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**Contributors**

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Archaeology and Ethnology.

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REMARKS

ON

SOME OF THE BEARINGS OF ARCHÆOLOGY UPON CERTAIN  
ETHNOLOGICAL PROBLEMS AND RESEARCHES.

BY

ROBERT DUNN, F.R.C.S., &c.,  
VICE-PRESIDENT OF THE ETHNOLOGICAL SOCIETY.

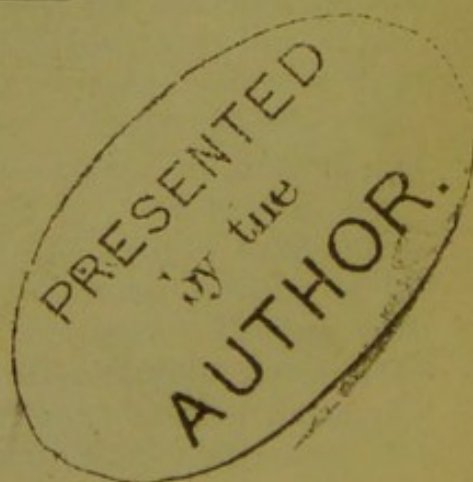
*Read at the Meeting of the British Association, at Nottingham, 1866, and before  
the Ethnological Society of London.*

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1866.



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XXIX.—*Archæology and Ethnology: Remarks on some of the bearings of Archæology upon certain Ethnological problems and researches.* By ROBT. DUNN, F.R.C.S., ETC.

[Read Dec. 11th, 1866.]

THERE is a fascination about the subject of Pre-historic Times and Pre-historic Man, about the revolutions of our globe, as revealed to us by geological investigation, and of the generations of mankind, by Archæological researches. The very obscurity, indeed, of the subject whets our curiosity and zeal in its investigation; for what can be more fascinating than the wonders of Geology, as we ponder over and upon the revolutions which our earth has undergone, as we seek out and search after the evidences of the first appearance of life upon its surface, and as we recognise, in its successive and changing phases, the varied animal forms, rising higher and still higher in the complexity and elaboration of their structure, up to the advent of man himself,—to us the crowning theme of all these wonders! For whom did he first appear? With excited curiosity and increasing interest, we ask with Professor Huxley, where must we look for primeval Man? Was the oldest *Homo Sapiens* pliocene or miocene, or yet more ancient? To this absorbing question what can we answer, save, that, in the fulness of time, when the earth was fitted for his reception, at the fiat of the Almighty, Man made his appearance. To use the emphatic language of Mr. Wallace (for I can use no words of my own, more clearly and forcibly, to give expression to my convictions) “from those infinitely remote ages when the first rudiments of organic life appeared upon the earth, every plant and every animal has been subject to the *one* great law of physical change. As the earth has gone through its grand cycles of geological, climatal, and organic progress, every form of life has been subject to its irresistible action, and has been continually, but imperceptibly, moulded into such new shapes as would preserve their harmony with the ever changing universe. No living thing could escape the law of its being; none could remain unchanged and live amid the universal changes around it. At length, however, man was brought forth, and there came into existence a being in whom that *subtle force*, we term *mind*, became of far greater importance than his mere bodily structure. Though with a naked and unprotected body—*this* gave him clothing against the varying inclemencies of the seasons. Though unable to compete with the deer in swiftness, or with the wild bull in strength, *this*



gave him weapons by which to capture or overcome them both. Though less capable than most other animals, of living on the herbs and the fruits which unaided nature supplies, *this wonderful faculty* taught him to govern and direct nature to his own benefit, and make her produce food for him, when and where he pleased. From the moment that the first skin was used as a covering, when the first rude spear was used to assist in the chase, the first seed sown or shoot planted, a *grand revolution* was effected in nature—a revolution which in all the ages of the earth's history had had no parallel, for now a *being* had arisen, who was no longer necessarily subject to change with the changing universe—a being who was in some degree superior to nature, inasmuch, as he knows how to control and regulate her action, and could keep himself in harmony with her, not by a change in body but by an advance of mind.”\* And in this *grand and characteristic attribute*, as you all so well know, lies the true grandeur and dignity of man.

Comparatively recent discoveries, indeed, give us glimpses of a period, and open to us a vista through which we see the human race existing on the earth, both in Europe and America, at a period more remote than had ever before been imagined. The men of the Drift must have shared with the mammoth, the cave bear, the woolly-haired rhinoceros, and gigantic deer, and with other species of animals, which became extinct many thousands of years ago, the forest-clad plains and valleys of Europe, when the British Isles were united alike with one another, and with the continent of Europe. Nay, more, seeing that the drift which fills the valleys of the Pyrenees had not reached that elevated spot where the cave of Aurignac is situated, and which has been so well explored by M. Lortet, it follows, as Sir Charles Lyell has well remarked—“If its fossil memorials have been correctly interpreted; if we have before us at the northern base of the Pyrenees a sepulchral vault, with the skeletons of human beings, consigned by friends and relations to their last resting place; if we have also at the portal of the tomb, relics of funeral feasts, and within it, indications of viands destined for the use of the departed on their way to the land of spirits; while among the funeral gifts are weapons wherewith on other fields to chase the gigantic deer, the cave lion, the cave bear, and woolly rhinoceros, we have *at last* succeeded in tracing back the sacred rites of burial, and more interesting still, a *belief* of a future state, to times long anterior to those of history and tradition.”

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\* Vide Mr. Wallace's memoir “On the Origin of the Human Race, and the Antiquity of Man, deduced from the Theory of Natural Selection” (Journal of the Anthropological Society of London, vol. ii).



But in this instance, unfortunately for the interest of ethnological science, the Mayor of Aurignac, when the discovery of the cave was *first* made, had the human bones collected and all re-buried, thus depriving M. Lortet and science of the important and valuable evidence which his examination of the cranial configuration of these cave skeletons would have given us as to their racial type.

Geological evidence thus claims for man a higher and far more remote antiquity than do the Hebrew Scriptures, as they have been interpreted and understood since the time of Archbishop Usher and Petavius. In the well-known works of Sir Chas. Lyell and Sir John Lubbock, the Geological evidence of Man's antiquity is set forth with such fulness and perspicuity, as to carry conviction to the mind of every sincere searcher after the truth. But long before they wrote, two eminent and distinguished Ethnologists, namely, the first President of this Society, Dr. Prichard, and our learned honorary associate, the late Baron Bunsen, both strenuous advocates for the unity of the human species, had, independently of each other, arrived at the same conclusion, and from other and different evidence than that which Geology presents. Baron Bunsen, from purely philological considerations, (and I know of no man more able or better qualified to form a correct opinion on the subject,) claims for the human race, as the descendants from a common stock, an antiquity of 20,000 years. And again, Dr. Prichard, in a note on the Biblical Chronology, at the conclusion of his elaborate and valuable *Researches into the Physical History of Man*, aptly remarks, "Many writers, who seem by no means inclined to raise objections against the authority of the Sacred Scriptures, and in particular Michaelis, have felt themselves embarrassed by the shortness of the interval between the Noahic Deluge, and the period at which the records of various nations commence, or the earliest date to which their historical memorials lead us back. And although the extravagant claims to a remote and almost fathomless antiquity made by the fabulists of many ancient nations have vanished, before the touch of accurate criticism, still, he adds, after abstracting all that is apparently mythological from the early traditions of the Indians, Egyptians, and some other nations, it must be confessed that the probable history of some of them seems to reach up to a period far too remote to be reconciled with the short chronology of Usher and Petavius."

The pre-historic population of the earth appears to have lived in caves, or in rude dwellings on the banks of rivers, and at a later time in little villages built on piles in the shallows of lakes, obtaining the means of subsistence by fishing or hunting, and doubtless clothing themselves to some extent in the skins of the



slain animals, and making all their implements of stone or bone—the use of metals being to them an unknown art.

But still, be it remembered, that, save for the presence of animals long ago extinct, such as the mammoth, the cave bear, and woolly rhinoceros, there is little in the condition of these prehistoric men which cannot even now be paralleled among the various barbarous tribes still existing in various parts of the world. For instance, the rude tribe in the Valley of Somme, where so many flint instruments have been found—who appear to have lived upon the ice, which at that glacial period covered the river, making holes in the icy floor, through which they dropped their hooks to catch the fish in the waters beneath—led a life in many respects similar to that of some of the Esquimaux tribes of the present day. And, at the other extremity of the American Continent—in Terra del Fuego, with its densely wooded hill sides and extensive glaciers—there still exists a population of savages, in a condition strikingly similar to that of those of the *remotest* antiquity, whose remains we find in the flint tools and stone implements of the *drift*. They are unacquainted with the metallurgic arts, and use stone tools, flint knives, arrow and spear heads of flint or volcanic glass, for cutting bark for canoes, flesh, bladder and sinews, for knocking shell fish off the rocks, breaking large shells, and for weapons of defence. In every sheltered cave, where wigwams are placed, there are invariably heaps of refuse—shells and stones, offal and bones—which often appear very old, being covered deeply with wind-driven sand, or water-washed soil, on which there is a growth of vegetation, an exact counterpart of the *kitchen middens* of the *stone age* of Scandinavia. These heaps are from six to ten feet high, and from ten or twenty to more than fifty yards in length. But there—as in the kitchen middens of Europe—no *human bones*, we are told, would be found (unless dogs had dragged them thither), because the natives either burn the bodies of the dead, or sink them with large stones in deep water.

Now, archæology is the link which connects prehistoric man with history; and bearing in mind the light which geological investigations have thrown upon the history of the earth itself, it is not, I think, unreasonable to expect, that future and more extended archæological researches throughout the world, will continue to shed their illuminating rays upon the generations of the men of primeval antiquity. Sir John Lubbock has well observed—“While extinct animals leave only teeth and bones behind them, the men of past ages are to be studied principally by their works; houses for the living, tombs for the dead, fortifications for defence, temples for worship, implements for use, ornaments for decoration.” In their modes of sepulchre we cannot



fail to recognise differences of race, and phases of civilisation. The tumuli, cromlechs, dolmens, and cistvaens, are alike characteristic and instructive in this respect,—the size and contents of the tumuli afford us a fair indication of the respect and estimation in which the deceased were held. Among the North American Indians and other savage tribes, nothing which the dead possessed was deemed too valuable to be interred with the body. The most costly dresses, arms, ornaments, and implements were deposited in the grave. “And,” says the venerable Professor Nilsson, of Sweden, “the ancient inhabitants of Scandinavia, unable to imagine of a future altogether different from the present, or a world quite unlike our own, showed their respect and affection for the dead, by burying with them those things which in their life they had valued most; with ladies their ornaments, and with warriors, their weapons. They buried the house with its owner, and the grave was literally the dwelling of the dead. When the great man died, he was placed in his favourite seat, food and drink were arranged before him, his weapons were placed by his side, his house was closed and the door covered up; sometimes, however, to be opened again when his wife or children joined him in the land of spirits.” It is abundantly manifest that the ancient tumuli do not belong to one period, nor to one race of the great family of man. “In Denmark, especially,” says Sir J. Lubbock, “there was supposed to be so sharp and well marked a distinction between the tumuli of the stone age, and those of the bronze period, that the use of bronze might be considered as having been introduced by a *new race of men*, who rapidly exterminated the previous inhabitants, had *entirely* different burial customs, and were altogether in a much higher state of civilisation. The tumuli of the stone age were generally surrounded by a circle of great stones, and contained chambers formed of enormous blocks of stone, and the dead were buried in a contracted or sitting posture, with the knees brought up under the chin, and the arms folded across the breast. The burial places of the bronze age, on the contrary, had no circles of massive stones, no stone chambers; in general no large stones on the bottom, with the exception of stone cists placed together, which, however, are easily to be distinguished from the stone chambers, consisting, as a general rule, of mere earth, with heaps of small stones, and always presenting themselves to the eye as *mounds* of earth, which in a few rare instances, are surrounded by a small circle of stones, and contain relics of bodies which have been burned, and placed on vessels of clay, with objects of metal. And thus the burrows of the bronze age are distinguished from the tumuli of the earlier period, not only by the important fact that, instead of the simple and uniform implements and ornaments of stone, bone, and



amber, we meet, suddenly, with a number and variety of splendid weapons, implements, and jewels of bronze, and sometimes, indeed, with jewels of gold; but also because the construction of the tumuli themselves of the two periods was different, and the corpse, which in the stone age was always buried in a contracted or sitting posture, was in the bronze age burnt." Important and instructive as are the contents of these graves, the practice of cremation deprives us of a valuable source of evidence in reference to difference of race, since in the different forms of the skull we have indisputable proof of elevation and degradation of the racial type. Skulls, indeed, have been found in association with bronze implements and ornaments, so closely resembling those discovered in graves containing only implements of stone, that the inference becomes unavoidable, if the fact be admitted, that the use of bronze was introduced by a different and more highly civilised race, and that the ancient inhabitants were not altogether exterminated by their conquerors. But we have yet much to learn from the ancient tumuli, and when they have been more extensively and properly questioned, I join with Sir John Lubbock in the hope and expectation that we shall get most important information on many interesting points respecting life in these ancient times,—such, for instance, as whether, in Northern Europe, during the stone age, they had domestic animals, such as the ox and sheep, as would seem to have been the case in Switzerland. Again, what kind of clothes were worn, and what position woman held in reference to man, judging from the remains found with their skeletons.

All over the world are found relics of the stone age inhabitants, while the lake bottoms of Switzerland are of especial interest in Ethnological researches, as affording evidence among these lake dwellers of all stages of culture, from a rude and early stone age through an advancing bronze age, up to a well marked iron age. Thus placing before us the record of a supersession of an original stone age race, by a new bronze race, and of this again by an iron race, Dr. Keller, indeed, in his work recently published, *On the Swiss Lake Tribes*, maintains, that these dwellings were from first to last the works of *one and the same people*, who began, at a low stage of culture, with implements of stone, and from thence rose gradually to the use of bronze, and at last to that of iron. This he considers to have been the Celtic race. He is accordingly opposed to the hypothesis, which makes civilisation a test of race, and to the belief that races have never changed in the degree of their civilisation, Sir John Lubbock sums up his interesting, lucid, and admirable account of the Swiss Lake dwellers and their habitations, in these words—"We have traced them through the ages of stone and bronze down to the beginning



of the iron period. We have seen evidence of a gradual progress in civilisation and improvement in the arts, an increase in the number of domestic animals, and proofs at last of the existence of an extended commerce. We found the country inhabited only by rude savages, and we leave it the seat of a powerful nation. Changes so important as these are not effected in a day; the progress of the human mind is but slow: and the gradual addition to human knowledge and power, like the rings in trees, enable us to form some idea how distant must be the date of their commencement. So varied, however, are the conditions of the human mind, so much are all nations affected by the influence of others, that when we attempt to express our impressions, so to say, for the terms of years, we are baffled by the complexity of the problem."\*

To the authors of the *Crania Britannica*, Drs. Davis and Thurnam, we owe a deep debt of gratitude for the indefatigable zeal and untiring industry with which they have pursued their valuable researches in Britain. All physiological psychologists are now agreed, that the brain is the instrument of the mind, and that the vesicular matter of the cerebrum or great hemispherical ganglia, is the substratum and seat of all intellectual action, and volitional power. Here it is that the ultimate molecular changes take place which precede the *mental stages*, and from *here* the mandates of the *will* issue. Nor is the fact to be forgotten, that although it is the brain which is the organ of the mind, its bony covering, the skull, is the outer measure and index of the brain's development. Nay, more, that from it we are enabled fairly to estimate the relative size and comparative development of the three great divisions of the brain itself, the anterior, middle, and posterior lobes; and thus among the typical races of man to recognise distinctive characters, impressed and stamped upon their skulls as indisputable evidence of degradation and elevation of type.

Now, many skulls have been obtained from the ancient tumuli of the stone age of Scandinavia. They are Brachycephalic, short and round, with heavy, over-hanging brows, and this cranial configuration, found to have prevailed so extensively in Denmark, France, and Switzerland, has led to the belief in the minds of some of the most distinguished archæologists, that the Pre-celtic inhabitants not only of Scandinavia, but also of Europe generally, were of Turanian origin, akin to the Laplanders. But Dr. Thurnam, at the Bath meeting of the British Association, adduced evidence in support of his opinion that the most ancient race of this country was not of the same *Brachycephalic* type as that

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\* "Prehistoric Times". By Sir John Lubbock, F.R.S. London: Williams and Norgate, 14, Henrietta Street, Covent Garden. 1865.



generally supposed to have spread over the whole of Northern Europe.

The skulls from the long barrows of the stone period in Britain are dolichocephalic, of a peculiar conformation, tapering equally towards the forehead and occiput, and to which Dr. Wilson has given the name of kumbocephalic, or boat-shaped. To these skulls of the chambered barrows, with which the sole material for the spear and the arrow was flint, Mr. Bateman has assigned the most remote antiquity. On the other hand, the skulls from the circular barrows of England of the Pre-Roman period are mostly brachycephalic; and the same *cranial* form is also found in tumuli of the same period, which contains implements and weapons of both bronze and stone, but sometimes of stone only.

It is indeed now considered to be fully established by human palæontology, that in pre-Celtic times there existed among the primitive peoples of Europe, both a dolichocephalic and a brachycephalic race, the latter greatly preponderating.

Now, after pondering upon these *typical cranial differences*, as revealed to us, by archæological researches, our minds seem to turn instinctively to that interesting speculation, *the condition of primæval man*.

Man, we are told, and I believe it, was formed on the moral image of his Maker—"In the image of God, created he him, male and female created he them."

In the words of Coleridge—

"God made mankind to be one mighty family,  
Himself our Father, and this earth our home."

Justifying the exclamation of Shakspeare—

"What a piece of work is man!  
How noble in reason, and in apprehension how like a God."

But whether or not as an adult he was first created with matured powers, and in the full possession of his faculties, of this at least we are certain, that he now comes into this world weak, dependent, and helpless. Dependent upon others for the very conservation of his being, and, during many years, for his every comfort. But then may I not ask, is it not that utter helplessness on the one hand, which awakens and developes, and this dependency on the other, which fosters and strengthens, those inherent feelings and affections which raise man so highly in the scale of being, and which progress, under the discipline of life, with the collateral development of his intellectual faculties, his bodily powers and physical energies to that maturity which is the perfection of humanity, and which assimilates man to his Maker, —*disinterested benevolence*.



It is never to be forgotten that man, of whatever race, is not born into the world a mere blank recipient of impressions, but that all the races of men, however they may differ in degree, are alike endowed with innate animal instincts and propensities, with social feelings and affections, with intuitions, moral and religious ; and with intellectual faculties—reasoning and reflecting powers. The germs, so to speak, or essential elements of all their mental activities, sensational, emotional, perceptive, and intellectual as constituent endowments, are present from the first ; for the human mind comprehends *implicitly, ab initio*, from its earliest existence, *everything* which its interior nature is calculated afterwards *explicitly* to evolve, as the successive phases of consciousness become developed. Still, however, when we compare civilised with savage man—our own condition with that of those whom the illuminating rays of civilisation have never reached, or among whom they have become extinguished, how striking is the contrast ! And how irresistibly are those interesting speculations forced upon us as to the condition of primæval man, and whether or not there may have been more creations than one of man—more Adams and Eves than a single pair ! Now as to the first of these interesting and important subjects for thought ;—seeing that throughout animated nature, everything is perfect in its kind, and that there everywhere exists, as an all-prevailing principle of creation, a harmony and an adaptation of means to ends, so that the world throughout its constitution is framed in admirable suitability to the faculties of man, as an intelligent, moral, and religious being,—there are assuredly strong and valid reasons for the belief that primæval man came from the hands of his Maker, “*mens sana in corpore sano*,” fitly and fully organised, in all respects, and every way duly in relation to external nature, and to the circumstances in which he was placed. But as we look at him now, and as we view, in contrast with their attendant *upright* or *projecting jaws*, the skulls of civilised and savage man, we at once recognise certain *distinctive differences* impressed and stamped upon them, as unmistakeable evidence of *elevation* and *degradation* of type. And then comes the question, are these types convertible, and if so, which of them was primordial ? As bearing upon this latter point, I would for a moment refer to a paper read before this Society, on the 23rd April, 1845, twenty-one years ago, and published in the first volume of our journal, which was listened to with great attention at the time, and which I have lately read with deep interest. It is, *On the Human Mouth*, by Alexander Nasmyth, Esq., who was a fellow of this Society, and deservedly held in the highest estimation for his physiological and microscopical investigations. He has been dead for many years,—but he still speaketh, in support of the posi-



tion, that the original configuration of the human jaws was of the *vertical* or perpendicular type, and that, as a consequence, the varieties of development in the mouth are *deviations from a perfect form*.

He says truly—"that the natural action of the lower jaw upon the upper may push out, evert, or expand the arch of the upper jaw; but, on the other hand, that is utterly impossible, by any habitual or natural act performed by the mouth, or by the individual, in any way to bring in or contract that arch, so as to produce from the prominent prognathous jaw of the Negro, the vertical or perpendicular jaw of the Indo-European." And again, that when excessive functional activity is thrown upon the concentric arches of the anterior portion of the jaws, as in the usages of savage life, in seizing, tearing, and dividing the food, by the teeth, the front ones become exerted, the jaws prolonged, and thus, as in the case of the Negro and the Bushman, in addition to the law of inheritance, the *prognathous* type is perpetuated among them.

Now the inference from these anatomical and physiological facts, to all who believe in the unity of the human species, is clear and uncontrovertible, that in primæval man the jaws were *upright*, and not protuberent; and in truth, that the prognathic and other varieties of the ape-like mouth are deviations from a perfect form—due to the usages of savage life. We all rejoice, in the belief, that progress is the great law of nature, and in the fact beyond dispute of the progressive improvability of man, but we must not close our eyes to what is quite as patent and equally as well established—Man's tendency under adverse circumstances and conditions to degeneracy and degradation.

For, to reiterate what I said, in my last paper read to this Society. "Wherever and whenever ignorance and brutality, destitution and squalor, have for a long time existed, the prognathous type invariably prevails. It is not confined to the Negro of the Delta of Africa, but is equally characteristic of the Bushman and Australian savage, and has even been recognised in Ireland, in Leitrim, Sligo and Mayo."

Again, it is worthy of remark—as having a direct bearing upon our subject of inquiry—the condition of primæval man,—that the celebrated fossil skull, from the Cave of Engis, near Liège, considered to be a *relic of the Drift period*, may, in evidence, be fairly adduced. For, says Sir John Lubbock, "there seems no doubt that this skull really belonged to a man who was contemporaneous with the mammoth, the cave bear, and other extinct mammalia; and he significantly adds, "so far as its form is concerned, it might have belonged to a modern European." According to Professor Huxley, "there is no mark of degradation about



any part of its structure; it is, in fact, a fair average human skull, and might have belonged to a philosopher."

Surely the contemplation of such a cranial conformation as this,—of a man of the geological period of the Drift, and the contemporary of the extinct mammoth, and the woolly-haired rhinoceros,—bearing, as it does, upon it, the impress and stamp, not of degradation, but of elevation of type, must raise its possessor in our estimation high and far above the ape-like savage, with his low, receding forehead, and his massive, projecting jaws.

But it is not to be forgotten, or overlooked, that another, once celebrated fossil skull of a very different character, is in existence, found in a cave in the Neanderthal, near Dusseldorf, and for which, at first, not only an antiquity was claimed, equally as great as that of the Engis man, but an importance infinitely greater; for it was looked upon, by some, as "the missing link," in the chain of continuity between the monkey and man, and for which the advocates of the ape origin of the human species had been so earnestly in search. A scrutinising inquiry, however, into its *locale* and the history of its discovery, and a strict and rigid anatomical examination of its structural peculiarities, have, alas! for advocates of the ape theory of man, deprived it altogether of its prestige and importance. Sir John Lubbock observes—"It must be admitted, that, although the antiquity of the skull is, no doubt, great, there is no satisfactory proof that it belonged to the period of the extinct mammalia." Professor Busk sagely remarks—"We have yet to determine, whether the conformation in question be merely an individual peculiarity, or a typical character." And again, Dr. Barnard Davis, one of the editors of the *Crania Britannica*, and than whom I know of no man more able or better qualified to pronounce an opinion on the subject, maintains that it presents no race characters; that it is in reality an abnormal skull, an instance of an accidental conformation, arising from *synostosis of the sutures*, and that its conditions are compatible with those of a diseased modern skull. He dwells on the fact that there is no accompanying evidence, such as flint implements, to show that it had any claim to antiquity, and as to the physiological evidence, that went to prove that the individual to whom it belonged was in an abnormal condition, being *lopsided*. Similarly formed skulls of modern date are in existence, so that in point of evidence, in relation to our inquiry, it is utterly worthless.

But still, however, let the archæologist extend his inquiries; for if, as Sir John Lubbock\* has observed—"Man constitutes a separate family of mammalia, as he does in the opinion of the

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\* "Prehistoric Times".



highest authorities (and such is my own firm conviction), that according to all palæontological analogies he must have representatives in Miocene times. But we need not expect the proof in Europe; our nearest relatives in the animal kingdom are confined to hot, almost to tropical climates, and it is in such countries, that we must look for the earliest traces of the human race."

Need I here remark that "*the missing link*" is still wanting, and that, as I opine, it never will be found. But, I ought rather to have said *the missing links*, for according to the ape theory of the origin of the human species, as expounded by Dr. Carl Vogt, of Geneva, and others, the different typical human races are the descendants from different ape ancestors. Now on this subject, I do most heartily join issue with what has so emphatically been said by our venerable President, however I may differ in opinion from him as to whether there may have been more creations than one; indeed, I need scarcely here observe, that the *monogenetic* and the *polygenetic* origin of man is still, and is likely to remain, an open question among ethnologists. In our much respected president, Mr. Crawford, the Nestor of our Society, we have not only an old, but an able advocate for the plurality of the human species, while in our late president, Sir John Lubbock, the hypothesis of the monogenesy of man has found an equally able advocate. In former communications, I have avowed my own adhesion to that of the unity of man's origin: and at present my mind rests on this conviction. After studying the varying forms of the human cranium in their relation to outward circumstances, social states, and intellectual culture, and, after endeavouring to trace out the influence of civilisation upon the development of the brain, among the different races of man, my belief in the unity of the human species has been more firmly established. The limits of this paper will not permit me to dwell upon the evidence which is furnished by *history* of the conversion, *in time*, of one type of humanity into that of another, under the influence of outward circumstances, social states, and intellectual culture. But the great antiquity of man on the earth has removed many obstacles to this hypothesis, which were once thought to be insuperable. Since the time that the hand of man fashioned the flints of the valley of the Somme, the geological conditions of the world have changed more than once, and the duration of these changes is incalculable.

During the long glacial period, a large portion of Europe became gradually covered with ice, and man receded step by step before the advancing glaciers, as they destroyed the mighty mammoth, and the woolly rhinoceros; it was by his intelligence and skill that he escaped this wholesale destruction from cold. By



striking flint against flint to fashion his primitive weapons, he perceived the rising sparks, and he learnt to retain them, and thus the first fire kindled for his rude feast, became afterwards his protection against the inclemency of a glacial climate and saved him from destruction. In conclusion, I would only add,\* in the words of Dr. Carpenter, "that the supposition of a distinct number of creations, one for each principal region of the globe, is not, in my belief, needed to account for the extension of the human family over its present area, and it does not afford any assistance in accounting for the phenomena of their existing distribution, since each principal geographical area contains races of every diversified physical character, the affinity of whose languages makes it often next to certain, that they must have had a common descent."

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\* Dr. Carpenter, "On the Varieties of Mankind", in Dr. Todd's "Cyclopædia of Anatomy and Physiology", vol. iv, p. 1364.

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