsters gaunt,
Grasped in their jaws abrupt—whence through the groves,
The woods, the mountains, they vociferous groaned,
Destined, thus living, to a living tomb.”

I have been studying the well-executed drawings of the bones of the *Felis spelæa* by Bassin, † which this artist has presented side by side with those of the modern lion, dwarfing our present king of beasts into comparative insignificance. Yet this was possibly not the worst enemy they had to encounter. ‡ In other respects, the life of these antediluvian men must have remarkably resembled those of the Esquimaux; a life full of animal enjoyment, the praise of which we have heard from one of our leading philosophers at a meeting of the British Association at Exeter.

23. The following is a list of the great mammals against whom man would have to contend in this Palæolithic age: §—

The great cavern Bear (*Ursus spelæus*).

The cave Hyæna (*Hyæna spelæa*).

The great Cat of the caverns (*Felis spelæa*).

The Elephant or Mammoth (*Elephas primigenius*).

The Rhinoceros with divided nostrils (*Rhinoceros tichorinus*).

The gigantic Stag, or Irish Elk (*Megaceros hibernicus*).

The Reindeer (*Cervus tarandus*).

The Bison (*Bison europæus*).

The Urus (*Bos primigenius*).

24. M. Lenormant remarks that “nothing is more instructive to the Christian who regards things in the light of the sacred tradition, than the spectacle furnished by the discoveries of geology and of palæontology in the Tertiary and Quaternary deposits. The condemnation pronounced by Divine anger is manifested in a striking manner in the life so hard and difficult which the first tribes of humanity then led; scattered as they were over the surface of the globe in the midst of the last convulsions of nature, and by the side of the formidable animals against which it was needful for them to defend themselves continually. It seems that the weight of this condemnation weighed more heavily on them than it has done since. And when science shows us, soon after the arrival of the

* See Appendix (D). † See *Sciences Nat. Zool.*, vol. xiv. 1870.

‡ Compare the sabre-toothed feline, the *Machairodus latidens*, found in Kent's Hole, &c. See W. B. Dawkins' *Cave-hunting*, p. 331.

§ Lartet, *Sur la Coexistence de l'Homme et des grands Mammifères fossiles*, *Sc. Nat. Zool.*, t. xv. p. 217. 1861.

first men in our regions, phenomena without example since, such as those of the first glacial period, we are naturally led to remember that the old tradition of Persia, perfectly conformable to the Biblical account of the fall of humanity through the sin of its first ancestor, ranges in the first rank amongst the chastisements which followed this fault, at the same time with death and sickness, the appearance of an intense and permanent cold, which man could hardly sustain, and which rendered a great portion of the world uninhabitable. A similar tradition existed also in the songs of the Edda,—the Voluspa.”

25. I extract the following passages from the first Fargan of the Vendidad: *—

As the first and best of regions and countries, I, who am Ahura-Masda, created Airyana-vaëjâ of the good creation; then Aura-mainyus, who is full of death, created an opposition to the same,—a great serpent, and winter which the daevas have created; ten winter months are there, two summer months. . . .

This is about the present climate of Novaia Zemlia.

* * * * * *

Upon the corporeal world will the evil of winter come,
Wherefore a vehement destroying frost will arise,
Where snow will fall in great abundance
On the summits of the mountains, on the breadth of the heights:
From these places, O Yima, let the cattle depart. &c. &c.

26. It has been too little noticed that Scripture evidently indicates a *mitigation* of the curse on the earth after the Deluge.† The curse upon the ground in connection with the sin of Adam, the irreverent transgressor, opens the sad history of the cursed antediluvian world; but the accepted sacrifice of the “reverent worshipper‡” looks forward to a renewed world over which the bow of promise displays, in the varied and yet united beauty of its glorious hues, the token of the renewed blessings fresh from the hand of a now reconciled and pardoning God. The very words used in the Septuagint, in reference to the acceptance of Noah’s sacrifice, are again used in the New Testament in reference to the acceptable sacrifice of Christ (Eph. v. 2).

27. In order to present clearly before the mind the claim for the relative antiquity of the human race founded on recent researches, I take a table§ of sedimentary and fossiliferous strata, and divide it roughly into periods, which may be admitted, for argument’s

* *Avesta*, the religious books of the Parsees. Spiegel’s Trans., Hertford, U.S., 1864, p. 3. † See Gen. viii. 21.

‡ See the old Chaldean name of Noah.

§ By H. W. Bristow, F.R.S., F.G.S., Director of Geol. Survey Eng and Wales; *Life Groups and Distribution*, by R. Etheridge, F.R.S.

sake, to correspond with those of the days of creation. It will be seen that it is only amidst the creatures of the sixth period, and rather towards the end of this era, that any remains attributable to man are to be found. I do not rest at all on the correspondence of the divisions, or their *possible* analogy to the days of the week of creation in Genesis; but we see that, whether in the light of Scripture or of science, man is *comparatively* a very late creation.

28. It is well* remarked by M. Hamy that the proofs of the co-existence of man and of any animal at a special epoch are of three orders:—(1) Man may have left some object of his industry in the ground, which contains the bones of the animal; or (2) he may have marked on these the traces of his work; or (3) he may have left his own remains in the same deposit of earth.

29. It seems to me that the character of proof in the second of these three cases is by much the strongest, as most free from disturbing causes of error, especially when this his work is found connected with the attempt to represent co-existent forms of animal life. I shall therefore present to the eye of the reader a copy of some objects found in the cavern of Savigné, near Civray,† department of Vienne (figs. 1, 2).

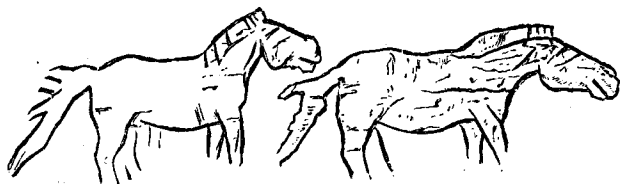


Fig. 1.

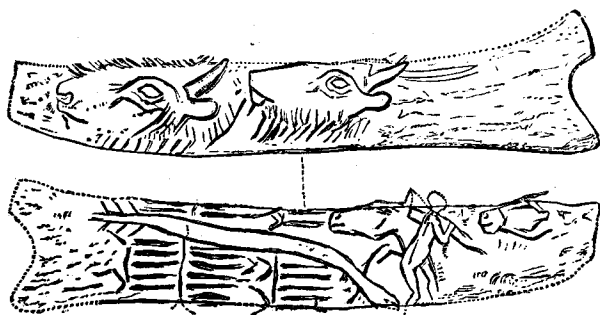


Fig. 2.

* Lenormant, *L'Homme fossile*, p. 11.

† Ed. Lartet, *Sciences Nat. Zool.*, vol. xv. 1861.

30. In the same cave were found the barbed head of an arrow made of stag's horn ; another neatly-made arrow-head of stag's horn also, and provided with deep channels on the barbs, destined apparently for the reception of poison ; a large sewing-needle formed of the bone of a bird ; a small harpoon, which might have belonged to an Esquimaux, together with the following, amid other objects :—

(1) A part of the posterior canon of a stag, on which have been engraved two figures of animals, probably, to judge by the ungainly head, of the elk species : * remains of the reindeer were found in the same grotto. (2) The extremity of a stag's antler broken at the hole by which it was suspended. The head of the animal (No. 2) is probably intended for the bear, which at present inhabits the Pyrenees.

The primitive race of people who executed these drawings are thought by M. Lartet to have resembled the Laplanders, and to have been people of small stature. It does not follow from this that their arms might not be very effective. (See Gibbon's account of the invasion of the Huns.)

31. Another very remarkable instance of the same early taste for drawing, and which seemed the most worthy of examination of all that were shown at the Paris Exhibition in 1867, is described by M. Lartet, the discoverer of this relic. He arrived soon after the workmen employed in excavation at La Madeleine, in Dordogne, had brought to light, but, in so doing, had broken the elephant's tusk, on which a primitive artist has drawn with much life-like fidelity the figure of a mammoth, differing by its long hairy mane, and in other ways, from any kindred animal now existing. The drawing (fig. 3) is on the same scale as the original traced on the ivory. †

32. Such facts, when well attested, carry conviction to the mind, and induce the conclusion that all the great contemporaries of Adam have gradually disappeared from the face of the earth ; his powerful intellect having proved more than a match for their powerful teeth and claws. But we are not furnished with conclusive evidence as to the length of time which it has required to effect this result.

33. To take the case of the Mammoth ‡ thus proven to have been

* Compare the striking resemblance to the Elk in Cuvier's *Animal Kingdom*.

† Other drawings, specially a group of reindeer from Dordogne, may be seen in *Cave-hunting*, by W. Boyd Dawkins, F.R.S., p. 345.

‡ Schoumachoff, a Tungoose chief, about the end of August, 1790, when the fishing in the river Lena was over, repaired, according to annual custom, to the seaside. Leaving his family in their huts, he coasted along the shore in quest of mammoths' tusks, and, one day perceived, in the midst of a rock of ice, a large shapeless block, not at all resembling the logs of drift-wood commonly found there. The next year, visiting the

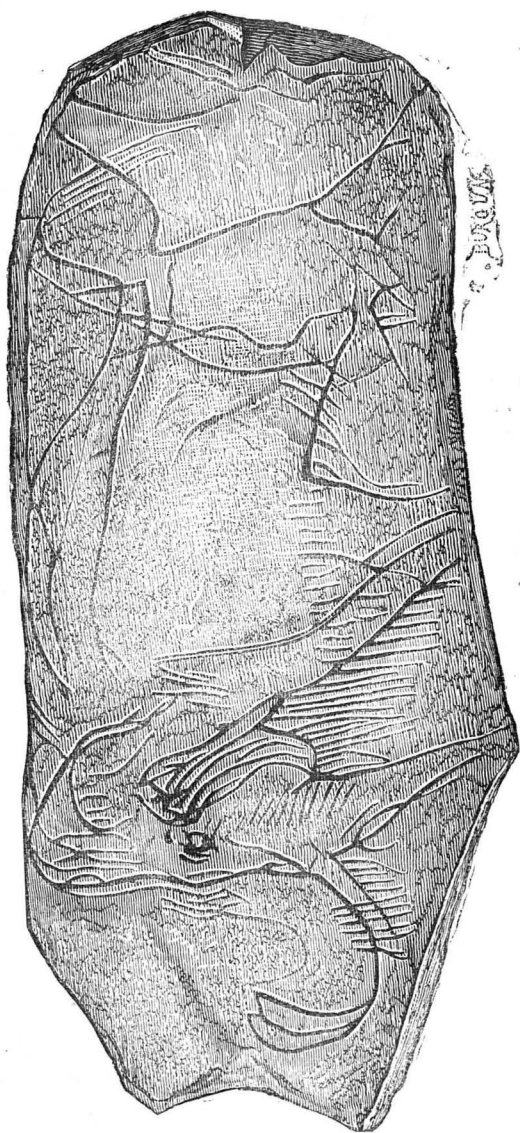


Fig. 3.

one of the giant beasts on which man gazed at some period with admiration ; we may possibly find that the era of his disappearance was, after all, not so very remote. An Egyptian text has recently been found* showing very clearly (having even the *figure* of an elephant to attest the reading) that Thothmes III., who must have reigned about 1700 B.C., killed in hunting 120 elephants for the sake of their tusks in the regions of Assyria. In the second century before our era, and probably long before, the Elephant had withdrawn to India, since Seleucus Nicanor then yielded certain provinces bordering on India to King Sandracottus in exchange for 500 elephants.

34. Now history is just as silent about elephants being found on the banks of the Euphrates as of mammoths on the banks of the Yenisei, at the same period. The former statement seems more difficult of credence than would be the latter. Chemical considerations render it very difficult to credit the continuous preservation of *decomposing* animal remains not even always imbedded in ice, for such a period as is supposed.†

35. It is said of an animal described in the Book of Job,‡

same spot, he observed that the mass was freer from ice ; but it was not till the fifth year that the ice had melted sufficiently to disengage the mammoth, when it fell over on its side upon a bank of sand. He then cut off the tusks, which he bartered for goods to the value of 50 roubles (£11. 5s.), with a Russian merchant. Being satisfied with this, the carcass was left to be devoured by the bears, wolves, and foxes, except what the Yakouts in the neighbourhood cut off to feed their dogs. Previous to this, indeed, he had a rude drawing made of it, which represents it with pointed ears, very small eyes, horse's hoofs, and a bristly mane extending along the whole of its back. In this it has the appearance of something between a pig and an elephant. In 1806 Mr. Adams, of Petersburg, fortunately heard of the circumstance, and repaired to the spot, and removed the least damaged parts to the museum at St. Petersburg. What remained of the skin was so heavy that ten persons had great difficulty in carrying it to the seaside, in order to stretch it on logs of wood. The tusks, each of which was $1\frac{1}{2}$ toise ($9\frac{1}{2}$ feet long), weighed 10 pounds (400 lb.), and the entire animal measured $4\frac{1}{2}$ archines ($10\frac{1}{2}$ feet), by 7 ($16\frac{1}{2}$ feet), long. A most remarkable thing is that it appears to have been *devoid of a trunk*.—From Pantologia, 1819, *sub voc.* Megatherium.

* Chabas, *Etudes*, &c., p. 574.

† “ En 1804 on en trouva un sur les bords de la Néva, si bien conservé qu'on peut encore en faire manger les chairs. Aussi frappé de cette conservation, le savant naturaliste d'Orbigny a été porté à revoquer en doute l'ancienneté du mammoth ; il ne pense pas qu'il puisse dater de cinq ou six mille ans, et croit même qu'il vit encore dans quelque localité ignorée.” —Chabas, *Stat. préhist.*, p. 571.

‡ Job xl. 15. In Dr. Latham's Dictionary of the English Language I find *mammoth* derived from the Arabic *behemoth*. This “the editor suggests from the fact of Arabic intercourse with the natives of the northern parts of Siberia ; being a fact of which there is evidence in the history of commerce, and in the discovery of Cufic coins on the Obi ; whilst, philo-

“Behold now Behemoth, whom I made with thee”—(part of the sixth day’s creation)—“he eateth grass like the ox . . . he moveth his tail like a cedar.”

36. An elephant, some say, is meant to be described here; which neither moveth its tail like a cedar, nor (as we think) eateth grass like the ox. Does it not seem more probable that one of the now extinct mammalia was extant at the era of the writing of this book? The mammoth delineated above had apparently a tail to which the above description might apply. The Hippopotamus, though once abundant in Egypt, and victor of its first king, had no doubt, at the period above referred to, become scarce if not extinct, having been *easily subdued by the natives*.*

37. I have shown that there is no contradiction between science and Scripture as to the fact of the coexistence of man and of the now extinct quadrupeds; that they are, in fact, distinctly asserted in Genesis to have been created at the same time.

38. I cannot say so much as to the imagined length of geological eras, and the period deduced from a reasonable view of the Bible, as to the duration of man’s existence upon earth. When we enter on an examination of this apparent discrepancy, we cannot but feel that data do not at present exist from which to compute these lapsed ages with any accuracy. I have elsewhere touched upon this subject, and on the facile faith with which evidence tending in a certain direction is received by our scientific writers. To some of these it would be a mark of scientific heresy to doubt the universal prevalence of a stone, a bronze, and an iron age; but we find in a quite recent work of one of our best Egyptologists and archæologists the following startling announcement, which it may be best to give in the author’s own words:—“L’âge de la pierre, qu’on suppose avoir existé partout avant la connaissance des métaux n’a laissé aucune trace dans l’histoire, chez aucun des peuples du monde.”†

39. How, then, shall we learn anything about the length of duration of so mythical an era? M. Chabas again says (p. 552):—“L’âge de la période paléolithique, tel qu’il se présente à nous par son outillage, est fort loin de réclamer pour son développement, une espace supérieure aux quarante siècles historiques que nous avons reconnus antérieurement à cette date.”‡

logically, there is like evidence of confusion between B and M in the case of southern words introduced into the native languages of the same districts” In respect to its *immediate* origin, it seems to have reached us through the Russian from the Samoeid.

* See Chabas, *Études*, p. 402. † Chabas, *Stations préhist.*, p. 471.

‡ That is to say, “before our era.”

40. The author admits in the same place that geology might perhaps call for different chronological appreciation:—"If the savans in this science could arrive at pronouncing with a certain unanimity on the length of the phenomena of the Quaternary period from the Pleiocene epoch until our days, and could show the necessity of the hundreds of thousands of years of which mention has been made, the question of the antiquity of man would then take a serious character; but at present there is far from being unanimity amongst observers, or even amongst geologists."

41. My late lamented friend Christy, the companion of Lartet, was confident that the result of their researches would throw back very considerably the date of man's introduction into the world. But now (if I understand right) all this is changed, and there has been a complete *bouleversement*, in the opinion of geologists concerning the diluvian deposits of the Somme and of the Seine; and consequently regarding the antiquity of the age of the prehistoric man who left his remains in these localities. This has specially taken place through the conscientious and complete study of the engineer Belgrand.*

42. Had the gentleman above named been living, we should greatly have valued his more mature and time-sobered opinions, which he would, very probably, have been ready to give to the Institute. Failing this, I can only commend the writings of our foreign archæologists, in particular those of Lenormant and Chabas, to the attention of those who desire to see a really conscientious examination of this question in all its bearings.

43. I cannot do better than conclude my review of this part of our subject in the words of one who has devoted much attention and research to Paleontology,—the eloquent M. Lenormant:†—"We possess *no chronometer* to determine, even approximately, the duration of the ages, and the thousands of years which have elapsed since the first men of whom we find the traces We are, in effect, in presence of phenomena of subsidence and of elevation of which nothing leads us to suspect even the greater or less degrees of slowness; for we know some phenomena of this nature which are accomplished quite rapidly, and others which are produced in so insensible and gradual a manner that the change is not more than a yard in several ages. As to sedimentary deposits, their formation may have been equally precipitated or retarded by the most diverse causes, without our being able to appreciate these. Nothing, even in the actual state of the world, is more variable in its nature (through a multitude

* P. 553.

† *L'Homme fossile*, Les prem. Civ., vol. i. p. 61.

of external influences) than the greater or less rapidity of increase of the fluvial alluviums, such as are the deposits of the Quaternary epoch. And, moreover, the facts of this epoch, or of the anterior times, cannot be measured by the same scale as those of the actual period, for their causes had then dimensions which they have no longer. Thus, the calculations made in reference to the progress of an alluvium, supposed always equal and regular—or, according to other data equally uncertain, which philosophers of too lively an imagination have attempted to make, to establish the time which has elapsed between the interment of the most ancient vestiges of fossil man and our era—are, in reality, nothing but hypotheses without a base, and capricious fantasies. The date of the appearance of the human species, according to geology, *is still unknown, and will probably always remain so.*"

44. I do not attach much credence to the evidence, falling chiefly under our *first* category, which M. l'Abbé Bourgeois thinks that he has discovered of the workmanship of man in the Miocene age. The supposed fossil man of the inferior Pliocene has also been put on the shelf, being unable to stand his ground against the criticisms of M. Hamy. There ensues, in the order of geological phenomena, the first Glacial period, during which there exists no trace of man or of his works. After this, in the era of the Upper Pliocene, the temperature of Europe became, it is supposed, very much such as it is now. It is presumed that at this period England was united to France, and Spain and Sicily joined Africa; that a free migration of animals could thus take place from the north and from the south, and that man also arrived in these countries with them. The proofs of this do not appear very sufficient, especially when taken in connection with the immense changes supposed to have ushered in the Quaternary period, during which the traces of human workmanship become evident and abundant. It is of the men of this period that we have been hitherto speaking; but we must pass on to a short review of the succeeding "Neolithic age," or age of weapons of polished stone. No great changes or vast catastrophes are supposed to have intervened between the above age and the present, which indeed by some is considered a continuation of the Quaternary period. M. De Rossi stated, as his opinion* that the last phase of the Quaternary state of the Tiber coincides with the first periods of the Roman history.†

45. Whatever may be the state of the case, there came a time when the small-handed men of whom we have been speaking followed (as it is surmised) the reindeer in his retirement to more

* At the Congress of Boulogne.—See Chabas, *An. Hist.*, p. 559.

† See Appendix (E).

northerly regions, and became superseded either by a Libyan kind of men, who were before mixed with them, or by better armed immigrants into these regions. A much higher type of civilization now becomes manifest in their remains, which no longer are associated with the monsters of the earth before described. To this period belong various objects of great interest for primeval history, showing that an active interchange of commodities must have begun to exist amongst the nations of the earth. The jade of the East finds its way to the shores of Brittany, and materials for use, and even for luxury, begin to be widely dispersed in traffic.

46. The commencement of this age is not distinctly marked, and its course runs on to an indefinite period of actual historical record. This is shown by the occurrence of bronze in the weapons, &c., belonging to the latter part of this period. Indeed, there is no time in which the use of polished stone instruments can be said to have ceased; for even to this day such are occasionally used. Humboldt depicts a most beautifully finished hatchet, inscribed with various characters of Aztec manufacture,* also a calender of the Muisca† and a bracelet of obsidian of the Muycas.‡

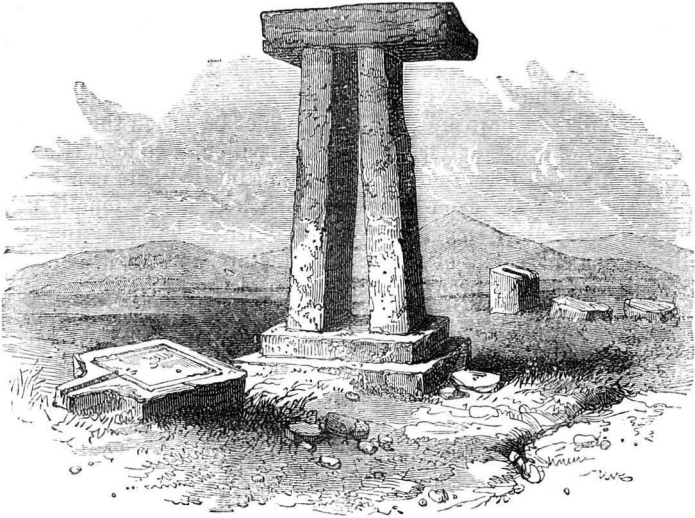
47. But perhaps the most remarkable contrast to the man of the previous period is this, that we now find ourselves amongst a generation of builders of temples, in a rude style indeed, but in the designs of which a motive of religion is distinctly apparent. M. Hamy§ says "To the monuments formed of enormous irregular stones, supporting, like gigantic pillars, a great horizontal table, succeed others composed of square stones, placed together in line with a certain amount of art. These pre-historic architects, whose works have been able to resist so many causes of destruction, thus indicate progress."|| "Later on, they covered with sculptured figures certain '*allées couvertes*,' and they raised at Stonehenge the majestic edifice which offers so many points of resemblance with that other pre-historic monument discovered by M. Mariette, at Ghizeh, and which is known to Egyptologists under the name of the 'Temple of the Sphinx.'"

48. This temple is believed to be anterior in its construction to the dynasty of Menes, the first monarch of Egypt. It is situated by the side of the great Sphinx, and was cleared from rubbish twenty years since by M. Mariette, at the expense of the Duc de Luynes. "Constructed of enormous blocks of the granite of Syène and of Oriental alabaster, sustained by square monolithic pillars, this temple is prodigious even by the side of the Pyramids. It offers neither a moulding nor an ornament, nor an hieroglyphic;

* *Atlas pittoresque*, Pl. 23. † *Ibid.*, Pl. 44. ‡ *Ibid.*, Pl. 66.
§ Quoted in *L'Homme fossile*, p. 48. || *Ibid.*, p. 46.

it is the transition between the megalithic monuments and architecture properly so called. In an inscription preserved in the museum of Boulaq, it is spoken of as an edifice of *which the origin was lost in the night of time*, and which had been found by chance, buried in the sand of the desert, under which it had been forgotten for long generations.”*

49. I copy from Fergusson's *Rude Stone Monuments* a drawing,

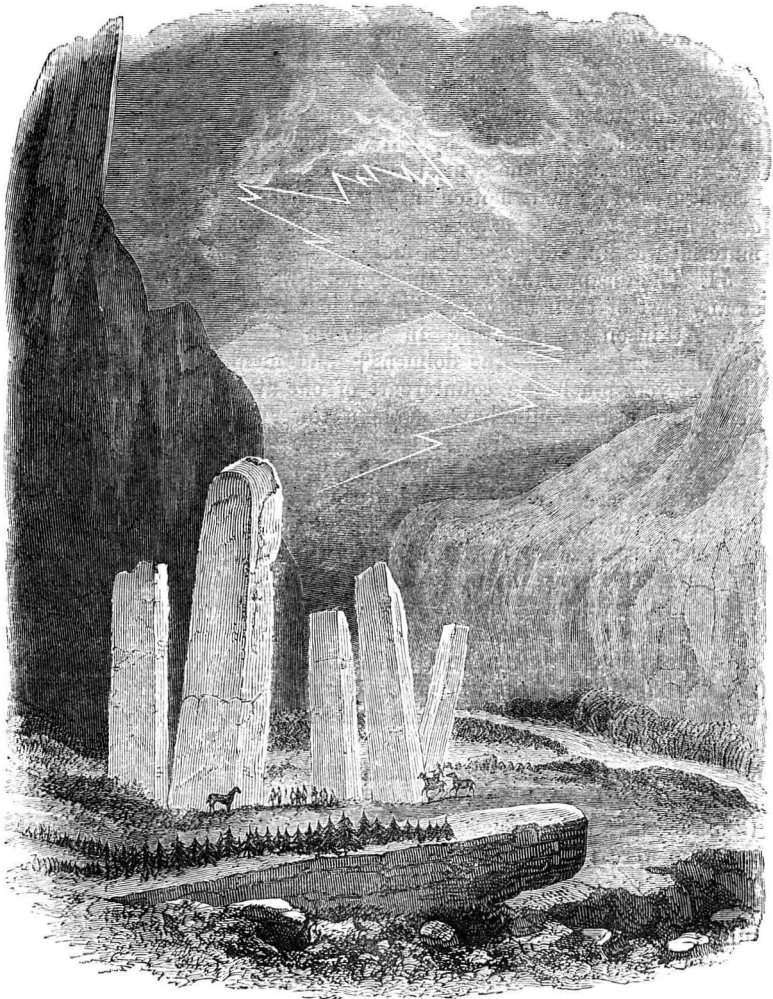


by Dr. Barth, of a trilithon at Elkeb, S.E. of Tripoli, in reference to which the learned author remarks, “The first thing that strikes one is that Jeffrey of Monmouth’s assertion that giants in old days brought from Africa the stones which the magic arts of Merlin afterwards removed from Kildare and set up at Stonehenge, is not so entirely devoid of foundation as might at first sight appear.” The removal of the stones is, of course, absurd, but the suggestion and design may possibly have travelled West by this route. I would add that the inner and smaller circle of “blue stones,” cut from igneous rocks, such as are not to be found nearer than Cornwall or even Ireland, may have been transported even in the vessels of the Phœnicians, for some of them are not large. One of the finest is 7 feet 6 inches high, 2 feet 3 inches wide at base.—(See page 93, same work.)†

* Chabas, *Stat. préh.*, p. 557.

† Mr. Fergusson says that, “without at all wishing, at present at least,

It may be well to consider, before we interfere (as recently proposed) for the preservation of Oriental antiquities, whether, as a nation, we are sufficiently careful of our own.



TOMBS OF THE GENII ON THE KORA, SIBERIA.

to insist upon it, I may here state that the impression on my mind is every day growing stronger that the dolmen builders in France are *the lineal descendants of the Cave men* whose remains have recently been detected in such quantities on the banks of the Dordogne and other rivers in the south of France."—*Rude Stone Monuments*, page 329.

50. A very curious fact has been stated by the traveller Pallas; it is that an ancient people worked the mines of metal in the Mountain of Serpents, near Krassogarsk, on the borders of the river Jenisei (56° N.), *having left on the place the instruments of which they made use*, such as wedges, mattocks, mallets, and hammers. The hammers were made of a very hard stone, of which a part was cut out in the form of a handle. The other instruments were of copper, and not of iron. They also found on the same point, and in the mountains of Irtisch, knives, poniards, points of arrows, &c., in copper, and ornaments in copper and in gold. Pallas cites also figures of animals molten in copper, and principally *elks, reindeer, and stags, and other animals which were unknown*. The material was fine copper or bell-metal.

51. The disappearance of these metal-workers is as remarkable as any part of their history. The ancient remains represented by Mr. Atkinson as existing in Siberia, exactly reproduce the tumuli* and altars,—the dolmens† and menhirs‡ of Brittany, the last very much the counterpart of one at Lokmariaker. One of these blocks would have made a tower large enough for a church, its height being 76 feet above the ground, and it measured 24 feet on one side and 19 feet on the other. Mr. Atkinson says,—“As I approached this spot I was almost induced to believe that the works of the giants were before me.” This is the same sort of impression given by the structures of Morbihan. Of course, there is really no logical connection between large buildings and large men. The two may nevertheless be in this instance related, for it is noteworthy that trilithons like those of Stonehenge exist (as well as dolmens) in Gilead, the country of the Amorites, and in Bashan, the country of Og,§ whose large stature is commemorated in the Bible. The builders of these had probably affinity with the Libyans, as shown in their mode of burial, and were in all likelihood the Rephaims or other aboriginal tribes smitten by Chedorlaomer. Raphia was a progenitor of giants (2 Sam. xxi. 18). They might resemble the old Goths. The Anakim were named from their lofty stature. The giants (Nephelim) before the Flood have quite another history.

52. The very same taste for monolithic structures and rows of pillars, to us without meaning, seems also to have prevailed in America,|| together with the fondness for vast mounds of which we cannot conceive the utility. If we could certainly discover the

* *Travels in the Region of the Upper and Lower Amoor*, pp. 179, 151.

† Pp. 370, 157. ‡ P. 120. See Plate.

§ *Rude Stone Monuments*, Fergusson, p. 442.

|| See for example D'Orbigny's *Travels*, Atlas hist. Antiquités, No. 4, Fig. 8.

meaning of the temple of the Sphinx, it might give us some light on the question. The figure of the Sphinx is supposed to have been dedicated to the setting sun, and though there does not seem to be any certain connection with the temple lost in hoar antiquity, yet it is not impossible that sun-worship was really intended by the constructors of both. As regards Stonehenge, it is clear that the disposition of the stones was connected with the quarters of the heavens,—the circus being due north, and, as shown by Mr. Beck in a communication to the *Times* newspaper,* the stone called the Pointer marks exactly the place of the sun's rising on the morning of the longest day of the year. Mr. Beck says, "As one who has now on several occasions been present and seen the sun thus come up over the 'Pointer,' and strike its first rays through the central entrance on to the so-called altar-stone of the ruin, I commend this obvious proof of solar worship in its constructors to those recent theorists who see in Stonehenge only a memorial of a battle or a victory."†

53. In fact, the above structure was regarded by those who adhered to Druidism, as late as the sixth century of our era, as "the great sanctuary of their dominion"; and the massacre of the Britons by Hengist is represented as taking place on a Baal feast in May.‡ The British Ceres Kéd is associated with Stonehenge, in which she was supposed to be present as "the gentle goddess."§ She has been identified with Isis, and her recovered son Iôr, or the sun, with Horus. Now, Stonehenge was "the precinct of Iôr,"|| and the Sphinx was "the image of the God Harmachou, the setting sun, the sun which shines in the abode of the dead," and so belonged to the times of the companions of Horus.¶ Mr. Palgrave describes a similar structure in the interior of Arabia, and the customs of the aborigines of India illustrate those of our own land. We find the Khonds, the Druids of the East, worshipping in groves, *priscâ formidine sacris*, and indulging in human sacrifices (until 1836). Macpherson tells us that they use neither temples nor images in their worship. They cannot comprehend, and regard as absurd, the idea of building a house in honour of a deity, or in expectation that he will be peculiarly present in any place resembling a human habitation. Groves kept sacred from the axe, hoar rocks, the tops of hills, fountains, and the banks of streams, are in their eyes the fittest places for worship. On the Khassia hills, moreover, rude stone monuments exist in greater numbers than perhaps in any other portion of the globe of the same

* June 22nd, 1872.

† See Appendix (F).

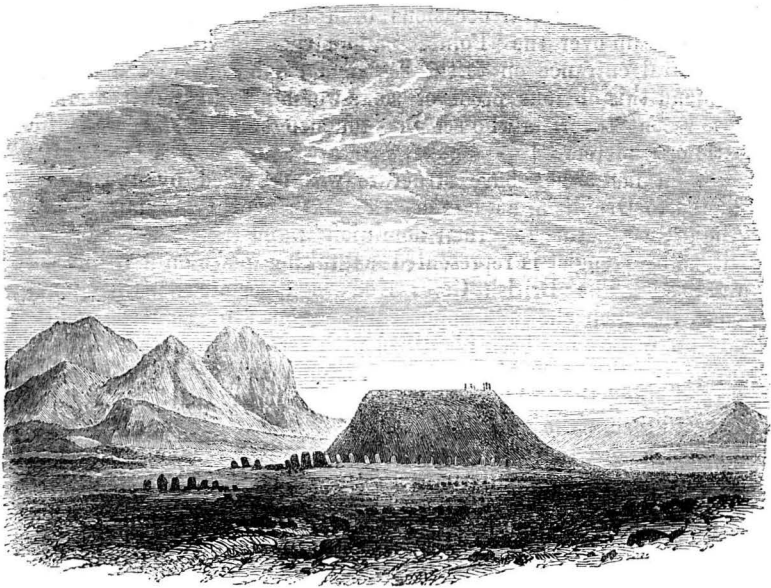
‡ Song of Cuhelyn, in Davies's *Mythology and Rites of the Ancient Druids*.

§ *Ibid.*, p. 316.

|| *Ibid.*, p. 316.

¶ Lenormant, *Les prem. Civ.*, vol. i. pp. 181, 179, 180.

extent. All travellers are struck with the curious similarity of their forms to those existing in Europe. They still erect menhirs in honour of deceased ancestors, whose spirit is supposed to dwell in the stone. The whole subject is very ably discussed in the work above quoted. But I do not remember to have met with any reference to the tablets which the Chinese worship, and in which the spirits of their forefathers are supposed to dwell. This seems to me a survival of the very old custom above referred to. On a review of the whole question, which cannot be pursued further in this paper, I am inclined to believe that the above temple-building



* A LARGE TUMULUS AND ALTARS NEAR KOPAL, SIBERIA.*

age coincides with the dawn of history and with the diffusion of sun- and serpent-worship through the world.

*c. Rise of a Material Civilization in the Race of Cain—
First Separation of Science from Religion.*

54. In the book of Genesis we have the history of Cain, who, as the first murderer, is driven forth from the presence of Jehovah, and the curse pronounced upon him that the ground when tilled

* Atkinson's *Travels*, p. 179.

should not yield her strength unto him, and that he should be a fugitive and vagabond* on the earth. And Cain went forth from the presence of the Lord, and dwelt in the land of Nod, † on the east of Eden. The name of the land was thus evidently derived from the character impressed on the unhappy fugitive. It is traditionally the great desert of Gobi, and the city of Khotan ‡ on its borders, glories in the idea that it is the very city which Cain built and called after the name of his son Enoch. It is at all events to the east of Eden, and a more suited locality could not have been easily imagined. The district produces *copper and iron*, and abounds in the remains of a lost race. § It is evident that the course of the pursuits of Cain must have been suddenly and violently changed, and the whole bent and purpose of the cultivator, thus turned away from his husbandry, was directed towards material civilization and city-building; and the Bible follows for a few short sentences the efforts of the Cainites. || The first city was certainly a remarkable conception, and the realization of the idea in the brief *stone age* recorded in Scripture, must have involved great difficulty and much persevering skill, for it is not till the fifth generation that his descendant Tubal Cain,—“Tubal the smith,” becomes, according to our translation, “the instructor of every artificer in brass and iron.” De Sola ¶ renders it “who sharpened various tools in *copper and iron*.” The family became remarkable in various ways. Yabal was the father of the nomadic people; and Yubal the father of all such as handle the harp and organ. The sister of Tubal the smith was Naamah the pleasant** or delightful one—the first inventress of plaintive music and song. The first poetry recorded is the address †† of Lamech to his wives—a song of triumph perhaps at the thought of the seventy and seven-fold vengeance which the instruments forged by his son might exact.

55. But what has all this to do with the special purpose of the

* נע ונד

† נוד, see App. G and H.

‡ “This city, whose traditions, preserved in the native chronicles, were known to the Chinese historians, boast of an antiquity ascending higher than that of any other city of the interior of Asia. By its own traditions its foundation was associated with an ancient chthonian god with a sombre physiognomy, a master of subterranean fires and of *metallic treasures*, and whom the Mahometans have not failed to identify with Cain. The Baron d’Echstein has shown that Khotan was the centre of a metallurgic commerce, which may be regarded as one of the most ancient in the world.”—Lenormant, *Les prem. Civ.*, vol. i. p. 84.

§ Johnston’s *Gen. Gazetteer*, *sub voce*.

|| See Lenormant.

¶ Following the points in the Hebrew (after Rashi).

** Comp. in Welsh *gwen*, a beauty; *gweno*, the evening star; *gwener*, Friday, day of Venus.

†† See Smith’s *Bio. Dic.*, *sub voce* Linus.

Bible in reference to the chosen race? Were these afterwards deified persons among the heathen? and was the sweetest of all melodies—the dirge over the murdered Linus—a lament of this sister over the handsome youth (Hyacinthus, Narcissus) who ventured on a musical contest with the god of melody, and was slain by Apollo—giving his name to fair and fleeting flowers, and to the tragic *ailinos* of the poets (*αἰ λίνε*).

56. We know not, because the narrative is so abrupt, but it is surely connected with more traditional knowledge which has now perished. Lamech, according to the Jewish tradition, slew his own son; and it is remarkable how many eastern traditions connect themselves with the early history of mankind. Several different features of civilization are marked out in these early traditions, but there is nothing of worship connected with them. All seems, however fair, to be essentially *worldly* in its character. It is most significant that the Scripture drops the unfinished story, and turns at once to the line of the Messiah in Seth,—leaving Cain and all his descendants. Seth, the substitutional one, appears on the scene, and it is from Seth that St. Luke deduces the genealogy of the Messiah. But the current of affairs thus pre-intimated goes on to the end. Throughout the Scriptures the highest civilization is found associated with evil tendencies in Egypt, in Canaan, in Tyre, in Babylon, in Assyria, and in Rome. It is evident that civilization dissociated from religion rests on an insecure foundation. An atheistic community always contains within itself the elements of its own destruction.

57. It is worthy of remark that copper and iron are the metals first worked by mankind. This accords with all that we know of antiquity, and with what we can easily suppose to have been *a priori* probable. Copper, from the comparative ease with which its ores might be reduced, being even found at times in a state scarcely needing the art of the metallurgist; and iron, which it is almost certain, would first be wrought out from its meteoric state into instruments for the use of man. It is, however, to be noticed that Livingstone found the survival of the ancient processes in South Africa, where the smith reduces his iron from the easily worked hæmatite ore, and then forges his instruments from the elaborated material. This is all strikingly presented to the eye in a sketch in the "Last Journals" of this lamented traveller.*

58. The inhabitants of Africa seem never to have known the use of bronze, and there is no evidence of their having passed through an age of stone. They reduced iron by simple metallurgic processes known to themselves. The Egyptians appear, according to M. Chabas, to have been always acquainted with the use of iron,

* Kindly lent to the Institute by Mr. Murray.

which they called *baa*, and even with steel, or *baa en pe*, "heavenly iron," which this author thinks may have been because of its reflecting the celestial vault.* The name appears to have survived in the Coptic *benipe*.†

59. It would seem that the notions of the ancients respecting the founders of metal always bore (probably from tradition) a sinister aspect. It is remarkable to find among the three families of Shem, Ham, and Japhet ‡ the same symbolic representations of the smith-god, under the features of a grotesque and misshapen



dwarf. Whether it is the Phtah of Memphis, when he is looked at specially as the demiurge; the Patèques of Phœnicia, or his Adonis Pygmæon (the god who wields the hammer); or the Hephaistos of Homer, § who hides his deformity in the Isle of

* Chabas, *Etudes*, &c., p. 61.

† See Appendix (I).

‡ Lenormant, *Les prem. Civ.*, p. 132.

§ *Iliad*, xviii. 410, &c.; *Od.*, viii. 311, 330.

Lemnos, and excites the ridicule of the immortals; or the Mimir of the Scandinavians; we see always the same consecrated type which is that of the Kobbold, of the Gnomes, and other analogous beings in popular mythologies, and which seems to be a caricature of the races who first worked in metals. One is almost tempted to think of the mark set upon Cain. At all events, the *souvenir* of this first civilization does not recall pleasant associations, nor lead us to suppose any superiority amongst those who addicted themselves to these civilizing arts. Thus the *Telchines*,* sometimes described as marine beings without feet, were workers in brass and iron, and made the sickle of Cronos and the trident of Poseidon. Their very eyes and aspect are said to have been destructive. M. Fougué made the important discovery at Santorin, in the Greek Archipelago, of “*a true Pompeii of the age of stone*,” buried under the layers of ashes thrown out by the ancient central volcano of that island, which has never been in eruption since the first historical traditions of Greece. Whole villages were buried under these accumulated strata. They belonged to a social state exactly parallel to that of the “*Lake-dwellers*” of Switzerland. In one of the dwellings there was found a saw of *pure copper*. By the side of rough articles of earthenware there were discovered a great number of vases of fine composition, and of very elegant forms, with painted ornaments, which showed a resemblance with those of Phœnicia and of Moab, and were evidently brought from beyond sea, indicating an early commerce then existing. The lowest stratum examined by Dr. Schliemann on the site of Troy probably contained remains of the same age.

60. M. d’Eckstein† has specially studied this subject of the races with a magical worship who adored the gods of metallurgy; and of the corporations which directed their works, and figured in a doubtful character as “*inventors, instructors, magicians, benefactors, and malefactors*,” at the same time the instructors of Aryan races, and yet viewed by them with aversion. Although directing the works of human industry, *these did not adore a personal and free God*; they did not regard with worship the god of the fathers of these races. Their supreme divinity was altogether impersonal, being identified with plastic and primordial nature,—nature in which it was embodied whilst working its metamorphoses as the soul of the world.

61. This early civilization, with all the marks of Cain about it, reappears among the inhabitants of early Babylonia, and the *Tubal* of Genesis x. becomes in the nation of the Tibarenes the great metal-worker of the new world. The limits of the present paper

* Smith’s *Dic.*, *sub voce*.

† Lenormant, pp. 139, 155.

will scarcely allow this theme to be followed out. It will be sufficient to translate some remarks of the Baron d'Eckstein* on the subject.

62. Tubal, the name of a tribe, *the probable name of a corporation*, is the equivalent of the *Telchines* of primitive Greece. We meet in Genesis x. this name, which belongs to a Circassian race,—to that of the Tibareni,—neighbours of the Chalybes, aboriginals of the mountains which border the Euxine Sea, who were forgers of iron and workers in brass, famous in the times of the Argonauts. In Ezekiel, Tubal is in the number of the tribes contributory to the commerce of Tyre, the city to which they delivered the brass of their mountains. The precious stones which are called Tibarenian are also the glory of Tubal. These are tribes against whom Xenophon warred after his Assyrian expedition.

63. It would certainly appear that whilst a large portion of the earth may have been oppressed with a glacial climate, a considerable amount of civilization had been attained before the Deluge in some favoured regions of Asia. If this rises no higher than mere material civilization, we have to inquire whether it was the same in the race of Seth, or whether higher and more intellectual pursuits elevated the minds of these. Concerning this point we have little or no information in Scripture, but it would seem that the lives of these patriarchs were abnormally lengthened, so that they became the prototypes of the demigods of Egypt, and perhaps of other nations. Lives thus protracted must have been used for some purpose, and we can scarcely imagine any exercise of the intellectual powers so certain to arise as those of astronomy and medicine. It is only in connection with the quiet pursuits of agriculture that such long lives could be reached, or the cultivation of the intellect advance.

64. I am, therefore, inclined to think that there is much resemblance to the truth—at all events, considerable probability—in the traditions collected by Dr. Chwolson from the accounts of the Ssabi, as delivered by Mahometan writers. These people identified Idris with Enoch, and assert that he gave certain books, which he had written to his son Methuselah, and to his second son, Ssabi, from whom they derived their religion. Even the Koran keeps up the tradition of this identification. Idris seems to have been looked upon as a great physician and philosopher, and to have been taken up to God by fire from heaven; on which account they burnt their dead, and some of them even burnt themselves alive. Idris,† according to one author, taught his children

* Lenormant, *L'Epoque néolithique*, p. 122.

† Chwolson, *Die Ssaber*, p. 246.

to write, and said to them, "O my sons, know that you are Ssabians, and therefore learn to read in your youth, for you will find the advantage of it in age." They were the learned men—the magi of the period. They believed that Ssabi, or Hermes, wrote a work on the unity of God, and that the writings of Seth and Idris remained till the time of Abraham. The Arabian author Schahradstain calls Hermes a great prophet, and gives his opinion that Hermes was identical with Idris, and first gave names to the planets, and invented the Zodiac, and showed the oppositions and conjunctions of the former. Thoth, or Hermes, was regarded as the real author of everything produced or discovered by the human mind—as the father of all knowledge, invention, legislation, &c. Hence, everything that man had discovered and committed to writing was regarded as the property of Hermes. As he was thus the source of all knowledge and thought, or the λόγος embodied, he was termed τρις μέγιστος, Hermes Trismegistus. It was said that Pythagoras and Plato had derived all their knowledge from the Egyptian Hermes. These works, or some of them, were extant at a late period of the Egyptian history, and Manetho, in his dedicatory epistle to his sovereign, Ptolemy Philadelphus, says, that, according to his commands, he shall lay before the king what he had gathered from the sacred book written by Hermes, his forefather.

65. Moses, who was learned in all the wisdom of the Egyptians, could not have been ignorant of these works, which must have been laid open to his inspection, as presumptive heir to the throne of Egypt.

66. Clement of Alexandria speaks of forty-two books of Hermes, containing the sum-total of human and divine knowledge and wisdom, and treating on cosmography, astronomy, geography, religion, and more especially on medicine. This accords with the account of Berosus:—

In his time [that of Xisuthrus] happened the great Deluge, the history of which is given in this manner. The deity Cronus appeared to him in a vision, and gave him notice that upon the fifteenth day of the month Dæsia there would be a flood by which mankind would be destroyed. He therefore enjoined him to *commit to writing* a history of the beginning, procedure, and final conclusion of all things down to the present term, and to bury these accounts securely in the city of the Sun at Sippara, and to build a vessel, &c.

67. After recounting the Deluge, Berosus continues:—

In this manner they returned to Babylon, and having found the writings at Sippara, they set about building cities and erecting temples; and Babylon was thus inhabited *again*.

68. Since recent researches into the cuneiform inscriptions have

led to our placing increasing confidence in the history of Berossus, it is worth notice that he implies that Babel was inhabited *before the Deluge*. I read in Smith's "Early History of Babylonia,"* that a king, named Zabuu, founded the Temples of Ammit (Venus) and *Samas the Sun, at Sippara*, "in ancient days." There is nothing impossible in the fact that knowledge might be preserved, in the Babylonian manner, on baked tiles, even through such a catastrophe, which for the rest does not seem to have left any very deep impression on the Babylonian plains.

69. The foregoing pages must be looked upon in the light of a preliminary inquiry, necessarily fragmentary and imperfect, from the very obscurity of the subject. I have stopped short at the threshold of the historic era, but have availed myself freely of the light thrown by the Book of Genesis on the creation and early condition and civilization of mankind. In so doing I wish it to be understood that I write only for those who will concede that we have there presented to us a faithful transcript of the earliest traditions of the human family. In seeking to follow the dim light, which in some cases is all that the Scripture affords, and to explore the coincidence of this light with that thrown by reliable geological discoveries, I am conscious that I may have made many mistakes as to *facts*, and still more as to *theories*. In the facts themselves, rightly understood, there can be no discrepancy, always taking it for granted, as above, that the Book is a reliable record.

70. Let us see, then, to what conclusions [inferences] we have, with more or less certainty, arrived.

71. *First*, that Adam, the head of the human family, was created by the Almighty, after special purpose, and in a special manner, in order to reflect His own image; and as a corollary to the above, that no creation of an Adam before the end of the sixth day can possibly be made consistent with either the first or second record in Genesis.

72. *Second*, that even as Adam was designed to shadow forth the power and wisdom, the creative skill, and orderly arrangement exhibited by the Divine mind in the universe, so Eve was intended to reflect the beauty, the grace, the compassion and tenderness of the Divine nature; as a corollary, the sexes are not equally adapted for all studies and pursuits, and have totally different parts assigned, to which the diversity of mental organization predisposes them.

73. *Third*, that civilization in its amount, or in its deficiency, is inseparably connected with the state of the woman; as a corollary that religion is specially needed to support her in her proper sphere, her nature being essentially more weak.

* *Bib. Arch. Trans.*, vol. i. p. 34. Appendix (J).

74. *Fourth*, that a period of violence, and general corruption and degradation of manners, ensued on the fall of the mother of all living; that in all probability, a glacial period of the earth's history rendered most parts of the earth unfertile, whilst the abundant supply of animal food fostered a savage hunter's life (apart from all pretence to civilization), of which we find the traces in the paleolithic period.

75. *Fifth*, that at a subsequent period there arose a race of temple-builders, whose megalithic monuments of all kinds are spread over a large extent of the world, seeming to indicate the general prevalence of sun- and serpent-worship, probably after the Flood. This seems to coincide in part with the Neolithic period.

76. *Sixth*, that in the race of Cain there supervened a material civilization of considerable importance to the future history of the world; this being separated from religion, and, as anticipated by the first author of it, "hidden from the face of Jehovah."

77. *Seventh*, that the life of the patriarchs in the chosen line before the Flood was probably devoted to agriculture in the most favoured portion of the earth's surface; this being the state of society most suited to longevity and to the cultivation of the sciences of astronomy, and also of writing and other researches, much of which knowledge survived the Flood.

78. On the whole, I conclude that the conception of man as a savage, improving himself from some apelike condition up to civilization, is repugnant to Scripture, opposed to the most reliable testimonies as to his early state, and most contrary to the endowment of noble faculties which his Creator has manifestly assigned to him.

APPENDICES.

(A.)

Mr. Hardy, in his *Ontology of Buddhism*,* shows that, according to the teaching of Gótama, there are twenty-eight members of the organized body, but among them no single entity is presented that we can regard as the primary and essential principle to which all the other parts are accessories.

This is exactly the doctrine propounded at the last meeting of the British Association. The idea, "which remained unassailable, that the living body was not a simple continuous whole, but that it was made up of a multitude of parts, which lived a *quasi* independent life."

(B.)

As this important point is much controverted, I must request the reader to turn to the *Englishman's Hebrew and English Concordance* under the head Man. This will suffice for our purpose, and we need only refer to the three first words, Adam, Ish, Enosh. Of these the first is used in all the different senses which we should express by *the human family*, whether as regards the intellect, "for the Lord knoweth the thoughts of Adam that they are vanity"; or his body, for it is in the person of Adam that the slave-dealers traffic;† their way of coming into the world, "though Adam be born like a wild ass's colt"; or continuance in it, "for Adam, born of a woman, is of few days and full of trouble"; or, to finish up his history, "Adam is like to vanity."‡ When Jehovah declares His resolution, "I will destroy man whom I have created from the face of the earth," it is again the same characteristic expression Adam, *i.e.* the human family.§

In chap. xv. of 1 Cor. we find as nearly as possible to be expressed in Greek the same term used for all men who are subject to death, for, as "in Adam all die" (*ἐν τῷ Ἀδάμ*). If, therefore, we search in Scripture for any portion of the human family not sons of Adam, we look in vain. Such would not belong to "the *first* man Adam" (and they could not be before the first), neither could they come under the quickening power of the second Adam, for the first of the human family (*ὁ πρῶτος ἄνθρωπος*) became a living soul, but the last, or, rather, highest, Adam, a *life-giving* Spirit. The first Adam came under the sentence of death, and involved all those who stand under his headship; but the nobler Adam, whilst voluntarily submitting to

* *Manual of Buddhism*, p. 389.

† Ps. cxliv. 4.

‡ Ezek. xxvii. 13.

§ אָדָם אִשׁ אֱנוֹשׁ

the penal sentence which he had not incurred, was declared to be, in resurrection, the Son of God with power, and also the first-fruits of those that sleep—Χριστός, the one anointed with the Holy Ghost, in whom all those who partake of this anointing shall also rise to endless life, for, if the Spirit of Him that raised up *Jesus* from the dead dwell in His people, He that raised up *the Christ* from the dead shall cause to live even the *mortal bodies* of His people by (δα) His Spirit that dwelleth in them.

As regards the use of the word Adam in Hebrew to signify man, I need only further remark that the term appears to be carefully avoided when angels appeared, or manifestations of superhuman personality. As to Abraham, when we read three men, it is *Enoshim* in the original; or to Manoaah, where the word is *Ish*. Again, in Daniel, "the man Gabriel," and the "certain man clothed in linen," are mentioned under the latter term.

It would be tedious to enter into the question of the peculiar use of *Ish* and *Enosh*, further than to say that both seem to be used with very wide latitude of meaning, as *person* in English. *Ish* has further, as contrasted with *Ishah*, the special meaning of husband. Moreover, where the contrast is between mighty men and mean men, rich men and poor men, great men are always called *Ish*, and poor and mean ones *Adam* (as Is. ii. 9, v. 15, xxxi. 8; Ps. xlix. 2); but the meaning of the contrast is very obvious, as we contrast "a person of quality" with the meanest of Her Majesty's subjects, which humble individual is nevertheless to be looked upon as "a human being."

(C.)

THE GREAT AMERICAN DESERT.

(From the *Times*, September 28th, 1874.)

"The *New York Times*' Own Correspondent writes from Omaha as follows

"That portion of Nebraska which might with most propriety be called the "Desert" is that adjoining the Loup and Niobara rivers, far to the north, near the Dakota line. This is the *Mauvaises Terres* or bad lands of the old Canadian voyageurs, and the dreaded "Makoo-set-cha" of the Dakota Sioux, for its white, rugged, and dreary plateaus reveal nought but the most barren desolation. It was, and is yet, a terror to all travellers, for not only is it difficult to traverse, owing to its ruggedness, but it is also devoid of wood and water, the two greatest necessities to the wandering wayfarer. Though forbidding as a landscape, it yet possesses the greatest interest for the palæontologist, as it is undoubtedly the most extensive cemetery of fossil animals in the world. Almost every species known to this continent in its various ages are found there in profusion, and many which have not been found in other portions. It is estimated that *several thousand species* now

extinct lie buried there. Among the latter fauna, which occupy the upper beds, we find several species of camels, varying in size from the present Arabian type to one little larger than a Shetland pony; numerous specimens of the Equidæ, ranging in bulk from the heavy Flemish cart-horse to one the size of a Newfoundland dog, and furnished with three hoofs to each foot, though the lateral ones were merely rudimental. The carnivorous animals are represented by wolves and foxes, some of which were larger than any now living; three species of the hynædon, which were most remarkably rapacious, and five varieties of the Felidæ, whose skulls display the terrible conflicts they had with their contemporaries. Among the larger and more interesting animals found there, owing to the fact that none of them now exist on this continent, are the pachyderms, which were quite numerous. They ranged in size from one no larger than a cat to one having the ponderous dimensions of the African hippopotamus. Several species of the rhinoceros family also roamed over the lacustrine marshes existing there in the tertiary era, and, later still, the elephant and mastodon sought the shade of the tropical forests then prevalent in Nebraska. Of all the animals found, however, none equals in numbers the Ruminantia, for over 700 varieties of one species have been found. Among these the ruminating hogs, to us, are the most interesting, as none now exist. These fossil bones are preserved with the greatest care, for they display no sign of abrasion, and they are as white and clean as if they had been bleached; and the fact that they are not worn in any way would go to prove that they have not been carried any distance by water or drift, and that the animals inhabited the region in which they perished. One peculiar fact in connection with this fossil fauna is that *no crocodiles have been found among it*, notwithstanding the Southern axiom that pigs were made to furnish meat and music to this lazy creature.

“While stopping there, I had the pleasure of participating in a buffalo-hunt, which lasted three days. Few sports are more exciting. This noble animal will soon, however, be among the fauna of the past, for the “pot-hunters” and civilization are rapidly pursuing it to decimation. It is estimated that the “hide-hunters” of Kansas, Texas, Colorado, and Southern Nebraska kill 50,000 each year for the skins alone; that the Indians kill three times that number, and that perhaps 10,000 more are killed by sportsmen and those pioneers who depend on buffalo for their winter meat; thus we have the enormous figure of 210,000 as the annual slaughter. But this even will not represent the grand total, for many calves are captured to be sold to menageries, museums, and to private gentlemen who desire such pets. I cannot approach a summary of the latter, but I think that from 5,000 to 10,000 would be an approximate estimate, though a low one. I have known instances where a hundred of these creatures were caught in a day by being run down, and not more than one-tenth were alive the next; for, though apparently strong, they cannot endure much hardship. By giving the figures in round numbers we may estimate that a quarter of a million bison are destroyed annually, and that, I think, will not be far from the exact number.

At this rate of destruction they cannot last long, so the present generation will probably witness the decimation of the animal most characteristic of the fauna of North America—one with which the history of our plains, pioneers, and trappers is most closely blended.’”

(D.)

“Nec nimio tum plus quam nunc, mortalia secla
 Dulcia linquebant labentis lumina vitæ.
 Unus enim tum quisque magis depensus eorum
 Pabula viva feris præbebat dentibus haustus :
 Et nemora ac monteis gemitu, sylvasque replebat,
 Viva videns vivo sepeliri viscera busto.”

Lucretius, lib. v. l. 985, et seq.

(E.)

“Nous ne saurions raisonnablement nous refuser à conclure, que les âges prétendus de la pierre polie, du bronze et du fer préhistorique se confondent ensemble et rentrent en ce qui concerne les gisements riverains de la Saône, dans les limites de la période historique des peuples Européens.”—*Chabas, Stations préhist.*, p. 523.

“Lorsque M. Mariette Bey voyait à Abydos les ouvriers de les fouilles se faire raser et écorcher la tête avec un silex, lorsque les Arabes de Qournah lui montraient des lances de Bédouines encore armées de gros silex, il s'est cru transporté dans l'âge de pierre, et il est arrivé à cette conclusion ; que l'âge de pierre a vécu en Égypte sous les Pharaons, sous les Grecs, et sous les Romains, qu'il y a encore vécu sous les Arabes, et enfin, que dans une certaine mesure, *il y vit encore.*”—*Chabas, Etudes, &c.*, p. 396.

(F.)

A clerical friend residing in the district, who is well acquainted with these remains and also with those in Brittany, writes me :—

“I am sorry you do not seem to have met with one monument of that religion far more ancient and remarkable than Stonehenge, namely, the temple at Avebury. You speak of Silbury Hill which lies about one mile from the temple. At Avebury the stones are larger than at Stonehenge, and the men of its day had not learnt to use a tool to cut stone. The mortise and socket of the stones as at Stonehenge marks a progress of several centuries. Avebury also is more equal in grandeur to Carnac for size and design. Henceforth I must feel the Druids did to the religion which preceded them what the Roman Catholics did to Druidism—utilized their monuments and called them by the name of the new religion.”

(G.)

“M. Hamy, d'accord ici avec M. Pruner Bey, considère comme la race spéciale des cavernes de Périgord comme la plus civilisée de cette époque, celle à qui l'on doit les dessins et les sculptures, *la race petite et brachycéphale*, qui dans ces caractères anatomiques présente les plus étroites analogies avec les populations hyperboréens, des Esquimaux et des Tchoukchis. Le rapprochement est d'autant plus remarquable et séduisant qu'on retrouve encore aujourd'hui chez ces populations, dans leur habitations actuelles, sous les glaces du pôle, identiquement les mêmes mœurs, les mêmes usages, les mêmes instruments, que chez nos troglodytes de l'âge du renne, et chez les Tchoukchis le même instinct naturel de dessin qui frappait il y a cinquante ans le voyageur Chéris.”—*Lenormant, L'Homme fossile*, p. 43.

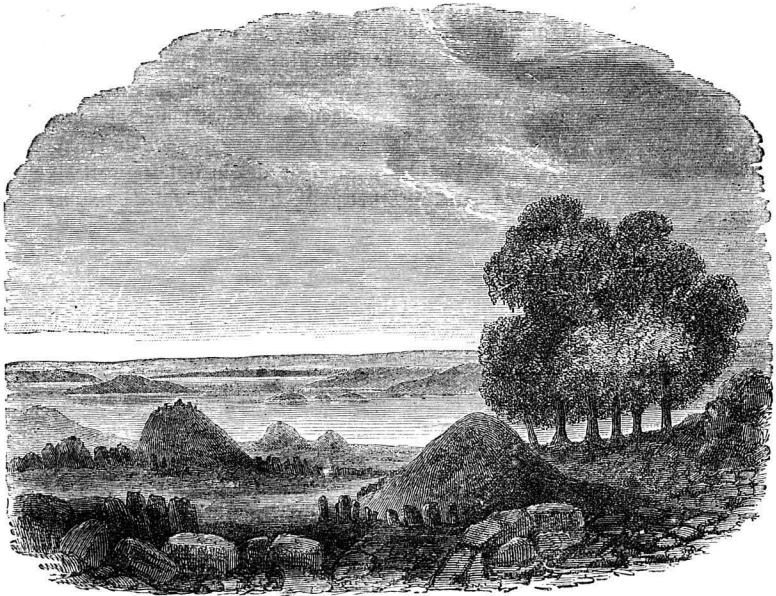
(H.)

The use of these megalithic structures in many cases for tombs does not invalidate their having also been regarded as temples. Up to the eighth or ninth century the descendants of the Ssabians used to make pilgrimages to the three largest pyramids, which they (erroneously) considered to have been tombs of their ancestors. They worshipped the spirit supposed to reside in them, and sought knowledge of future events. In like manner, a work published in 1848 * records, “A species of divination is still practised at Arthurstone, by the neighbouring rustic maidens, who have little idea that they are perpetuating the rites of Druidism, and the mysteries of Eleusis in their propitiatory offering. At midnight of the full moon, if a maiden deposit in the sacred well beneath, a cake of milk, honey, or barley meal, and then on hands and knees crawl three times round the cromlech, she will see, if ‘fancy free,’ the vision of her future lord; if her affections are engaged, the form of the favoured youth will stand before her fearfully bound to answer truly her questions as to his sincerity.” Arthurstone is the name of a very remarkable cromlech on Cefn Bryn, near Swansea. It is, according to Camden, a vast unwrought stone, probably about twenty tons weight, supported by six or seven others that are not above four feet high. It was called Maen Cette, or the Stone of Kéd, and is commemorated in the Triad. “Of the three great labours of Britain, the first was lifting the stone of Ketti; the second, building the work of Emrys (Stonehenge); the third, raising the Mount of Assembly” (or Silbury Hill, in Wiltshire).

* *Tales of the Cymry*. By James Motley. Swansea and London.

Kéd, or Ket, was originally (in all probability) *the moon*. Kits Cotty House, at Aylesbury, had probably the same double purpose of tomb and sanctuary.

The temple of "the White Lady" (Cerid-wen), consisting of a tumulus and ruined walls, is held sacred by the tribes of the Kirghis, and it is said that no animal ever entered its sacred precinct and lived.—See Atkinson *Upper and Lower Amoor*, p. 151.



(I.)

Copper and iron were the earliest metals known, or brought into use by the human family; but till comparatively recently, iron was too scarce and of too costly manufacture to take its legitimate place of utility in reference to the ordinary uses of civilized life. In Egypt it was long an article of luxury, and in the neighbouring nations we are informed of a similar state of things. Thus, whilst the Philistines bound* Sampson with fetters of copper, the Canaanites had chariots of iron (Josh. xvii. 16). A bow of steel is

* We read at a latter period, that Zedekiah met with like treatment from the King of Babylon.

mentioned in two or three instances in the book of Job* and in the Song of David when victorious over his enemies. It may be necessary to mention that the words are all cognate, and that the rendering steel is only warranted as required by the sense. Brass is in almost all cases an unwarranted translation. The name seems to be Shemitic, and to be derived from a root signifying to *shine*. It is, therefore, probable that the use of the word was not in any age carefully restricted by the Hebrews. Bronze belongs to the later period, and may perhaps then be included under the same name.

(J.)

W. Boyd Dawkins, F.R.S., in his *Cave-hunting*, arrives at the conclusion that there is no evidence that the Palæolithic people were inferior in capacity to many of the lower races of the present time, or more closely linked to the lower animals. . . . The historian commences his labours with the high civilization of Assyria and Egypt, and can merely guess at the steps by which it was achieved; the palæontologist meets with the traces of man in the pleistocene strata, and he too can merely guess at the antecedent steps by which man arrived even at that culture which is implied by the implements. . . . Neither has contributed anything towards the solution of the problem of his origin.

The CHAIRMAN.—I am sure I may offer the thanks of the Society to Mr. Howard for his interesting paper, which contains so much archæological knowledge. It is now open for those present to offer remarks upon it.

Dr. H. COLEMAN.—Looking at this paper from the point of view of a logician and metaphysician, rather than from that of a physicist, I cannot agree with it. I agree most cordially with all the paragraphs into which the author has divided his paper, and with the six or seven propositions termed conclusions; but I do not see that the conclusions follow from the premises. I agree with the conclusions, and I would agree with the premises, but I do not see them. Where are the facts which led the author to state these conclusions? Some conclusions might possibly follow, but certainly not these. Had time allowed, I think I could have shown this in every case. I will, however, take two points. In the first place, I would ask what Mr. Howard means by a conclusion which we have with *more or less* certainty arrived at? If it does not result from a certainty, it should not be called a conclusion. In the second place, as to the assertion that Adam was the head of the human family, I could not find any statement in the paper which justified the conclusion that he was, other than the passage in the first chapter of Genesis, in which I agree; but why

* Job xx. 24; Jer. xxxix. 7.

invite us to hear a statement with which we are all familiar? If, on the other hand, Mr. Howard had human testimony to rely upon, apart from the Scripture, why was it not given? I honour Mr. Howard for his great abilities and for the noble use he makes of them to defend revealed religion, but I am bound to protest against what I consider irrelevant conclusions, for their effect upon me is something like the waving of a red flag before the eyes of the traditional bull.

Mr. F. A. ALLEN.—I have been very much interested in Mr. Howard's paper, but should like to make a few remarks upon it. In his 20th paragraph, Mr. Howard refers the existence of Palæolithic man (whom he calls cannibals!) to antediluvian times. Does he believe that such a cataclysm as the Flood would have left the kitchen-middens and bone-caverns undisturbed? Was not the antediluvian world the source, not of barbarism, but of all the civilization and culture of Assyria, Egypt, Greece, and Rome? Mr. Howard also suggests that iron was called "heavenly iron," because it reflected the celestial vault.

Mr. HOWARD.—That is a quotation from M. Chabas.

Mr. ALLEN.—It is much more likely to have been so named from the first iron having been discovered in meteorolites or aërolites which may have been seen to fall from the sky.

Rev. Canon TITCOMB.—I was afraid, when I read the proof copy of the paper, that the discursive character of its illustrations would necessarily lead us into a variety of topics which would, more or less, detract from the unity of this great subject; to my mind it is really a most interesting and important one. There are but two ways in which we can discuss it. The first is that of the worldly scientist, who disregards the Scriptures altogether, and, as a mere philosopher, is not to be blamed for viewing things as they are. He starts with the first dawn of history, looks into pre-historic times through archaeology and palæontology, and then adduces such results as have been brought before him by discovery; he tells us that aboriginal man was a wild savage, a cannibal; not civilized by his Maker, but evolved from a lower animal; having passed upwards, through successive stages of material and moral civilization, until he became at last a reasonable being. The other line is that which Mr. Howard and many others hold; who start with the conviction that the Bible records the truth, and then go on through the evidences which it presents, until they come to external history. The question is whether these two modes of treatment are so far apart that we may not justify Scripture, and yet at the same time acknowledge some of the inferences of our other friends to be correct. The observations of men who explore the early races of mankind through archaeology and palæontology, necessarily lead them to the earliest *visible* remains; but that is in no way a proof that there was not a pre-existing race in some period of the earth of which *no* remains can be found,—I mean—the very race of which the Bible speaks in its earliest

pages. The Christian student should never overlook this ; for in this way the Book of Genesis will supply a fountain of thought which may harmonize with many of the discoveries of archæology. Mr. Howard said in his paper that Scripture described a *brief* period of a stone age ; I venture to differ from him ; it was a *long* period. Hales's chronology makes the stone age in Scripture to cover 1,500 years. Calmet makes the period from Adam to the birth of Tubal Cain to cover 900 years. But Hales's chronology is that most generally followed. Take it therefore on his calculation, and you have a stone age according to Scripture of 1,500 years, during which time there was an overpowering tendency, through the fall of man, toward gradual degradation, leading on to the period of the Flood, when the disorganization of mankind became excessive. But for 1,500 years, though man thus lapsed from the high *moral* condition in which he had been formed by the great Creator, he still had a *material* civilization. This primitive race, existing on the slopes of Asia, would gradually extend itself ; certain waves of population going out in a northerly direction, and so arriving in Europe. Imagine these people under the influences of a severer climate, and of scarcer food than that to which they had before been accustomed ; would they not gradually become more and more uncivilized, their moral and material civilization being lost in inhospitable climates ? Would they not gradually become savage hunters, such as our archæologists find, in proportion as they went further northward and got into Arctic regions ? I take it that the first wave of population going north would represent what our archæologists call the *palæolithic* race. Is this not quite consistent with Scripture ? With a second wave of migration no doubt the art of working in stone would be improved. Chipped stone would be set aside ; and by an improved operation of working, they would arrive at the *neolithic* age. In 1,500 years surely such waves of population might have swept over Europe and Asia, so that it would be perfectly consistent with the Scriptures, that their remains should now be found just where the population went. It was not till afterwards that the metal-working races,—I mean Tubal Cain and his descendants,—came upon the scene. This again would represent another long period, before that higher civilization arose of those great city-builders who founded Babylon and ancient Egypt. This is an interesting way of regarding the subject, and it is one which has been to a great extent overlooked by Mr. Howard in his accumulation of other facts. I believe that if we analyze them carefully they will contribute much to a reconciliation of prehistoric archæology with Scripture. Still there remains the question, as to the non-appearance of these races, or rather of their remains, archæologically, in the cradle of the human family. Why is this ? Because they lived in the sunny climes of Central Asia, and were not brought into such conflict with those terrible forces which were found in northern climes. This, I think, is why we do not discover their bones in caves, along with the mammoth, the rhinoceros, the cave bear. Their remains

have passed away like the bones of modern races in the soft warm earth of those sunny regions. Thus, the fact that the relics of the earliest races are only discovered in northern regions, is, to my mind, not merely in harmony with Scripture, but is one of the greatest proofs that the Scriptures are true. For, as men travelled on, their remains would thus be found in the very order in which we now find them. I can see no difficulty in all this ; and I think that if the discussion takes this line it will make our evening more profitable than if we take up all kinds of *incidental* points arising out of the paper, such as the question of the great antiquity of man, or twenty other things which might be named. We should then have more unity in our discussion. We should then be able to see how really and truly the early dawn of civilization is harmonious with the discoveries, even of the latest archaeologists. (Cheers.)

Mr. D. HOWARD.—It seems to me that the last speaker has called attention to a very important point,—the special method in which this subject requires to be treated. The main question at issue between the men of a certain school and the Christian is, whether the natural course of man's progress is upward or downward. We cannot too clearly keep before us what we mean by civilization : there are two very different things called by that name recorded in Genesis,—the civilization of Cain and the civilization of Seth. It is not by accident that they are thus brought together. They are two entirely different civilizations, that may come together or not, more often not,—the material and the moral. As for some of the philosophers who speak about the progress of mankind, I wish they were a little more logical ; is there any proof, not only that an ape can develop into a man, but even that the ape-like man can ever raise himself in the scale of humanity ? Is not the whole tendency of a degraded race to further degradation ? There is only one thing that can civilize a race that is thoroughly degraded, and that is religion. There is nothing wonderful in any degree of ape-likeness in man, for man has a natural physical resemblance to the animal, and there is no doubt that if the moral nature is degraded, the animal nature gains prominence. It should be regarded as a compliment to some men to call them beasts, seeing that the beasts have so much the advantage of them. This only shows, however, that man is but the wreck of what he ought to be, and is not fulfilling his mission. But the question before us is, is there any proof that the palæolithic or neolithic man ever improved his position in the world ? We do find that certain great races have maintained their position, and they have been those whose religion has been the purest. The possibilities of improvement that we find in the Aryan and in some other races is surely not unconnected with the fact that their religion, poor at the best, was yet not utterly corrupt. The corrupt races have died out, and the religious races have risen. All this is comprehensible enough if we believe the history of Genesis. There is time enough, even in our chronology, to explain all that has really been proved about pre-historic man. Hypothesis

is nothing, and the split flint does not always prove a knife. (Hear, hear.) There is one point that I think we ought always to bear in mind, and that is, that these different ages of stone, bronze, and iron may overlap one another, and they certainly do not follow one another everywhere in unvariable order. They may all have coexisted in the iron age. This is a curious fact, and I have in my possession a proof of it, [in the shape of a stone knife, brought by a missionary from Rara Tonga, where it was used in the last generation for sacrificial purposes. (Cheers.)

Dr. E. HAUGHTON.—At this late hour I will not attempt to enter upon the large question of civilization taken in its widest sense. I would only mention, in relation to the finding of flint implements, that, on one occasion, in which a number of so-called flint arrow-heads had been collected and brought up for exhibition at various scientific societies, the explanation was given of how they came to be found by a person who had actually seen the flints fall from a height, and thus witnessed the making of them. They were flints embedded in chalk, at the top of a cliff, and they fell in such a way that many chipped into arrow-heads and other forms. With regard to Dr. Coleman's criticisms, I think he was hardly fair in his remarks; for when a member takes the trouble to give such a learned paper, he deserves the greatest consideration. There are many points in it which are suggestive and likely to be of much use; for instance, that with regard to the fatal gift of beauty. Dr. Darwin, in endeavouring to establish the doctrine of evolution irrespective of design, speaks of the gift of beauty only in reference to females; but we know there is beauty in flowers; and it would puzzle the wisest logician to find any utilitarian reason for that. God need not have made them beautiful, and this is an argument against Darwin's view, showing, as it does, that it is not merely the things which are gifted with increased endowments which thus receive an advantage over others, but that there is a real design in these endowments.

The HON. SECRETARY.—One word with regard to the existence of a palæolithic and a neolithic age in various countries, and its use as a measure of time. It is acknowledged by Dr. Dawson and other leading geologists, that in different countries the palæolithic and neolithic ages were contemporaneous, and it is still so in modern times, especially in some islands of the Pacific.

The CHAIRMAN.—Perhaps I may be permitted to trouble you for a moment, in order to add a little bit of criticism to Dr. Coleman's. He complained of the whole paper as containing many valuable facts, which, however, were not sufficiently connected. He had no objection to the ribs, but he lamented the want of vertebræ (laughter). I find fault, not with the body of the paper, but with the title. I protest against it, because I want it distinctly to be enunciated, as the view held by this Institute, that man was created civilized. Mr. D. Howard has already put that strongly, by insisting on the fact that there were two civilizations, material and moral; I would go still farther

for I believe that man was created civilized, both morally and (to a very great extent) materially. (Cheers.) He possessed from the first the *δύναμις*, or potentiality of material civilization, which only needed development by contact with the material world. We must look upon the savage not as the original primordial man, but as the degraded man, and I challenge the production of any instance of a really savage tribe having raised itself to a civilized condition. I do not think there is any authenticated instance; but if it has ever taken place, it has been through the power of religion, and of nothing else. Therefore, I only wish that this paper, valuable as it is, should have its title changed. It is not a dissertation on "the early dawn of civilization considered in the light of Scripture," but the light thrown by Scripture upon the early history of undegraded man.

Mr. J. E. HOWARD.—Dr. Coleman, my first critic, finds fault with the paper because I have said that we arrive at certain conclusions, those conclusions being not exactly mathematical conclusions. It does not appear to me at all logical to attempt to deduce the origin of mankind from Adam by any such reasoning as Dr. Coleman's seems to rest upon. My paper was intended for those who would agree with me that the Scriptures contain a truthful record of the earliest traditions of mankind, and therefore I set out with that as a *starting point*, without attempting to prove anything about the authority of Scripture. I merely say, *in accordance with the Scripture*, that Adam in the Hebrew is the name for all classes of mankind. There is only one name for mankind in the Scriptures, Adam being the generic name for the whole human race. There is a passage (Matt. xix. 4-6) in which our Lord takes up the two accounts of the first and second chapters of Genesis, referring to the great question of marriage, and unites them as teaching the creation of man. That is sufficient for me: I take it on the authority of our Saviour. I have already said that my paper must be looked upon simply in the light of a preliminary inquiry. In the case of such inquiries we are often quite unable to prove that which may still be stated, to a certain extent, as at least extremely probable. Mr. Allen made an observation in regard to the Deluge: all geologists admit that there has been more than one glacial period; I certainly did not say the glacial period was in consequence of the Deluge; indeed I indicated that the period before the Deluge was a specially glacial period; but I have no doubt that there were more than one such periods. As to Canon Titcomb's observations, I do not understand why he says he differs so much from what I attempted to say,—that I supposed the Palæolithic period to have been what we should call the Antediluvian period, and the Neolithic to have supervened upon that. I have said the Scriptures only record a short stone period in comparison with the ages that have elapsed, and have supposed that the Palæolithic age and the age of the first working of metals coincided to some extent—perhaps not in point of locality, but certainly in point of time.

The meeting was then adjourned.