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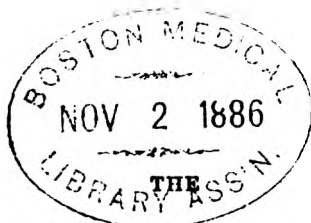


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WITH regard to the usual classification of ocular colours, Dr. Broca remarks that the term "black," applied to the colour of the human eye, is entirely a misnomer, and that those which are commonly called black eyes are either very dark brown or occasionally very dark green. He observes of the eyes of negroes that, although they are universally called black, they are frequently scarcely darker than a chocolate colour. If to these pretended black eyes we add blue, grey, and green eyes, we shall have exhausted the list of ocular colours comprised in the previous classification. "But," says Dr. Broca, "anthropological description requires greater precision. It is not sufficient simply to point out the fundamental colour of the eye which is the subject of observation: this indication is rendered impossible in many cases by the mixture of colours. Besides, when it is proposed to discover whether any relation exists between the colouring of the eye and that of the skin or hair, it is more important to determine the greater or less depth of shade of the iris than the nature of the shade itself. When it is said that one individual has a blue, and another a brown eye, it is understood that the first has in the eye more colouring matter than the second. And yet there are blue, green, and even grey eyes, which are in reality much darker, that is, much nearer black, than any eye which can be called brown. For this reason, Dr. John Beddoe, of Clifton, in his important inquiries upon the eyes of the Scotch, the

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Irish, and the Jews, has avoided mentioning the fundamental colour of the iris; he has confined himself to a classification according to shades, without pointing out the fundamental colours, and has thus reduced the whole chromatic scale of the eyes to three types, which he calls dark, neutral, and light.

"But this classification is only available by those who have established it, or who have assisted *de visu* at the experiments. The application of shades is entirely personal, not in extreme cases, but in those which incline more or less to the intermediate. The object of the general instructions prepared by the Society is precisely to substitute for these personal appreciations uniform and methodical determinations, which shall not depend upon the degree of knowledge of the observers. It is thus necessary to place at their disposal a chromatic table, representing at once the principal *tints* and the principal *shades* of the colour of the iris."

Dr. Broca then proceeds to describe the plan upon which he has formed his classification, as follows:—"I have adopted Dr. Beddoe's principle in always arranging in sets of five the number of shades disposed in a scale from the lightest to the darkest. I have thus obtained five degrees expressing the *quantity* of colouring matter in the iris, and I have disposed them in five vertical columns, containing very dark, dark, medium, light and very light. I have then classed my sketches according to the fundamental colours, and it appears to me that these colours may be reduced to four principal types, viz., brown, green, blue, and grey. Yellow, which is frequently mixed with the preceding colours, is never sufficiently pure to constitute a distinct type. I may say the same of red, which always forms a certain part of the colouring matter of brown eyes. The reddish (*roux*), composed of red and yellow, does not seem to me either to deserve or to form a series by itself; this colour is observed in the eye of cats and lions, but I have not seen it in those of men. All the reddish eyes which I have seen approached the brown, and converged towards the intermediate degree of the series of browns. I have then commenced by disposing, in a graduated series, the eyes which belonged clearly to one of the four principal colours, brown, green, blue, or grey; and, placing the deepest of each series in the column of very dark eyes, and the lightest in the column of very light eyes, I have chosen among the other terms of the series the intermediate shades to fill up the intermediate columns. In this way, each vertical column shows types of colour different in kind, but nearly equivalent in shade, and each horizontal line includes types of colour similar in kind, but very different in shade.

"The twenty types being thus distributed and numbered, it is

easy to characterise by one or two numbers each eye of which the fundamental colour is decidedly brown, green, blue, or grey. When the shade corresponds exactly with one of the types represented, it will be marked with the number of that type. Thus, No. 2 refers to a dark brown eye; No. 8 to a medium green, &c. When the shade is included between two neighbouring types, it is represented by the two numbers separated by a hyphen. Thus, 3-4 would be a brown between the intermediate and light shades."

This valuable system of classification, on which M. Broca has expended so much time and care, is likely to prove of the utmost use to the cause of Anthropological science, and we understand will be employed at an early date by the Anthropological Society of London.

At the *séance* of December 3, an important paper by M. Boudin upon the subject of Consanguinity was read, in reply to that by M. Dally, which has already appeared in our columns; but as we may possibly soon publish this *in extenso*, we pass it over for the present.

At the same meeting Dr. Armand read a continuation of his paper, read in 1862, upon the varieties of races observed in the various campaigns of the French army from 1843 to 1862, treating in this portion of the Chinese and Indo-Chinese. We gather from this paper the following interesting particulars relative to the Chinese, which appear to have been collected in the year 1860. The Chinese are generally short; the form of the head holds a medium place between the Northern European and the negro, the forehead and the face retreating a little more than in the European, but less than in the negro. The head is conical, the face triangular, the colour yellowish, the upper lip overhangs the lower, the root of the nose is very wide, the nose is flat with wide nostrils, the eyes are oblique and far apart, the eyebrows black and elevated, they have but little beard, and the hair is black, smooth and shining. The lower classes in China, who are accustomed to much exercise, are the best made and the most vigorous. The increase of population in China is immense, the civil servants, military and sailors, being obliged to marry, and all classes marrying at an early age. The Chinese prefer their women of slight figure, but the contrary holds good of the men, it being considered the proper thing for the male sex to attain aldermanic proportions. The women are entirely dependent on their male relatives, the daughter being under the government of her father; the wife, of her husband; the widow, of her son. They are taught to paint and to embroider upon silk. A large number cultivate music and letters, and they are all generally instructed in

the duties of domestic life. Dr. Armand considers that the practice among the Chinese women of compressing the foot is rapidly decreasing. A man is not introduced to the woman whom he is about to marry, the negociation being carried on by his friends. The woman brings no dowry. The law forbids marriage between relations, and sanctions divorce, for which it specifies seven reasons. The husband is allowed to have as many concubines as he can afford to keep: they are subject to the wife, and are in a somewhat similar condition to that of servants. Their children have the right of inheritance, but in a smaller proportion than the legitimate offspring. Infanticide and abortion are allowed by the law, but advantage is seldom taken of the permission, as the Chinese have a strong affection for their children. A rich man requiring an heir can always purchase the child of a poor one.

Of the population of Zche-fou, Dr. Armand says that it is at once maritime and agricultural. The sailors of the fishing boats and junks are strong and robust, and some of them very stout. Their longevity is great, it being by no means rare to find among them men of seventy and eighty years of age, and most of them looking at least ten years younger than they are in reality. Dr. Armand found that, in this country, which has had little or no intercourse with Europeans, syphilis was very prevalent, traces of secondary and tertiary symptoms being easily discernible.

The following description of a Chinese sketch, giving a verticollateral view of the interior of the human body, will show the condition of anatomical science in China. Dissection being forbidden, the Chinese doctors are obliged to have recourse to their imagination for their information upon this subject.

"The brain is represented by a simple lobe, elongated like that of a fish. The cerebellum is wanting; there is only a small swelling at the beginning of the spinal marrow. The superficial portions of the ear and eye are roughly marked: there are neither frontal sinuses, nor nostrils, nor palate; neither larynx nor pharynx. The trachea and the œsophagus are placed parallel to each other at a distance, like two necks of bottles. The trachea, of which six rings are marked, terminates in something like lungs, divided into ten apparent lobes. There is no heart. The diaphragm forms three reversed domes or three inferior convexities. The liver and the stomach seem like two bladders placed one on the other. The kidneys are represented, but do not communicate with the bladder, which is placed by itself in the pelvis, like an ace of hearts with the point upwards; perhaps the uterus was intended to be represented. The trunk-vertebræ are represented to the number of twelve in all,

followed by the sacrum. As to the abdominal walls, eight thick layers may be counted, placed one above the other."

This description is followed by some interesting particulars of the theatres and cemeteries of China.

The next people of whom M. Armand treats are the Annamites, or inhabitants of Cochin-China, who, he says, belong to the Indo-Chinese branch of the Mongolian race. Their ovoid head connects them with the Chinese types, and, like the Chinese, they have black hair and eyes, the latter somewhat oblique, the nose small rather than flattened, the cheek-bones less prominent, the lips somewhat thick; the dull white complexion of the children changes into an olive brown among the adults. There is a mixture of Malay blood in those populations which, in Lower Cochin-China, have often the lank thin bodies and long limbs of the negroes of the Equator. Both men and women wear their hair long, and moisten it with castor or cocoa-nut oil. The males are without beards until they grow old, when a few hairs make their appearance. Both sexes wear the same dress, which consists of a pair of wide trousers fastened at the waist, and over these a tunic or blouse hanging loose. They almost always go bare-footed, and sandals are considered a luxury. The women wear no stays, but they confine the breasts by a triangular bandage, pressed very tightly, and fastened round the neck and behind the back.

As in China, the parents have the right of selling their children like cattle. Polygamy is the rule, and a certificate of repudiation is all that is required to constitute a divorce. There are few cases of longevity: in Lower Cochin-China old men are rare. A man of fifty years of age is already emaciated, wrinkled, and broken down with age: the women rapidly become decrepid. The immoderate use of betel and opium has a large share in producing this result. Fevers and dysentery, and above all cholera, are endemic. Diseases of the skin are common, such as itch and many sorts of ulcers on the legs. Syphilis is widely spread and severe.

The next population which M. Armand notices is that of Aden, which he visited on his way from the Indian Ocean before passing through the Straits of Bab-el-Mandeb to get into the Red Sea. He describes the population as very mixed, consisting of Persians and Arabian Asiatics, Africans, and, above all, black Abyssinians with straight hair, who are the boatmen of the place. These are excellent swimmers and divers, like the Malays of Singapore and the Maltese fishermen, and will bring up a piece of money thrown into the sea at great depths.

"Some of these negroes," says M. Armand, "attracted our

attention by their red and woolly hair. We asked ourselves, at first, whether the effect of crossing had not been to put English wigs upon these negro heads. But we soon discovered others wearing on their heads coverings of bitumen, as if for scurfs; they leave this coating on until it falls off spontaneously: it is their mode of colouring, or rather of discolouring, their hair, in order to imitate their masters."

A pamphlet by M. Brechon, entitled *Studies upon the Fractures of the Skull*, which was presented to the Society in December last, contains the following extraordinary fact relating to an aborigine of New Caledonia, who survived an immense fracture of the skull. The mark of the fracture extending right round the skull from the occipital bone to the lower part of the frontal, had entirely detached a fragment, which thus included almost the whole of the covering of the cranium. There was, besides, in the back part of the line of this fracture a considerable indentation, and it appears probable that the wound had been occasioned by a violent blow on the back of the head. In spite of the enormous extent of this wound, the man survived, and the consolidation of the fracture was completely effected.

The head of this savage was found in a sort of bone repository near Port Vincent by M. Chaleix, surgeon in the navy, and is at present in the Rochefort Museum.

We have already learnt from the narrations of travellers that the South Sea Islanders sometimes recover in a surprising manner from wounds in the head, which would be almost inevitably mortal among Europeans; but M. Brechon's fact is unique in its kind. All wounds of the same description, which have been observed up to the present time, among Europeans, have always been followed by death.

The following observations upon the best means of obtaining an exact representation of the colour of the eye, accompanied a case of twelve specimens of the most usual colours presented to the Paris Society by M. Boissonneau fils. As this paper forms an useful supplement to the able article by M. Broca, which we have mentioned above, we reproduce it:—

"The discussion which took place at the last meeting of your Society, perhaps permits me to inform you what are the means which I myself employ in reproducing, in enamel, eyes of which I have received a descriptive painting by letter.

"Physicians or private individuals who wish to send me the model of an eye, generally choose oil-colours; but, after many years experience, I have been induced, for the following reason, to request paintings in water-colours in preference.

"Oil-painting, it is true, imitates better the transparency of the cornea and the depth of the anterior chamber of the eye; but these results, very important from an artistic point of view, are only obtained by effects of light and shade which modify the real colours of the field of the iris.

"Thus, for example, when I had an oil-painting for a model, I was uncertain whether I ought to copy the darkest, the lightest, or that which appeared to be the intermediate shade.

"It happens, besides, very often that, to obtain these effects of transparency and of depth, the artist neglected the real colour of the iris, and almost always, after my first attempt, the physician who superintended the adaptation of the artificial eye, sent me directions which had the effect of rectifying the work of the painter.

"The dull shades of water-colours, on the contrary, produce less perfectly the effect of transparency, and the artist is naturally led to make a better study of the colour of the iris. Thus, when the greatest possible exactitude is required, water-colours are much preferable; the imitation is made with less hesitation and the results are more truthful."

At the same meeting, M. de Quatrefages read a passage from a letter of M. Garrigou, a member of the Society, describing the discovery of two human jaw-bones in the cave of Bruniquel (Tarn et Garonne). It appears that these bones were found at a depth of about 2 *mètres*, beneath a black clayey deposit of about 0.32 *mètres* in thickness. M. Garrigou has carefully examined the first, and believes that it belonged to a brachycephalic subject of small size, and about twenty-four years of age. It is very similar to the celebrated jaw-bone of Moulin-Quignon.

M. Broca presented to the Society a large number of human bones, among which were five lower jaw-bones and three broken skulls, together with several bones of animals and various implements belonging to the stone age, which have been extracted from a tumulus at Chamant, near Senlis, the property of M. le Comte de Lavaulx. The observations with which M. Broca accompanied this collection merely related to the place where they were found, and contained a list of the flint implements, etc. The description of the skulls will be found below.

On the 7th January, 1864, the Anthropological Society of Paris held its ninety-third meeting. M. Gratiolet, having been chosen President for the ensuing year, took the chair, and made the following address:—

"Gentlemen,—I ought, first of all, to thank my colleagues of the Société d'Anthropologie. In calling upon me to preside over them

to-day, they have condescended to give me a new proof of that kindness, to which they have so often accustomed me.

"I would wish, in order to prove to you all my gratitude, to imitate faithfully the zeal and accuracy of my illustrious predecessor. It is true, that man proposes and God disposes : but, whatever happens, you have put my mind perfectly at rest by nominating M. Pruner-Bey as your Vice-President. My duties will only last for a year, and when I give up the chair to my learned colleague, it will be really a joyful occasion. It may truly be said on that day that time has incontestably led to great progress in the Society.

"At present, I am delighted to be the bringer of good news. The actual position of the *Société d'Anthropologie* is the visible expression of incessant progress. In the beginning, certain necessities inherent in the installation of every new society obliged the founders to limit the number of members. But now, the times are changed : our Society is no longer a child in the cradle ; now it can walk alone, and I will add, that, thanks to your efforts, it walks gloriously.

* * * * *

"Besides its 154 members, the *Société d'Anthropologie* comprises six honorary members, thirty-six foreign associates, eighteen national correspondents, and eight foreign correspondents.

"This increasing prosperity is the glory of our Society ; but what it ought still more to congratulate itself upon is, that it has witnessed the birth, since the commencement of last year, of a society which is our sister not only in end but in name. The Anthropological Society of London has almost immediately displayed its activity, by the publication of a Journal rich in important labours, and of which two numbers have already appeared. Let us, then, applaud our younger sister with all our hearts. Let us wish her all the success which we desire for ourselves. We speak, it is true, different languages, but our object is the same, and our riches will be in common.

"I do not wish to enter here upon the question of our accounts. But I am happy to be able to state that our finances are in a most satisfactory state, and the Society has the more right to be gratified with this result because it has not shrunk from any expense that could render its publications worthy of the science which it cultivates. I may be allowed to remind you that the generosity of a colleague, whose loss is ever to be regretted, has placed you in such a position as to enable you to seek, in a direct manner, anthropological researches. The prize which will immortalise in the memory of the Society the name of Ernest Godard, will be awarded at the extraordinary meeting of 1865."

M. Broca gave, at this meeting, a description of the skulls which we mentioned above as having been discovered at Chamant. These skulls were too much broken to be studied at the last meeting; but, M. de Lavaulx having taken care to keep the fragments of the different skulls separate, M. Broca was able to reconstruct them so that, although far from complete, their principal characteristics could be considered. The following is a table of the transverse and antero-posterior diameters. :—

	Antero-posterior Diameter.		Transverse Diameter.		Cephalic Index.	
No. 1.	178 mm.	...	140 mm.	...	78.65	0/0
2.	189 "	...	136 "	...	71.42	"
3.	184 "	...	144 "	...	78.20	"

The second skull is very dolichocephalic. The two others are mesaticephalic, but are much nearer the dolichocephalic than the brachycephalic form.

The next paper was by M. Defert, on the first two numbers of the *Anthropological Review*, and *Journal of the Anthropological Society of London*.

A committee, formed for the purpose of compiling instructions upon the Anthropology of Sicily, and composed of Dr. Pruner-Bey, Count Duhoussset, and Dr. G. Lagneau, have produced a valuable and interesting paper upon that island. The attention of Anthropologists would naturally be drawn to a country possessing the peculiarities of position and language which Sicily does; and those who have made it their particular subject of study have been amply repaid. Previously to historic times, ample material may be found here for palæontological research. The island appears, at some distant time, to have been geologically connected on one side with Italy and on the other with the African continent. On this subject Dr. Lagneau says, "The remembrance of the cataclysm which caused the formation of the Straits of Messina is not yet completely lost in the night of time, for the writings of several authors of antiquity, among others Strabo, Pomponius Mela, and Silius Italicus, make mention, either of the continuity of Sicily with Brutium, or of its sudden separation. In support of this assertion, without calling to mind the authors cited by Cuvier, Fradin, and Boucquelot, it will be sufficient to quote the following passage of Pliny, who speaking of Sicily, says: 'Quondam Brutio agro cohærens, mox interfuso mari avulsi xv m in longitudinem freto.'"

This theory is further borne out by the fact that, in the cavern of San Teodoro, at the foot of Mount San Fratello, near the village of Acqua-Dolce, in the north of the island, M. F. Anca found fossil bones of the spotted hyæna, the hippopotamus, and the African ele-

phant, already observed in that of Olivella. But what is still more interesting to anthropologists is, that in certain fossil-bone caves objects worked by human hands have been found. In the cave of San Teodoro, M. Anca found implements or arms in phonolite and trachyte, whilst Dr. Falconer discovered flint knives, pieces of coal, etc., in the upper stratum of the cave of Maccagnone, near Carri, to the west of Palermo. Dr. Lagneau thinks that by continuing to make similar investigations, it might be possible to find some fossil bones of the first inhabitants, and thus to discover, by the aid of palæontological chronology, the epoch of man's first appearance in this portion of southern Europe. Besides these researches, there is abundant room for observation in the burying grounds of the ancient inhabitants of the island. Without doubt, the population at that distant period was of a much purer race than the mixed inhabitants of the present day, and their anthropological characteristics would be displayed with proportionate precision. M. Boucquelot points out for this purpose the sepulchral caves in the south of the island, near Girgenti, Caltanissetta, Castrogiovanni, the lake of Pergusa, Calatagirone, Vizzini, Modica, Orchora, Stafenda, Noto, Avola, etc. Some of these caverns are sarcophagi cut out of the rock; others are natural grottoes, some of which are inaccessible. These caves have also been sometimes thought to be the dwellings of the ancient inhabitants. Such were without doubt the innumerable caves disposed in stages on each side of the valley of Ipsica, between Modica and Spaccaforno, in which Balbi and de la Salle assert that gigantic bones have been found. Homer and Thucydides speak of those situated near Lentini as the dwellings of Lestrygons and Cyclops. Dr. Lagneau thinks that these Cyclops were the Pelasgi, and quotes M. Mimaut, who says that, by the remains of small conical towers which they constructed, these people may be traced to Italy, Sicily, Sardinia, Corsica, the Balearic Isles, etc. About the origin of the Pelasgi themselves there is much difference of opinion. Pott, De Hahn, and others regard them as a branch of the Aryan family, and derive their name either from *πελ*, *παλ*, *παλαιοι*, ancients, *πελὸν ἄγρος*, a black field, or *πελαργος*, a swan, from their similarity to that bird in its migratory habits. On the other hand, Roeth and M. Pruner-Bey consider them as a nomadic portion of the Semitic race, basing their opinion, first, on the etymology of the word Pelasgi, which they derive from the Semitic root *pelash* or *palash*, signifying migratory; and secondly, on the historical documents and the names of the heroes and divinities of ancient Greece, testifying that at least a portion of the Pelasgic peoples quoted by the ancient authors belonged to the Semitic stock.

Whatever may be the ethnic origin of the ancient inhabitants of the caves of Sicily, although the narratives relating to the Cyclops and other giants, who are generally said to have been the first inhabitants of the earth, are more and more worthy of being regarded as fables now that the progress of human palæontology has demonstrated the small stature of the most ancient races of man, the researches made in these caves will not be the less interesting; for they might be able to furnish some information, either respecting pre-historic peoples, who were only gigantic or monstrous in the imagination of travellers, or upon other peoples whose existence history has revealed to us in this part of the island, as the Sicani, for example.

The Sicani are generally looked upon as the most ancient inhabitants of the island with three capes called Trinacria. From their name it took that of Sicania. Diodorus Siculus and Timeus consider them to be autochthonic, but a number of other authors regard them as of Iberian origin, and this theory derives no inconsiderable amount of confirmation from the Basque etymology of several names of places in Sicily. Another theory is, that the Sicani are Pelasgi, who preceded or accompanied the Siculi in the migration from Thrace and Illyria into Italy and Sicily. In support of this opinion, M. Miot, the translator of Diodorus, instances the Greek etymology of the names of the Sicanian chiefs who were vanquished by Hercules, but it is very possible that the author may have given these names their Greek form. But supposing that the Cyclops were Pelasgi, the idea of the Pelasgic origin of the Sicani would receive some support from the opinion of Demetrius of Calatia, who thinks that Sicanus, the chief of the Sicani, was the son of the Cyclop Briareus.

The origin of the Sicani not being precisely ascertained, it will be difficult to assign to them any positive anthropological characteristics, so as to allow us to distinguish their bones among those of the ancient places of burial, or to trace their descendants among the Sicilians of the present day. If, however, we look upon their Iberian origin as sufficiently established, we must suppose that they possess characteristics similar to those of the Basques, which, however, are not yet clearly defined. In this investigation it will be important to take notes of the names of mountains, valleys, water-courses, villages, and isolated dwellings, and those of persons, the phonology of which departs from the Greek or Latin. The manners of the ancient inhabitants of the island should also be studied. In Sicily and in Southern Italy, as well as in the Balearic Isles, the sling appears to have been in use. Do we still find in certain regions of Sicily the use of the iron or leaden shod stick, and of the Basque dress?

The next people referred to are the Siculi, about whose origin there is so much uncertainty, that it is impossible to determine their anthropological characteristics. To determine to what race they belonged, it will be necessary to search their ancient burying-places in order to make a careful examination of the bones, and also to study the existing Sicilians in those parts of the island where descendants of this people may still be likely to be found. After their immigration, which, according to Philistus, took place eighty years, and according to Hellanicus, three generations before the siege of Troy, which would bring it, according to Bellenger and Freret, to between 1264 and 1364 B.C., this people at first occupied the parts of the island abandoned by the Sicani; but after having beaten them, and advanced against them towards the southern part, they took possession of the richest territories, and fixed their abode in the northern, central, and even western portions; near Girgenti, Siculiana, at the present day in ruins, would seem to testify to their presence upon a point of the south-western coast.

Among the other peoples who have from time to time planted colonies in Sicily, concerning whom valuable and interesting details are given in this paper, are the Semites of Phœnicia and Carthage, the Creti and Elymi among the Greeks, the Romans in the third century B.C., the Normans in 1037, and after them the Germans, French, and Spaniards. Last of all, there was a large immigration of Albanians, commencing in 1448; these people founded several colonies, in which they preserved, to a great extent, their national customs.

From this sketch of the large number of varied nations which have contributed to the formation of the Sicilian population, it would be imagined that a great variety of anthropological types would exist in the island; but Dr. Pruner-Bey observes that, either from the predominance of some one of the constituent races, or from the fact of the ethnic mixture having taken place in a uniform proportion, the Sicilians of the present day present a certain similarity of physical and intellectual characteristics. According to him the stature of the Sicilian is generally below the medium; he is thin, his features are long and angular, his nose is not generally flattened, his hair is curly, and of a blackish brown, particularly in the country, in small places, and on the borders of Palermo. His eyes are handsome, and his glance piercing; he has rarely much beard. In character the Sicilians are passionate and vindictive, but also capable of great devotion; they are intelligent, imaginative, and enthusiastic, possessing much vivacity of speech and manner, but endowed with irresistible love of ease. They are generally good musicians. One of their greatest and most deeply-rooted

superstitions is their belief in the influence of the evil eye. The paper concludes with some interesting observations by M. Pruner-Bey on the dialect and peculiar idioms of the Sicilians.

M. Hazard, the proprietor of the cave of Mont Maigre, near Orrouy (Oise), sent the Society several pen and ink sketches, representing the configuration of Mont Maigre, the appearance of the sepulchral cave before the excavations, its appearance at the present time, and three cuttings of the soil showing the situation of the bone-stratum.

Mont Maigre is a steep and conical eminence, situated above the village of Orrouy, upon the north side of the valley of the Autone, a small stream which is a tributary of the Oise. Its summit rises to about eighty mètres above the valley. Upon its southern side, at an elevation of fifty mètres above the valley, was the opening of a small excavation, the roof of which was formed by the lower face of a split rock, and the sandy soil covered by several large stones, which appeared mostly to have been detached from the vault. The entrance, which was difficult of access and partly obstructed by these stones, was about four mètres wide. The depth was only three mètres and the height fifty centimètres from the level of the entrance, diminished towards the end, where the soil rejoined the rocky roof. Four years ago, M. Hazard had some workmen employed upon this spot; and, in moving a large stone, about one metre and a half long, they found that it covered a human skeleton stretched at full length on a bed of perfectly dry yellow sand. The feet of this skeleton pointed east south-east; and all the bones, perfectly preserved, were in their places. M. Hazard assured himself of this, and had the bones carefully removed; but, unfortunately, they were afterwards mixed with those subsequently discovered, so that it became impossible to reconstruct the first skeleton. In continuing the work, they discovered, immediately below, a large quantity of human bones, disposed without any order, and forming a bed of about a metre in thickness which extended the whole width of the cave. They were in a state of perfect preservation, of a slightly yellowish-white colour, and as clean as if they had just been prepared by an anatomist. A large number of bones of animals, much broken, were mixed with the human bones; the latter, however, formed at least nine-tenths of the total number. The animals' bones were those of small ruminants. Besides these bones there were found fragments of rough pottery, hatchets of polished flint, knives of cut flint, and a small bronze spoon marvellously preserved, the long thin handle of which was terminated by a little figure of remarkable workmanship. These objects have been carefully pre-

served by M. Hazard. A large number of the bones were lost, but two large boxes were filled, one with skulls and fragments of skulls, the other with large bones, and placed in a shed constructed on the summit of Mont Maigre. Here they remained untouched for four years, until Messrs. Broca, Bourgeois, and Lagneau went to the spot for the purpose of examining them. From the number of skulls and fragments of skulls preserved, it is certain that the cave contained the remains of at least fifty individuals. All these M. Hazard has generously presented to the Paris Society, with the exception of one skull which he has preserved for his own collection.

The existence of the entire skeleton which occupied the superficial bed proves that the cave of Orrouy was not only one of those bone-caves to which the exhumed bones of a cemetery were transferred, but that it was really a place of sepulture. This skeleton is that of the last individual buried in the cave. It is probable, that before that there was another placed in the same manner, and the bones of which were displaced and put among the rest to make room for the new-comer. It is probable, indeed, that that would have been, like the preceding, thrown in its turn into the general repository, if a new body had had to be introduced into the cave. If these suppositions are well founded, we may be allowed to believe that the cave of Orrouy was the burying-place of a very small tribe, or perhaps even of a single family; for, with such a mode of inhumation, so small a cave could not be intended frequently to receive bodies; and this, from the considerable number of bones found there, leads to the conclusion that this place of sepulture must have been used for a great number of generations.

During some further operations of the workmen, at about fifty mètres distance from the cavern described above, the sandy soil under a ledge of rock had to be removed. In immediate contact with the lower surface of this rock were found four fragments of a human skull, of remarkable thickness, of a brownish-grey colour, and entirely differing in its nature, its aspect, the rough state of its surface, and its position, from the skulls in the cave. These four fragments have been fastened together; they evidently belong to the same individual, and form together about half of the skull. No other bone, either of man or animal, nor any object of human workmanship has been found in the same place. The rock which covered it having long been fractured down to its base, and having in consequence taken a slightly oblique direction, it is supposed that this skull was at one time placed superficially in the soil of a small natural excavation, since effaced by the displacement of the rock.

M. de Roucy has written to M. Broca, begging him not to attach

too much importance to the presence of the bronze spoon among these remains, because this might possibly have been placed in the cave at a later period. To clear up this doubt we ought to be able exactly to know the level of the point where it was found ; but, unfortunately, the discovery was made in the absence of M. Hazard, and the workmen can afford no information on the subject. It can only be said, therefore, that the remains found in this cave belong at least to the bronze age, as no trace of iron has been found among them. M. Broca has announced his intention of favouring the Society with the result of his observations upon these skulls and other bones.*

A long and interesting paper by M. Pruner-Bey, entitled "Questions relating to General Anthropology," is the next in order ; but, as we intend to translate this in full for the benefit of our readers, we pass it by for the present.

At the meeting of the 4th February, it was announced that Dr. Hunt, President of the Anthropological Society of London, had transmitted, in the name of the Council, two propositions to the Society of Paris—1st to exchange duplicates from the museums of the two Societies ; and, 2nd, to put the two Societies into direct communication, through the medium of delegated Commissioners, in order to prepare in common general instructions for Anthropological investigations. The principle of the first proposition was adopted by the Paris Society. The two museums would thus be able to assist in each other's completion ; but it would be difficult to bring the principle into operation before the publication of the two catalogues. Dr. Hunt's second proposition met with an equally favourable reception. The Society regretted they were not able to give it a retrospective effect, as the *Instructions for Anatomical and Physiological Researches* were already in the press, and would appear with the second number of vol. ii of the *Memoirs*. The publication of these Instructions, which had been adopted on 17th July, 1862, and completed 6th November of the same year, had been retarded by material difficulties relative to the reproduction of the chromatic tables ; but these difficulties were now overcome, and the publishing committee had already received the first proofs. But the instructions for anatomy and physiology only formed a portion of the general instructions. Ethnographical, Linguistic, and Archæological instructions, those which concerned the comparative pathology of the human race, statistics and medical geography, were still in preparation, and the Society of Paris would consider itself fortunate in being able to combine with that of London in the preparation of

* See *Journal of Anthropological Society of London*, vol. ii, p. cclxix.

these important instructions. It was also decided that the London Society should be allowed, if they desired to do so, to reproduce the chromatic table.

A letter was received from Professor Rudolph Wagner, stating that the meeting of the Anthropological Congress of Germany which was to have taken place at Göttingen, was postponed. One of the principal questions to have engaged the attention of the Congress was the craniology of the Laplanders and Esquimaux; but the principal assistance reckoned upon in the elucidation of this subject, was to have been derived from the skulls that the public and private museums of Stockholm and Copenhagen were to have sent to Göttingen for the occasion. The war between Denmark and Germany rendered this impossible, and it was too late to change the programme. The Congress was therefore adjourned.

M. Broca announced that, thanks to M. Simonot, the omissions which existed in the chromatic table of the skin, are now supplied. All the tints in this table have been copied either directly from nature or from busts coloured after nature.

In the corresponding table of the hair still greater facilities have been given, as the artist has been enabled to copy the colours from the specimens themselves. M. Broca had collected several hundred of specimens of all colours belonging to individuals of both sexes and of all ages and races. In this he had received the assistance of several members of the Society, particularly of M. Morpain, who had furnished him with hair of Albinos, and M. Pruner Bey, who had placed at his disposal his large and unique collection of hair. M. Broca had formed a graduated series of these according to their colours and shade. He exhibited to the Society a large card, upon which the various shades form a complete circle, passing from black to white by brown and grey, and returning from white to black by blond and red.

This collection is so perfect that it requires great care to distinguish two adjacent shades. The passage from bright to dull red and from blackish red to absolute black is particularly remarkable. This table, after the elimination of the duplicates, still contains more than sixty shades: but the numbered table only represents a certain number of types far enough apart to be easily distinguished at first sight. The lightest coloured specimens are those of Albinos. None of these, however, have been found to be absolutely white.

M. Broca proposed at first to dispose the colours of the hair in a scale as he had done those of the eyes, and to do the same with the colours of the skin. But this would have given use to three different scales, which could not have been included in a single plate. There

are a great many colours which are common to the skin and to the hair,—thus it is possible to avoid a number of repetitions by placing in a single table all the colours of the skin and hair. As the determination of these colours does not offer any difficulty, they have not been arranged in regular series. The shades of the same colour have been brought together to avoid errors of contrast, but it has been thought unnecessary to establish parallel groups as in the scale of colours of the eye.

M. Broca presented to the society a drawing of the eye of an Albino woman of thirty-seven years of age, of which he gave the following account. The ball of the eye, seen through the pupil, is of a blood-red colour. The iris, seen from a distance of about a yard, is of a uniform red, duller than that of the ball of the eye, but, when looked at closely, we immediately see that this shade of the iris is the result of the mixture of two different colours, red and white. The red parts consist of long thin spots, of very varied forms and dimensions. Some are linear, others have the form of small much elongated lozenges, or of small nearly isosceles triangles, the largest size of which is not more than a millimètre. All these red spots, separated from each other by white fibres, have a radiated disposition, that is, their large axes would meet, if prolonged, in the very centre of the pupil. None of them extend to the small circle of the iris; but some of them are prolonged as far as the large circle. When we examine the entire iris, we find that the small circle is whiter than the rest of the membrane; the large circle is much less white; the red manifestly predominates in the intermediate zone between the two circles. The red spots do not present exactly the same shade. Those which are very narrow are only of a rose colour; the widest are almost as bright a red as that of the pupil. Similarly, the white fibres are whiter in proportion as they are thicker. Those that are very thin have a rose-coloured tint.

When the eye is examined attentively, it can be seen that the red colour of the spots is only the colour of the ball of the eye seen by transparency, and that the white parts are those where the fibres of the iris form bundles sufficiently thick to arrest the light. The radiated disposition of the fibres of the iris, well-known to anatomists, is evident in the eye of the Albino. There is, on the level of the pupillary border, a small ring of circular fibres; from this ring, which is also called the sphincter iridis, the bundles of fibres separate, diverging obliquely, forming anastomosis in such a manner as to intercept the web or elongated areola, and reaching to the exterior border of the iris. These circular or divergent fibres are colourless. They are opaque, or rather they are not very

transparent. Where they are thickly clustered, they hide the colour of the deeper portions; where they are thinner and further apart, they allow that colour to be seen, more or less modified by the effects of transparency. In the normal state, the posterior face of the iris is covered by a layer of pigment entirely opaque and quite black: there is, besides, in eyes more or less brown, a certain amount of pigment contained in the thickness of the iris itself. The special colour of the iris depends, on the one hand, on the thickness or thinness, the opacity or transparency, the density or laxity of the fibres of the iris; on the other hand, on the quantity and distribution of the pigment deposited in the thickness of that membrane itself. As to the posterior pigmentary layer, it is always uniformly black, in the lightest as well as in the darkest eyes. In the Albino the pigment is entirely wanting: the pigmentary cells exist, but are perfectly transparent. The red colour of the innumerable vessels of the deep membranes of the eye, not being overpowered by the black of the pigment of the choroid is shown in all its purity, and the base of the eye, seen through the pupil, appears of a blood red. The absence of the pigment of the iris has another consequence. This membrane, deprived of the opaque coating which is destined to arrest the luminous rays, only opposes an insufficient obstacle to the passage of the light, and allows, by its transparency, the red colour of the base of the eye to be seen. But this transparency is not uniform: it is especially manifested at the level of the spaces intercepted by the fibrous clusters, which, being more opaque, show themselves in their natural colours under the form of white lines or stripes.

M. Broca infers from this that there would exist great differences in the eyes of Albinos. He refers to some cases of partial Albinism which have been mentioned, and in which there was evidently a small quantity of pigment existing in the iris; and concludes that, from the natural variation of the thickness and density of the fibres, there would be some cases where the entire iris was almost as deep a red as the pupil itself, whereas in others it would not be deeper than rose colour. The red or transparent spaces are so many small pupils, through which the luminous rays penetrate into the eye: these rays form upon the retina so many abnormal images which destroy the plainness of the principal image formed by the pupillary rays, which would render the vision very defective. There are, in this respect, great differences between Albinos: the sight of some is almost normal; others can scarcely see at all in day light, whilst they see very well in a half light. When the transparent or red spots are very narrow, these small supplementary pupils scarcely

allow any luminous rays to pass which do not sensibly disturb the vision. When, on the contrary, they are wider, they produce a confusion of images. It is clear that, in the last case the confusion is proportionate to the width and also to the number of the supplementary pupils. If the transparent spaces were closed up or effaced, the vision would cease to be disturbed. This is what happens when the exterior light is not very intense. Then the normal pupil becomes enlarged, that is, the size of the iris is diminished. The clusters of opaque fibres which, when distributed through a space of, for example, four millimètres, left room for transparent spaces between them, will be drawn into contact with each other when that space is narrowed to two or three millimètres; there will only remain a single pupil, the normal one, and the luminous rays will reach it in their regular manner. It was decided that this representation of the eye of an Albino should be added to the plate of the colours of the eye prepared by the Society.

At the same meeting, M. Broca communicated to the Society the result of his investigations on the height of conscripts in the three departments of Finistère, Côtes-du-Nord, and Morbihan; and exhibited a map showing by different shades the proportion of exemptions on ground of size in the hundred and twenty-six cantons of these three departments, during the ten years from 1850 to 1859 inclusive. The thirty-one cantons which have furnished the greatest number of exemptions on account of insufficient height, form a large uninterrupted black patch, which corresponds almost exactly with the limits of the ancient country of Cornouaille, and is entirely situated in Lower Brittany; that is, to the east of the line of demarcation established by M. de Courson between the localities where French and Breton are spoken. The influence of race upon height becomes manifest from the examination of this map. The shortest stature is observed in the cantons where the population of the ancient Armorica has remained pure; the tallest exists, on the contrary, in those countries where the Kymro-Bretons, who arrived in the sixth century from the southern part of Great Britain, established themselves. More extended details have been collected in a memoir, which will be published with the map.

A committee, consisting of Messrs. Pruner-Bey, Andrieu, and Perier, was formed, for the purpose of compiling instructions for M. Léon Vaillant, who was about to set out for Egypt and to undertake a journey of exploration upon the shores of the Red Sea. M. Perier, who communicates the results of this interesting labour to the society, has compiled a paper full of extremely valuable information upon the manners of the different races living in this

part of the world, as well upon the African as the Asiatic shores of the Red Sea, and containing many suggestions as to those points upon which it is most desirable to obtain information.

At the meeting of 18 February, M. Dally made some observations upon two papers upon the Andaman Islanders contained in the *Bulletins* of the Society, one by M. Pihan-Dufeillay, the other by M. Broca. On M. Pihan-Dufeillay's remark, that these people display "an absence of all, even rudimentary civilisation," he observes that they possess habitations, arms, tools, and even canoes, and they appear to have a knowledge of fire, although that fact is not distinctly stated: they tattoo by the aid of a cutting instrument, which is a certain indication of search after ornamentation: they have a certain amount of care for the dead, and an institution somewhat resembling polygamy. M. Dally inquires, with respect to these facts, what may be considered the most elementary degree of human civilisation? Are these men, who have never had any idea of constructing habitations, of obtaining fire, or of making tools, who leave their dead without burial, and shew no trace of restraint upon sexual relations? Are there marked differences between the most rudimentary form of human civilisation and the most elevated form of the social instincts of animals? Further, he comments upon an observation of M. Broca, who concludes, from Professor Owen's geological and anatomical researches, that the Mincopies were "one of the most ancient races, if not one of the primitive races of man. M. Dally asks what meaning is to be assigned to the expressions *most ancient races* and *primitive races*. In reply, M. Broca observed that he used the terms as putting aside the question of monogenism or polygenism. Those who admit the existence of several primitively distinct races, would conclude from Professor Owen's opinion that the Mincopies, separated since the end of the tertiary period from all mixture of race, are the representatives of one of the primitive races. On the other hand, the monogenists, viewing the Mincopies as having remained for a very long period under the influence of the same media, and separated from those causes which have led to the modification of most other peoples, would consider them as one of the most ancient races of man.

At the meeting of March 3, Professor Ange Duval communicated his observations upon two cases of traumatic aphonia produced by injury of the third left frontal convolution. The first case was that of a man thirty-four years of age, and caused by a fall upon the right side of the back of the head. The loss of speech was immediate and complete, but consciousness remained, and the patient preserved his expression of face, and was able to make himself under-

stood by signs. He died on the twelfth day after the injury, without recovering the power of speech. A fracture of the right portion of the occipital bone and a transverse fracture of the petrosal bone on the same side. There was a small contusion in the anterior extremity of the right frontal lobe. Above all, there existed, in the *left* frontal lobe, a deep and very extended contusion, which entirely disorganised the posterior half of the third frontal convolution. Within, the wound extends to the second frontal convolution, which is only partially divided; without, it is somewhat prolonged upon one of the radiated convolutions of the island of Reil.

The second case was also that of a fall upon the head. The patient was a child five years of age. The loss of speech was complete and immediate. A cure was effected, and the child lived for twelve months after, when he was accidentally drowned. His reason was preserved, but he never recovered the faculty of speech. A post-mortem examination discovered, on the external portion of the left frontal lobe of the brain, a spherical cyst, thirty-three millimètres in diameter, situated under the pia mater a little behind the fracture, and placed in a deep excavation of the cerebral substance.

This cyst succeeded a deep contusion of the corresponding part of the brain. The observation was made at Toulon in 1849, and it would be impossible to say now what particular convolutions were injured; but the situation of the cyst has been determined with so much certainty as to leave no doubt that there was an injury of the third frontal convolution. M. Broca, in commenting upon these observations, declared his own experience, in more than twenty cases, to have been precisely similar, whilst he has remarked in several instances that injuries to the third frontal convolution of the *right* hemisphere have not affected the faculty of speech.

At the meeting of the 4th February, M. d'Omalius d'Halloy invited discussion upon the three following questions:—

1st. What are the proofs of the Asiatic origin of Europeans?

2nd. Have not the flexion languages, instead of passing from Asia into Europe, spread from Europe into Asia?

3rd. Are not the people who speak Celtic dialects (Irish, Gauls, Bas-Bretons, and Scotch Highlanders), and who are from this fact believed to have come from Asia, rather descendants of autochthonic peoples of Western Europe?

We reserve the long and interesting discussions upon these questions for our next abstract.

BÜCHNER'S FORCE AND MATTER.*

THESE are tidal ebbs and flows in the moral as in the physical world. Opinion cannot stand still. It is subject, like other things, to the law of action and reaction. One extreme in thought infallibly begets another. Ages of faith are followed by periods of doubt, to be in turn succeeded by times of grand belief. Man is not wholly spiritual, and as certainly he is not solely material. The relative proportion of these elements may vary in different individuals and even in different races, and perhaps as a rule it will be found that the former is preponderant in the higher, and the latter in the lower types. Without offence to the devotees of either, it may be said that religion is the highest embodiment of the first tendency and science of the last. Through the former we contemplate the inner and by the latter we behold the outer world. The one should make us know ourselves, the other should enable us to understand the universe in which we are placed. A true culture will exclude neither, and a ripe wisdom perceives that their antagonism is apparent, their harmony real. The one is concerned with God and the other with Nature, and there is ever a priesthood, high and holy, attached to each. Constituting, however, different orders in the grand hierarchy of intelligence, it is only at rare epochs that they can openly and formally combine. Perhaps it may even be said that their normal condition is one of separation, and it certainly is so in ages of analysis and disintegration like our own.

In the discussion of such a subject we can no more exclude place than time. Just as there are eras, so are there areas favourable to faith or the reverse. We cannot deny the ethnic element its rightful place in such a question. To assert that the Semites of Western Asia have not a theological mission, would be simply to deny the facts of authentic history. Limiting our remarks to the Caucasian race, we may say that the Asiatic is prone to religion, the European to philosophy. The march of civilisation westwards has been one long analysis, leading us from the monotheism of Jerusalem to the materialism of London; the former furnishing the creed and the latter holding the purse of the civilised world. At present Asia is, in every sense, a howling wilderness and Europe a smiling garden; but without the gift of prophecy, it is easy to see that if all this will not

* Force and Matter, by Dr. Louis Büchner. Edited by J. Frederick Collingwood, Esq., F.R.S.L., F.G.S. London: Trübner and Co.

be exactly reversed, it must at least be greatly modified in that far future which is to loom out as the mother of coming epochs.

Confining our attention, however, to Europe and her revolutions of opinion, we may remark that, ethnically speaking, we have here an area where intellect tends to preponderate over sentiment, and where perhaps in harmonious conjunction with this, that intellect is more prone to analysis than synthesis. Hence in religion, the Monotheism of the Jew has reappeared as the Trinitarianism of the Christian, and even threatens occasionally to sublimate, among the philosophic class of thinkers, as with the eastern Aryans, into Brahminical Pantheism or Buddhistic Atheism. Now to this latter body belong in an especial manner the more metaphysical and transcendental literati of modern Germany. Indeed, the profound relationship observable between the eastern and western Aryans, or shall we say by way of distinction the Indian Aryans and Teutons, not only in the character and tendency of their speculations, but even in the entire mental constitution whence these intellectual specialities proceed, is so marked as to be worthy of careful study as an ethnic fact of considerable value. It is the same with the ancient Greeks, the teachings of Pythagoras and Plato being mere transcripts from the higher theosophy of the elder Brahmins, or shall we say, speaking ethnically, a cyclical repetition of intellectual development, arising from identity or at least proximate relationship of race, of which their lingual specialities are only another indication.

And if we may be allowed to enter into so subtle a distinction, we would say that the speculations of the Greeks are more nearly related to the teachings of the Brahmins or Aryans pure, and those of the Germans to the principles of the Buddhists or Aryans mingled with the semi-Mongolic aborigines of India. It was this mingling, indeed, and the inevitable modification of doctrine that ultimately resulted from it, which adapted Buddhism for its present wide circulation among the Mongolic tribes of Northern and Eastern Asia, for whom pure Brahminism, as the unadulterated product of a higher race, would have been far too spiritual in its tone and too hierarchical in its organisation. And now, perhaps, we may begin to understand something of the real racial vocation of Germany in the Reformation. Protestantism, it has been often observed, is the Buddhism of the west; that is, it is the product of rationalism triumphing over faith and tradition, of reason dominating authority; in other words, of intellect ruling sentiment. Now it is a most mistaken idea that the Protestant movement terminated with Luther and Calvin. They only initiated this great upheaving of the Teutonic mind. For let us clearly understand there is Protestantism in politics and in philosophy as well as

in religion, and this dread Buddhism of the west is only now making good its claims in the two latter departments. In the one it has eventuated in the English and French revolutions with their concomitant results, and is now evolving socialism and other forms of disintegrative action in the body politic, just as Eastern Buddhism disowned and destroyed caste. In the other it has resulted in the production of such works as that which furnishes the subject matter of the present article.

The history of opinion has always an ethnic bearing. There is a racial type of mind as well as body. Every distinctly marked division of humanity will not only have its own religion and law, but its own philosophy and art, for in truth these are but transcripts of the mind which has produced them. Thus Catholicism, with its architecture, painting and music, was obviously the religion of the Italic type, with their æsthetic proclivities developed under the influence of mediæval Christianity in place of the Olympian faith of an earlier era; that is, it was the product of a classic race manifesting their ineradicable specialities of endowment in the adaptation of an artistic ritual to an imported and primarily monotheistic creed. While Protestantism, Rationalism, Deism, and Atheism, are but the successive steps by which the European mind, more especially as represented by the predominantly muscular Teutons, advances in its analytical action, from the ecstatic spiritualism of the eastern prophet to the experimental materialism of the western savant.

In a sense, therefore, Dr. Büchner is a racially representative man. He can see nothing but "indestructible matter" and "immortal force", both cognised simply through the senses. Of the universe without he has no doubt. He treads its adamantine pavements with the perfectly satisfying consciousness of their eternal durability. He is obviously at home with Shakspeare, but that "we are such stuff as dreams are made of" is not a part of his philosophy. That all this apparently outer world, *as known to us*, can be but an IDEA in the mind of the observer, never seems to have crossed him, even as a suspicion. He *believes* in matter—not as an experience of the consciousness, but as an outward and independent entity. Of the extent of this stupendous assumption, he is happily ignorant, and like many of his experimental brethren, is perhaps none the worse physicist on this account. Only, the man who speaks of God as an abstraction, and treats human immortality as a myth, should not object to a little metaphysics in examining the fundamentals of his philosophy. Where we arrive at such conclusions, it is desirable that we should be careful of our premises, and not build the sublime superstructure of so grave a philosophy on the rather sandy foundation of a perfectly gratuitous assumption.

Having thus then cleared our way, and brought the subject down out of the eternal and the abstract into the temporal and concrete, we find much in Dr. Büchner's work to admire. Contemplated simply from the timeplane, his propositions about the indestructibility of matter and the inexhaustibility of force are demonstrably true, and as a fearless statement of this great argument, the work is the best ever published. It is honest. It deals in no half truths. As a bold and fearless statement of the case for Materialistic Atheism, it is the ablest and bravest work extant, and as such we rejoice to meet it in an English dress; while its publication anywhere, with the author's name and his official position deliberately placed on the title page, is an unmistakable symptom of health and vigour in the mind of the age. Scientific hypocrisy is obviously on the wane. The fearless spirit of the eighteenth century is returning. That base tendency to compromise, which characterised the cultured minds of Europe from the battle of Waterloo till a comparatively recent period, is departing. We are recovering the manhood, that can state a truth and utter a conviction, unrestrained by a cowardly regard for consequences. Books are no longer the masks of authors. We are beginning to believe in the power of veracity, and to regard no crime as greater than that, which, under the pretence of tuition, would knowingly lead a disciple into error. We are outgrowing the terrors of that age of reaction, which followed on the excesses of the French Revolution, and with this we are also leaving behind that "State science", to which even the illustrious Cuvier occasionally condescended, and which under the shallow pretext of not unsettling creeds, dared to palter with conviction and enact that basest of all the forms of treason, a conspiracy against the truth. It must be obvious to all gifted eyes, that we are approaching a great intellectual crisis. The men of fact and the men of authority are closing up their ranks for the impending conflict. The hollow truce of the last half century is at an end. Science and Theology stand face to face as avowed and open enemies. The day of the Bridgewater treatises, with their nursery babyisms, is a thing of the past, and Europe, as at the latter end of the last century, awaits in awed expectation the farther development of this stupendous battle of the gods, to which, however, there can be but one termination, the acceptance by theologians of the conclusions of science with all their consequences.

The preceding observations will have prepared the reader for understanding the plan and appreciating the worth of Dr. Büchner's fearless work. Its tone is eminently and essentially continental, and perhaps we may add, as a yet more distinctive speciality, its manner, both in statement and argument, is unmistakably German. There

is a spirit of almost angry antagonism in its pages, for which, as we have no occasion in this country, we have perhaps but an imperfect appreciation. We think that a man of science may be much better employed than in running a tilt at theological windmills, and accordingly we leave these respectable conveniences to their allotted functions in the body politic without disturbance, contented, as in the case of Darwin and Sir Charles Lyell, with a calm statement of facts and a clear deduction from the premises which they afford. For this, however, a certain maturity of the national mind appears to be necessary; and to this, whether from more immediately political or remoter ethnic causes, no continental people seem yet to have attained. They have not yet advanced to that triumphant faith which believes that the supernal majesty of truth has only to be unveiled to ensure the loyalty and adherence of all beholders. This, however, is rather an affair of manner than of matter, and, once understood, ceases to be objectionable.

In the chapters on the immortality of force and matter, there is, as we have already observed, an admirable statement of the subject from the *material* stand-point, but when the author talks of the *eternity* of matter, he obviously misapprehends the deeper significance of the terms which he employs. All material existence is essentially phenomenal, and, as such, subject to the law of *sequence*—in other words, it is *temporal*. It belongs to the *sphere* of time—is on the time-plane, and can by no true philosophy be predicated as eternal. He falls into a corresponding mistake when he speaks of the *infinity* of matter, which, as being composed of *finite* atoms, can by no multiplication of these become *absolutely* infinite. A magnitude which transcends our conception is not therefore unlimited. We, as finite, have simply found something which we cannot contain—that is all. Dr. Büchner, and all who follow him, should know that nothing which is cognised through the *senses* can be infinite. Again let us state the abstract truth on this subject: the phenomenal, as it cannot be the eternal, so neither can it be the infinite, its limitations being equally marked in either direction. We have been the more particular in these remarks, as we should be sorry to see so good a cause as that of scientific truth subject to a trip at the hands of the masters of dialectics. And, yet, if scientific men will venture out of their own domain of physics, whose lines are impregnable, into the higher realm of metaphysics, and with minds habituated to the handling of the concrete, unwisely attempt to meddle with the abstract, they will infallibly suffer a shameful defeat, whenever a competent champion shall appear in the lists against them. Let us, then, as the faithful disciples of induction, humbly leave all talk of the INFINITE and ETERNAL to the

students of moral philosophy, in whose province these terms may have an appreciable significance, which they certainly lack in ours, where their unauthorised use simply exposes us to the pity of our more logically trained cotemporaries.

The grand defect of Dr. Büchner's speculations on the Cosmos, and we may add that of all who have thought with him, from the days of Heraclitus and Epicurus downwards, is that they regard the Universe as a piece of *dead* mechanism, whereas it is an eminently *vital* organism. Hence, in his chapter on "The Heavens," our author quotes and approves the foolish superficialities of Hudson Tuttle, when he asks "Why did the Creator give rings to Saturn, which, surrounded by its eight moons, can have little need of them, while Mars is left in total darkness." Why, we would respectfully suggest to Mr. Tuttle, has an embryo of seven months sundry organs in an advanced stage of development, which are only germinal in one of seven weeks, and altogether imperceptible in one of seven days. This fault-finding with normal structure, this pretence of criticising nature and improving fact, is ever an unmistakable evidence of immaturity in scientific culture, and may be worthy of Mr. Tuttle, but is certainly quite unworthy of Dr. Büchner, who ought to know that "an *accidental* concurrence of the elements" is a phrase altogether without meaning in true philosophy. Perhaps, however, we are too severe on these gentlemen, and may be only criticising their *words* in place of their *ideas*; but when the doctor, again approvingly, makes his favourite Tuttle say "Nature always works *silently*," we are certainly tempted to add—in her volcanoes, earthquakes and thunderstorms. The truth is, generalisations so sweeping as those which we have quoted, and the book abounds in them, both in the text and the quotations, are dangerous ground, more especially for intellects of moderate calibre, and should, if they could only see it, be carefully avoided by Dr. Büchner, and particularly so by Mr. Tuttle.

But it is nearly time that we should bring our observations on this remarkable work to a close; for the remainder of the chapters, on "The idea of a God," "Personal continuance," etc., are in the same style of shallow metaphysics as those which we have already criticised, and simply demonstrate, what all deep thinkers have long known, the utter impossibility of mastering the subjective sphere from the objective stand-point. It is in this way, however, that the work is calculated to do good service. It is the Nemesis of the Bridgewater treatise style of natural theology, the logical terminus of the vulgar attempt to find a God in matter. To this complexion has it come at last. From Paley to Büchner, may seem to some people a rather long and devious march, but the one is simply the end of which the other

is the beginning. It is time that these solemn follies should cease. Let theologians keep to their own province—they and their spiritualism are quite misplaced in science. And, on the other hand, let men of science carefully eschew revelation—and we may add metaphysics. We shall not discover God by induction, nor demonstrate the immortality of the soul by an experiment. These sublime truths are attained by another path, are mastered by a grander process, and, like the stainless stars, that look calmly down on every storm, serenely bright beyond the cloud, supremely still despite the tempest, will infallibly survive the discoveries of science and the revolutions of opinion, however potent the attacks of philosophers—and we may add, however weak and injudicious the defence of theologians.

We have been rather severe in the foregoing observations on Dr. Büchner's work, because it belongs to a school of physico-theology, which, whether on the affirmative or negative side, we hold to be equally opposed to the true interests of science. In attempting to expose his errors, we have perhaps almost unconsciously fallen into that very train of metaphysical reasoning which we have reprobated in him. But something of this kind was unavoidable in the treatment of a volume whose main purpose seems to be an assault on established credences through the instrumentality of science. But whatever may be our opinion of the spirit and design of the original, we cannot conclude our remarks without according a well-deserved tribute of commendation to Mr. Collingwood. We admire his moral courage in thus daring to adventure the publication of such a work in an English dress. Nor can we close without an allusion to his style, which is as clear, rhythmical, and harmonious as the finest literary production, flowing in perfect freedom from the hand of an accomplished master of all the elegancies of composition. There is an ease and grace in his periods almost unique in the field of translation, and which might well render the English reader oblivious of the fact that he is reading, not a masterpiece in his own, but an admirably rendered transfusion from a foreign tongue.

THE SCIENCE OF HISTORY.*

THIS book must be considered in fact, though not in name, a valuable contribution to the science of Anthropology. For the laws by which nations or collections of men are necessarily governed during that period of the existence of mankind which is called the historical are at present the highest problems to which the attention of the anthropologist can be directed. We say at present, because it seems very possible that, as mankind have lived many decades of thousands of years without a history, so the time may come when it may be wise enough to live in such a condition of true adaptation to the ends of its being, that all that we now call history may become unnecessary, and the historical period be looked on merely as the school-boy days of mankind by our descendants. Such an expectation, however, will not be found in the pages of Draper. His book is at once the complement and the antagonist to that of Buckle. Those who have found arguments for opposing Buckle's conclusions in his want of plan and the vagueness of his aims, will need all their ingenuity to prevent their own weapons being turned against themselves in estimating Draper. Those who deride the idea of the perfectibility of man, or rather the possibility of the indefinite diminution of his imperfections, will find that the science of history, which they couple with it, is capable of being made a fact without the admission of such an idea. The colossal man of Comte and Temple is here divided into many colossi, who live and die like individual men. The law of their organisation is, according to Draper, to be studied in the individual, and the fate of death and extinction must inevitably be likewise theirs also. It is, however, only in an intellectual point of view that the different phases of life are held to correspond in this comparison of the individual with nations, each of which is shown to pass through the five several ages of credulity, inquiry, faith, reason, and decrepitude.

The idea of there being any fundamental differences in race or any virtue in heredity is scouted by Buckle; nor do they form any of Draper's master-keys for unlocking the hidden treasures of anthropological wisdom. To Buckle the development of all nations seems only to differ according to the different circumstances they are placed in. To Draper each holds its peculiar course, affected and modified more in its expression than essentially by things outside itself. The two volumes of Buckle form only a part of the introduction to a work no man could ever have lived to complete. The two thin volumes of

* *History of the Intellectual Development of Europe.* By John William Draper, M.D. 2 vols., 8vo. London: Bell and Daldy. 1864.

Draper are as accurately finished off as an elementary treatise on a thoroughly perfected branch of science. Buckle writes to prove, Draper to teach. In Buckle we trace genius and energy trying to make themselves a path. In Draper, like an American railroad, the way may be long, but it is cut sheer through the forest, from one extremity of the continent of history to the other. The text of Buckle stands on a deep foundation of notes: every statement is supported by a quotation. No reference stains the clear white pages of Draper. If you want them, consult the first great library at hand. Buckle, after laying down the principle that all consequents are determined by all the antecedents, takes up history at a period when the accumulation of antecedents is considerable enough to be easily estimated, and proceeds to show how the succeeding consequences were, in fact, inevitable. The only inevitable things to Draper are those which are equally so to the individuals—birth, maturity, and death. No power can arrest the development when once begun; no skill can save nations from their fate. The chain of events drawn out by Buckle has no end. Those exhibited by Draper are a series of similar rings or circles; not exactly alike, but similar. The smaller ones would answer to those nations who have lived fast and died fast; who have sprung suddenly from nothingness, and returned quickly to it again, but still have lived their life. Of these the Arabs are an example. Others may have been destroyed before completing their existence by coming in contact with some more powerful organisation, as frequently happens to individuals. Others lie for a long time in a state of torpid infancy, and eventually reach an extreme old age, having in a long series of ages passed through all the phases incident to national life. Amongst these, China ought to be the most interesting to us. For, "Europe is inevitably hastening to become what China is. In her we may see what we shall be like when we are old."—"To a like organisation of their national intellect, and to giving it a political control, the countries of Europe are thus rapidly advancing. They are hastening to satisfy their instinctive tendency. In an all-important particular the prospect of Europe is bright; China is passing through the last stage of civil life in the cheerlessness of Buddhism, Europe approaches it through Christianity."—"Nations, like individuals, are born, proceed through a predestined growth and die. One comes to its end at an early period, and in an untimely way; another, not until it has gained maturity. For every one there is an orderly way of progress to its final term, whatever that term may be."

An attempt is here made to smooth the parting agonies of the nations of Europe to a fate they are not perhaps willing to admit is either so near or so certain as our author supposes. And an important

question arises at once, Are nations born and do they die in the same sense that individuals do? The answer to this must depend principally upon the sense we attach to the word nation. It has, for example, frequently been said of late that Italy, or the Italians never have yet been a nation. If this is actually true, we may soon expect to witness the occurrence of a remarkable event, that is, the birth of a nation. But a very little reflection would be enough to convince us that the accession of Venetia and Rome, though they might render the nationality of the Italians so patent a fact that no one could deny it, would no more be the birth of the nation than the acknowledgment of his birthright in a court of law would be the commencement of existence for an individual. On the other hand, the French are indubitably, in an ordinary conception, a nation of considerable antiquity, even if we carry their nationality no further back than the reign of Louis XI; yet, in a social and political view, they might be considered as dating only from the first years of the early Republic. Young France was the title they assumed; and though the portentous infant might have been in existence before, he had not woken to self-consciousness. In this way it is possible that nations may be going through the stages of existence much faster than even Draper imagines. Perhaps their career more resembles that of families than of individuals. A family, so long as it can retain the same property, has an unity which is perhaps after all more apparent than real. Its history, or rather the history of its first members, soon ceases to guide those who come after, if it is not recorded, which is seldom the case, even where the proofs of descent and the possession of the same property is retained. In this case, the traditions of the founder will continue to influence his descendants perhaps more than they are aware, as long as they are not incompatible with the surrounding circumstances, including in these the education and character of the individuals. But side by side with the governing tradition will spring up fresh maxims of conduct more adapted to the inevitable change going on around; and these will displace the original tradition or intellectual life of the family sooner or later, according to their intrinsic value, and the necessity or capacity for applying them, which may occur or be developed as fresh generations arise. When this event really has taken place, a family may be said to have died, and a new one taken its place, though the blood, and even the lineaments, and many of the external peculiarities may remain the same. The hour of departure may sometimes be more distinctly marked than that of birth; but the family, in the aggregate sense, will be quite unconscious of either.

Sometimes the natural decay of a family, in this sense, is accelerated

by the will of its head; sometimes his death, leaving an heir to be brought up by a wife of strange blood and different objects, will effect an equally violent change more naturally; sometimes descendants may repeat the lives, the emotions, and even the words of persons of whose very existence they are even unconscious. A family may thus run through its course in the person of an individual, or may prolong its existence for generations, but will, in common parlance, be considered as one and the same so long as the name and social condition remain unaltered.

Thus, also, it is with nations. Each European state contains within it an infant, an adolescent, a mature, and a dying form of intellectual life. Each of these emanations of the present or past generations has its votaries, its dissidents, and its enemies. Each may be said, in its full maturity, to govern and form the nation; and with each, in reality, a nation is born and also passes away, and is no more conscious of the moment of birth and extinction than a family or an individual.

Europe may be hastening to intellectual organisation, but that is no proof of the necessity of future decay. One form of intellectual power may succeed another for a series of ages. The nations may be changed with them as much in reality as they were a thousand years ago by the coarser commixture of intrusive races; but the changes will not be so visible, and the descent, position, and name of our descendants will remain the same.

We cannot, therefore, quite acquiesce in what might seem here to be valued as the principal results of the philosophy of history. But we may reasonably doubt if the author was ever really inclined to consider this hypothesis in any other light than a framework on which to stretch his sketch of a long series of connected truths. That the thoughts of men widen as the generations roll on, and that intellect eventually governs the world, that truth—scientific and demonstrated truth—will prevail over the most highly organised form of superstition and repression the world has ever seen, are here set forth in such a way as to compel conviction even from the unwilling.

The work is divided into two main portions, viz., accounts of the Grecian and European ages of credulity, inquiry, faith, reason, and decrepitude. The history of the former, commencing with the Ionian school, and terminating with the death of Hypatia, or the closing of the schools of Athens by Justinian, shows at once that such an orderly progress of intellectual life and death is by no means in any way contemporaneous with that of a nation. Nor can the second be any better identified with the rise or fall of individual nationalities.

So much having been said in derogation of what is after all more a

conventional than a substantial difference of opinion, we proceed to the more agreeable task of giving some slight idea of the merits of this magnificent work.

It is pre-eminently a practical book. The application of its arguments, its erudition, and its proofs to the controversies and the needs of the social state of the present can be mistaken by no one. Even when the reasoning points to the inevitable approach of European decrepitude, it seems that such a consummation can be avoided if statesmen will only be wise in time, and, instead of identifying our fate with a crumbling religion, will hail as allies the youthful philosophy of demonstrated and demonstrable truth. Not that anything could have saved the downfall of ancient polytheism, or supported the vague speculations of the Neo-Platonists. But it was not necessary that the pagan religion and pagan knowledge should be destroyed together. Though Constantine sometimes professed Christianity, he need not have given up the Asclepians, the hospitals of antiquity, to the ignorant zeal of the Christians. In them once already had been fought the old battle of reason and superstition. In earlier times, as in our own, it was difficult to convince the illiterate classes that in sickness we ought to help ourselves, and not expect relief by penance and supplications, unless we join therewith rigorous personal, domestic, municipal cleanliness, fresh air and light. But Hippocrates had already deserved the great glory of destroying the theological notions of disease, and had replaced them by more practical and material ideas, and from the votive tablets, traditions, and other sources, together with his own admirable observations, compiled a body of medicine. Thus the pursuits of the physician had been severed from those of the priest, and as we may well believe, not without a struggle. But science had, in this particular, received support from some enlightened rulers. The temple of Serapis in Alexandria was also, in fact, a hospital, and under the Ptolemies, the sure basis of anatomy was laid as the foundation of a medical school. Herophilus and his colleagues were authorised to resort to the dissection of the dead, and to ascertain, by that only reliable method, the true structure of the human body. The strong hand of Philadelphus resolutely carried out his design, though in a country where popular sentiment was strongly opposed to such practices, hitherto unheard-of in the world, for to touch a corpse was in Egypt an abomination.

But when Constantine and his successors, under ecclesiastical influence, had declared themselves the enemies of worldly learning, it became necessary for the clergy to assume the duty of seeing to the physical as well as the religious condition of the people. It was unsuited to the state of things that physicians, whose philosophical ten-

dencies inclined them to the pagan party, should be any longer endured. The Asclepiions were replaced by other institutions more agreeable to the genius of Christianity. Noble as were the hospitals and charities of the Empress Helena and pious Christian women, they laboured under an essential defect in having substituted for educated physicians well-meaning but unskilful ecclesiastics. The sick who were placed in these benevolent institutions were at the best under the care of kind nurses; and the consequences are seen in the gradually increasing credulity and imposture of succeeding ages, until at length there was an almost universal reliance on miraculous intervention. Fetiches, said to be the relics of saints, but no better than those of tropical Africa, were believed to cure every disorder. To the shrines of saints crowds repaired, as they had at one time to the temples of Æsculapius. The worshippers remained, though the name of the divinity was changed.

"Scarcely were the Asclepiions closed, the schools of philosophy prohibited, the libraries dispersed or destroyed, learning branded as magic or punished as treason, philosophers driven into exile, and as a class exterminated, when it became apparent that a void had been created which it was incumbent on the victors to fill. Among the great prelates, who was there to stand in the place of those men whose achievements had glorified the human race? Who was to succeed Archimedes, Hipparchus, Euclid, Herophilus, Eratosthenes? who, Plato and Aristotle? The quackeries of miracle-cure, shrine-cure, relic-cure were destined to eclipse the genius of Hippocrates, and nearly 2000 years to intervene between Hipparchus and Kepler. A dismal interval of almost twenty centuries parts Hero, whose first steam-engine revolved in the Serapion, from James Watt, who has revolutionised the industry of the world. What a fearful blank! Yet not a blank, for it had its products—hundreds of patristic folios filled with obsolete speculations, oppressing the shelves of antique libraries, enveloped in dust, and awaiting the worm.

"Such, then, were the first-fruits of the introduction of a new religion into the Roman world. But violence done to edifices and institutions was soon extended to individuals, whose opinions could only be reached in that way. By the murder of Hypatia, the position of philosophy in the intellectual metropolis of the world was determined; henceforth science must sink into obscurity and subordination. Its public existence was no longer tolerated. Indeed, it may be said that from that moment, for some centuries, it altogether disappeared. The leaden mace of bigotry had struck and shivered the exquisitely tempered steel of Greek philosophy. It was thence ascertained that throughout the Roman world there must be no more liberty of thought. It has been said that these events prove Greek philosophy to have been a sham, and, like other shams, it was driven out of the world when it was detected, and that it could not withstand the truth. Such assertions might answer their purposes very well, so long as the vic-

tors maintained their power in Alexandria, but they manifestly are of inconvenient application after the Saracens had captured the city."

The general explanation of these events is, that Greek philosophy and the Greek intellect was not indeed a sham, but had survived its maturity, and was now in its decrepitude; and that another round of credulity, of inquiry, faith, and reason must be begun, to be succeeded by another epoch of decrepitude, beyond which no one can at present penetrate. But this is not an explanation to be received without considerable demur. Draper, indeed, has answered it himself in one of his most suggestive passages, and we cannot improve upon him.

"Except the death of a nation, there is no event in human history more profoundly solemn than the passing away of an ancient religion, though religious ideas are transitory, and creeds succeed one another with a periodicity determined by the law of continuous variation of human thought. The intellectual epoch at which we have now arrived has for its essential characteristic such a succession of change—the abandonment of a time-honoured but obsolete system—the acceptance of a new and living one; and, in the incipient stages, opinion succeeding opinion in a well-marked way, until at length, after a few centuries of fusion and solution, there crystallised on the remnant of Roman power, as on a nucleus, a definite form, which, slowly modifying itself into the Papacy, served the purposes of Europe for more than a thousand years throughout its age of Faith. In this abandonment *the personal conduct of the educated classes* very powerfully assisted. They outwardly conformed to the ceremonial of the times, reserving their higher doctrines to themselves, as something beyond vulgar comprehension. It had come to an evil state when authors like Polybius and Strabo apologised to their compeers for the traditions and legends they ostensibly accepted, on the ground that it is inconvenient and needless to give popular offence, and that those who are children in understanding must, like those who are children in age, be kept in order by bugbears. In Rome, at the time of Augustus, the intellectual classes, philosophers and statesmen, had completely emerged from the ancient modes of thought. In one sense they had passed into liberty, in another they were in bondage. Their indisposition to encounter those inflictions with which their illiterate contemporaries might visit them, may seem to us surprising: they acted as if they thought that the public was a wild beast that would bite, if awakened too abruptly from its dream; but their pusillanimity, at the most, could only postpone for a little an inevitable day. The ignorant classes, whom they had so much feared, awoke spontaneously in due season, and saw in the clear light how matters stood.

"Of the Roman emperors there were some whose intellectual endowments were of the highest kind; yet, though it must have been plain to them, as to all who turned their attention to the matter, in what direction society was drifting, they let things take their course, and no one lifted a finger to guide. It was not to be expected that

the popular mind could spontaneously extricate itself from the vicious circle in which it was involved. Nothing but philosophy was competent to deliver it, and philosophy failed in its duty at the critical moment. When the intellectual basis of a religion is gone, it is much better for a wise government to abstain from all compulsion in behalf of what has become untenable, and to throw itself into the new movement so as to shape the career by assuming the lead. Philosophy is useless when misapplied in support of things which common sense has begun to reject; she shares in the discredit which is attaching to them. The opportunity of rendering herself of service to humanity once lost, ages may elapse before it occurs again. Of all the duties of an enlightened government, this of allying itself with philosophy in the critical moment in which society is passing through so serious a metamorphosis of its opinions as is involved in the casting off of its ancient investiture of Faith, and its assumption of a new one, is the most important, for it stands connected with things that outlast all temporal concerns."

Those who think that their religion stands on a basis which cannot be compared with that of ancient polytheism, may at least inquire how that religion has met the epoch of European inquiry and reason.

Perhaps they would say that no comparison can fairly be instituted. The cases are not parallel, and no ingenuity can make them so. They would tell us that the security of society, of property, and of all that is valuable in modern civilisation, depend upon a rigid adherence to the religious dogmas of the day. This is precisely the argument that was used by the upper classes of Rome against the inroads of Christianity, and which was answered so triumphantly by St. Augustine. He anticipated by fourteen centuries what was thought a profane speech in the mouth of Napoleon, by observing that victory had always depended not on God, but on the valour of the legions. Let them consider how many things tend to show that society is returning to the state it was in when the disturbances caused by the introduction of a new religion, and new principles of duty and morality, among which patriotism and respect for antiquity had no place, so much contributed to its overthrow.

Our communications between most parts of Europe though more rapid are scarcely more complete than in the days of Julian or Theodosius. The habits of modern nations are singularly approximating to what they were before Christianity destroyed the confidence which must have subsisted in families who had but one general form, though many objects of worship. One of the first social things abandoned by new converts were the baths; and how curious it is to see all over Europe these institutions rising again on the very spots where they fell together with the worship of the healing divinities of the fountain. In England their place is supplied by clubs, and now by the

large hotels at the seaside. Conversation here is freer than anywhere else, for men are released from the fear of the expression of their opinions doing them injury, when they may never see their auditors again. Nothing was so much dreaded for an early convert, as free intercourse with his equals in the unrestrained society which congregated in the halls and libraries of the ancient thermæ.

"Make me Bishop of Rome and I will become a Christian," said the prefect of Rome. Is there no bishop we can fancy on the other hand saying now, "Secure me the income and state of a bishop and I will give up being a Christian?" Do we not hear in the clamours for an ecclesiastical court of religion the same accents which first endeavoured to place the church above kings? Has not the nominal power over testaments been, but recently taken away, which the clergy inherited with the temple lands that so many of their churches still occupy? Are not marriage and its dissolution made civil proceedings, which were also once in the jurisdiction of that religion the church has superseded? Will the creed of Europe return to its primitive condition? the ill-understood worship of an obscure and low-born sect!

When Constantine joined his fortunes to those of Christianity, the votaries of the old religion are supposed to have numbered still one-half of his empire. At the census of 1851 only one-half of our population professed the doctrines of the established church. The words of those who fear the introduction of new opinions are singularly analogous. "And some fabulous and hideous darkness is about to domineer over that which is most beautiful on earth," says Eunapius* on the approach of Christianity. "Much more true is the explanation, which sees in it the first stealing over the sky of the livid lights which shall be shed profusely around the great Antichrist," says the Bishop of Oxford on the appearance of *Essays and Reviews*. Is there then no parallel between the first centuries of our era and the final ones of its second millennium? Our first millennium closed amidst general apprehensions of the simultaneous end of all things. Is our third to commence unchequered by the hopes and fears of The Last Christian? A closer investigation of this question would lead us beyond our province. The more general answer of Draper occupies the greater part of his second volume.

"In individual life, since no precise natural epoch exists, society has found it expedient to establish an artificial one, as, for example, the twenty-first year. The exigencies of history may be satisfied by similar fictions. We might thus be justified in considering the foundation of Constantinople as the commencement of our age of

* Καὶ τὴ μιν οὕτως καὶ αἰεὶ σκοτὸς τυραννήσει τὰ ἐπὶ γῆς κάλλιστα. Eunapius in the *Life of Ederius*, p. 41, ed. Boissonade, 8vo., Amst., 1822.

† *Replies to Essays and Reviews*, pref., xi.

faith, and its capture by the Turks as the close. The animosity between the Byzantine ecclesiastical system and all worldly wisdom was inextinguishable. In Europe there had been incorporated old forms of worship and old festivals with Christian ones without any scruple. There had been produced a civilisation, the character of which was its extraordinary intolerance. A man could not be suspected of doubting the popular belief without risk to his goods, his body, or his life. As a necessary consequence, there could be no great lawgivers, no philosophers, no poets. And the Roman ecclesiastical system likewise had been irrevocably committed in an opposition to intellectual development. It professed to cultivate the morals, but it crushed the mind.

"But the age of inquiry at last began. The irruption of the Arabs into Spain raised the awkward question, by what means the infidel could possibly obtain such great triumphs. It was not by his better faith, and therefore it must be by superior knowledge. Might not one be appropriated without the other. The Spanish Moors and Jews had besides begun to influence the higher European classes. The Jewish physicians and the Jewish usurers were in every court and in every great household. At last the formal intellectual attack upon the dogmas of the church commenced.

"The Saracens had long been assiduous cultivators of astronomy in all its branches. They had applied to it both observation and mathematical observation. Upon one point, the figure and relations of the earth, it is evident that not the slightest doubt existed among them. And it was upon this very point that the reason and faith of modern Europe came to issue. The memorable battle was fought upon the question thus sharply defined; Is the earth a moving globe, a small body in the midst of blazing suns and countless myriads of worlds; or is it the central and greatest object in the universe, flat, and canopied over with a blue dome, motionless while all is in movement around it? The dispute thus definitively put, its issue was such as must always attend upon a controversy in which he who is defending is at once lukewarm and conscious of his own weakness. Never can moral interest, however pure, stand against intellect enforcing truth. On this ill-omened question the church ventured her battle and lost it."

The same evil instinct which tore Hypatia piecemeal in the church at Alexandria brought Galileo before the inquisition at Rome. Still it was a stouter heart than his which first proved the earth to be a sphere. The moral effects of the voyage of Magellan were far greater than those of the discoveries of Columbus. "But though the church hath evermore from Holy Writ affirmed that the earth should be a wide-spread plain bordered by the waters, yet he comforted himself when he considered that in the eclipses of the moon the shadow cast of the earth is round." It proved a fact which could never afterwards be disputed. But it was passed over in silence. The church was probably too ignorant, or too arrogant to study the fall of the religion it had superseded, and pursued the same system of hypocrisy in high places which had given such a powerful weapon to those who

once wanted to attack the idols of Roman dominion. In due time arrived Copernicus and Galileo with the heliocentric theory. The earth was at once reduced to the position of being, instead of a chosen or sacred spot, only one of similar myriads, subject to universal law in every movement, and generated an inconceivable distance of time before, by law as definite and unalterable. The end of the conflict was a total rejection of authority and tradition, and the adoption of scientific truth. Those whose interests lay in the perpetuation of former ideas and the ancient order of things, looked with intolerable apprehension on what was taking place. They saw plainly that this intellectual activity would at last find a political expression, and that a power, daily increasing in intensity, would not fail to make itself felt in the end.

Thus they have never ceased to struggle against every fresh advance of human thought and knowledge. The doctrine of providential interruptions at the *creation* of the earth, then at the origin of species, or organic life, and always in the life of the individual, and in the history of man, has never yet been really abandoned by the Christian world.

" Yet the progression of life on the surface of our planet is under the guidance of preordained and resistless law, it is affiliated with material and correspondingly changing conditions. It suggests that the succession of organic forms which, in a due series, the earth's surface in the long lapse of time has presented, is the counterpart of a like progress which other planets in the solar system exhibit in myriads of years, and leads us to the conception of the rise, development, and extinction of a multiplicity of such living forms in other systems; a march of life through the universe and its passing away. With the abandonment of the geocentric theory, and of the doctrine of the human destiny of the universe, have vanished the unworthy hypothesis of the recent date of creation and the approaching end of all things. In their stead are substituted more noble ideas. The multiplicity of worlds in infinite space leads to the conception of a succession of worlds in infinite time. This existing universe, with all its splendours, had a beginning, and will have an end; it had its predecessors, and will have its successors; but its march through all its transformations is under the control of laws as unchangeable as destiny.

" But is it probable that the individual proceeds in his movement under law, that the planet also proceeds in its movement under law, but that society does not proceed under law?"

This is the last stronghold to which the enemies of science have retreated. Once let history be taught on scientific principles, and society will have no reason to dread an age of decrepitude, though the vanguard of human improvement may sometimes be held by one nation, and sometimes by another; sometimes be found in America, in Australasia, and sometimes again in Europe.

There are three classes of men whose interests are bound up, or fancied to be so, in opposing the installation of the last and most important of all the sciences. Of the clergy we need not speak.* The fifth monarchy, which they look, or ought to look for, would clearly not result from the evolution of any law hitherto known. Hence, to interpret the future from the past is not a pretension they can tolerate, and any attempt to do so is stigmatised as the madness of intellectual arrogance. Secondly, come those statesmen, happily now few in number, who wish to substitute their individual will for the dictates of public opinion, or rather perhaps of public instinct. This, however, is a class from whom there is little to fear, and much to hope. For should a philosophic statesman arise, who would embrace the idea of uniting the power still belonging to the governing classes with those more secret powers which, whether existing in individuals or in theories, are labouring for the development of intellectual and scientific organisation, he might commence a career which would surpass in utility and even in reputation what any heaven-born minister has achieved.

Lastly come a numerous and still powerful class ; who, having dethroned the priesthood and made themselves masters of the true pulpit of our day, literary eminence, are loth to give place to any system which would measure the value of their labours more or less according to their scientific accuracy, and reduce them in many cases to a position little better than that of successful novelists. It is exactly from the Kingsleys and the Froudes, from those to whom history seems avowedly "like a child's box of letters with which we can spell any word we please; we have only to pick out such letters as we want, arrange them as we like, and say nothing about those which do not suit our purpose," or those who start with the avowed purpose of teaching history in such a way as shall give satisfaction to the Rulers of an University, that we should expect the loudest declamations against the universality of law. Let history once become a science, its different phases be mapped out more or less precisely, and the present *historian* would be at best a mere biographer, and that of persons of whose domestic life, and of the development of whose mind the smallest materials for forming an opinion exist. The process of whitewashing, as it is called, or even of blackening

* It is a pity that the action of the Church should give sufficient grounds for the composition of such a book as *Gospel Paganism*. The author is sincere, and an ardent searcher for truth. His tone and arguments will give pain to many ; nor can the want of originality be justly objected to ideas which are fast becoming the thoughts of every one. It is all the more unfortunate that he should be able to say that the Church, in the person of the Bishop of Oxford (Pref. to *Replies to Essays and Reviews*), "still daringly calls for the repressive action of authority to forbid enlightenment." (*Gospel Paganism; or Reason's Revolt against the Revealed*. Austin and Co., London, 1864. 8vo.)

some famous character, would lose all its interest. Between the good old Roman histories of Romulus and Remus, with their large print, quaint woodcuts, and delightfully short letter-press, and the scientific treatise unfolding to the future statesman or philosopher the development of law in human history, there would be no other intermediate steps than there now are between the early picture-books of natural history, and the regular course of zoological study. It is not then surprising that the discoverers of the continence of Henry VIII, and the inflexible justice of Frederic the Great, as they sit in the seat of authority, should use the same weapons their predecessors used, and indeed still continue to use, against themselves. To send Cyril to his own place in a novel may be well enough, but the unfortunate theologian who overstates the case of his adversaries, must be content to lose his reputation for orthodoxy, even though he may attempt to please the successors of Newton and Paley, by venturing to oppose the law of gravitation and breaking "through the rules of his being".

There seems to be a singular misconception in the minds of some as to the meaning of a law of history. They think the existence of such a law sufficiently disproved, if it can be shown that the action of an individual, or of any small knot of men, has produced great and unexpected effects, especially if these effects are in a direction which was also unexpected. Now the career of an individual, or the exertions of a party, must always be governed by, or in unison with the great principles which determine the progress of human society. But they may often be apparently opposed to them. If they are, then the observers may think that the laws of history, as laid down by experience, are suspended. But it is not really so. They resemble either boys who throw stones down a precipice, and mistake the natural effect for the result of their own actions, or those who laboriously strive to control natural laws, which, however, universal experience has now found out can only be done by obeying them.

Not less superficial is the criticism upon the doctrine of averages, as applied by Buckle. "Unfortunately the average", it is said, "of one generation will not be the average of the next". No more is the average of life; but still insurance tables are not worthless. The average of every year, of every month—nay, of every day, alters. If we wished to calculate the average duration of the existence of the ephemera, we should employ minutes or seconds to record our observations. Dealing with the actions of men we employ years, generations, or even centuries, according as events have moved fast or slow. Thus, if we wish to ascertain whether ecclesiastical power is on the decrease or otherwise, the experience of a generation does not give sufficient data. We heard it seriously argued three years ago, that the Papacy was getting more powerful, because exactly fifty

years before the Pope was a prisoner in the hands of Napoleon. Take, however, several epochs of fifty years duration, and no one can differ about the result. Crimes accompanied with violence are less frequent now than ever before; those of fraud more so. But will this go on? Can we in any way foresee the future? If not, there is no true science of history. And no one can foresee anything, says the objector. "Gibbon believed that the era of conquerors was at an end."—"But a few years ago we believed the world had grown too civilised for war."—It would be answer enough to reply that Gibbon never believed anything of the kind, but said merely that the invention of fire-arms would prevent any second overthrow of the nations of western Europe by savage immigrants from the east; and that if "we", that is, all sensible people, had *believed* in the extinction of wars, we should have disbanded our armies.

But a better answer is, that those who do not understand, and will not employ the methods of a science, cannot of course be expected to foresee anything; and whilst those who do may be counted on the fingers and ridiculed for their attempts, we are not likely to prove the reasonableness of the pretensions of a science by the accuracy of its predictions. This test, by the way, was invented by Comte, and applied as an argument, *à posteriori*, to show the perfection to which astronomy had arrived. Science, however, existed long before it could predict; though that power may be necessary to prove that it has arrived at maturity. And those who have truly studied history have not been so deficient in that power as we are told. Napoleon at St. Helena exercised no mean faculty of prediction. Lord Chesterfield's announcement of the coming of the French Revolution is known to every one. Much, indeed, of what is to come, is seen so long before, that people at last believe the prediction to be a mistake. The ignorant would no doubt credit the astronomer royal if he told them an eclipse was to take place to-morrow; but if he were to predict one for 10,000 years hence, he would at least be thought a very heterodox person. The science of history, like every other, can make but little progress till it is honestly embraced, and put upon a fair trial.

Another reason why there is difficulty in procuring a general acknowledgment that man socially is governed by fixed laws, arises from the necessity we are under of speaking of individuals as exercising an absolute control over many events. But this, after all, is no more inconsistent with scientific accuracy, however much shallow critics may laugh at it, than for the astronomer to speak of the rising or setting of the sun. When history is relegated to those who have really studied it, its professors will still continue to use the ordinary language of those they address, though indeed, in that day, without

fear of being misunderstood. They will still condemn or applaud the actions and the actors as circumstances seem to require, herein following the usual course, which implies that men can control affairs, and that the agent is to be held responsible for his deed. But objectors need only consider the course of their own lives, to be satisfied as to how limited an extent such is the case.

"We are, as we often say so, the creatures of circumstances. In that expression there is a higher philosophy than might at first sight appear. Our actions are not the pure and unmingled results of our desires; they are the offspring of many various and mixed conditions. In that which seems to be the most voluntary decision there enters much that is altogether involuntary—more, perhaps, than we generally suppose. And in like manner, those who are imagined to have exercised an irresponsible and spontaneous influence in determining public policy, and thereby fixing the fate of nations, will be found, when we understand their position more correctly, to have been the creatures of circumstances altogether independent and irrespective of them—circumstances which they never created, of whose influence they only availed themselves. Over the events of life we may have a control, but none whatever over the law of its progress. There is a geometry which applies to nations, an equation of their curve of advance."

This is the great theme, well and worthily handled by Draper. To this end the efforts of many of the highest minds of the day are converging, effects at once and causes of the progress of historical science. With nothing short of this can Anthropology be complete or content. The youngest born of all the sciences, it addresses itself to the greatest problems which affect man, either as an individual or a species. Our author thinks a man must be satisfied if only his book lives a little longer than himself. But the great generalizations he propounds will not be so speedily surpassed: and he has wisely taken care that his own work shall not be deficient in the interest which attaches to minute research or minute comparison. Many of the smaller episodes are here well elaborated. Nowhere do we remember to have seen so interesting a picture of the great museum of the Ptolemies at Alexandria, or its importance in the history of the sciences so well brought out.

The influence of the Arabian literature on the mind of Europe is perhaps slightly exaggerated. The Grecian literature must, as soon as it became known, have stimulated those who first had access to it much in the way it eventually did, even without the assistance of Averroes and the Saracenic physicians. But do not let any one suppose that Mahomedanism is rated above its value. The spurious philosophy which would set its simple dogma above that of Christianity finds no favour here. It was not by virtue, but in spite of its precepts, that knowledge and learning found an asylum in the country of the Koran. The estimate of that book is impartial and profound.

"Considering the asserted origin of this book—indirectly from God himself—we might justly expect that it would bear to be tried by any standard that man can apply, and vindicate its truth and excellence in the ordeal of human criticism. We ought to look for universality, completeness, perfection. We might expect that it would present us with just views of the nature and position of this world in which we live, and that, whether dealing with the spiritual or the material, it would put to shame the most celebrated productions of human genius, as the magnificent mechanism of the heavens and the beautiful living forms of the earth are superior to the vain contrivances of man. Far in advance of all that has been written by the sages of India or the philosophers of Greece on points connected with the origin, nature, and destiny of the universe, its dignity of conception and excellence of expression should be in harmony with the greatness of the subject with which it is concerned.

"We might expect that it should propound with authority, and definitively settle those all-important problems which have exercised the mental powers of the ablest men of Asia and Europe for so many centuries, and which are at the foundation of all faith and all philosophy; that it should distinctly tell us in unmistakable language what is God, what is the world, what is the soul, and whether man has any criterion of truth; that it should explain to us how evil can exist in a world the Maker of which is omnipotent, and altogether good; that it should reveal to us in what the affairs of men are fixed by Destiny, in what by free will; that it should teach us whence we came, what is the object of our continuing here, and what is to become of us hereafter. And, since a written word claiming a divine origin must necessarily accredit itself even to those most reluctant to receive it, its internal evidences becoming stronger and not weaker with the strictness of the examination to which they are submitted, it ought to deal with those things that may be demonstrated by the increasing knowledge and genius of man, anticipating therein his conclusions. Such a work, noble as may be its origin, must not refuse, but court the test of natural philosophy, regarding it not as an antagonist, but as its best support. As years pass on, and human science becomes more exact and more comprehensive, its conclusions must be found in unison therewith. When occasion arises, it should furnish us at least the foreshadowings of the great truths discovered by astronomy and geology, not offering for them the wild fictions of earlier ages, inventions of the infancy of man. It should tell us how suns and worlds are distributed in infinite space, and how, in their successions, they come forth in limitless time. It should say how far the dominion of God is carried out by law, and what is the point at which it is his pleasure to resort to his own good Providence or his arbitrary will The discussion of subjects, so many and so high, is not outside the scope of a work of such pretensions. Its manner of dealing with them is the only criterion it can offer of its authority to succeeding times.

"Tried by such a standard, the *Koran* altogether fails. On speculative or doubtful things it is copious enough; but in the exact, where a test can be applied to it, it totally fails. Its astronomy, cosmogony,

physiology are so puerile as to invite our mirth, if the occasion did not forbid As to man, Mohammed is diffuse enough respecting a future state, speaking with clearness of a resurrection, the judgment-day, Paradise, the torment of hell, the worm that never dies, the pains that never end; but, with all this precise description of the future, there are many errors as to the past. One who is so unreliable a guide as to things that are past, cannot be very trustworthy as to events that are to come.

"The *Koran* abounds in excellent moral suggestions and precepts: we cannot turn to a single page without finding maxims of which all men must approve. There is a perpetual insisting on the necessity of prayer, and inculcation of mercy, almsgiving, justice, fasting, pilgrimage, and other good works; above all, a constant stimulation to do battle with the infidel and blasphemer

"From the contradictions, puerilities, and impossibilities indicated above, it may be anticipated that the faith of Mohammed has been broken into many sects. Thus there are, among the Shiites, those who believe that Ali was an incarnation of God; that he was in existence before the creation of things; that he never died, but ascended to heaven, and will return again in the clouds to judge the world. But the great Mohammedan philosophers, simply accepting the doctrine of the oneness of God as the only thing of which man can be certain, look upon all the rest as idle fables, having however this political use, that they furnish contention, and therefore occupation to disputatious sectarians, and consolation to illiterate minds."

The criterion of truth which is afforded to us neither by the *Koran*, nor, so far as we are aware, by any other book, is found to reside in the unanimous opinion of the whole human race. And though perhaps it is not an absolute criterion, yet we can rise by degrees to higher and higher certainties along an ascending scale which becomes more and more exact. Metaphysical writers who have treated on this point have been led into error from an imperfect conception of the true position of man; they have limited their thoughts to a single epoch of his course, and have not taken an enlarged and philosophical view. Probabilities increase with the number of consenting intellects, and hence the criterion of truth is capable of increased precision with the diffusion of enlightenment and knowledge.

The prospects of humanity are therefore full of hope. Good auguries may be drawn for philosophy from the great mechanical and material inventions which multiply the means of intercommunication, and, it may be said, annihilate terrestrial distances. In the intellectual collisions which must ensue, in the melting down of opinions, in the examinations and analyses of nations, truth will come forth. Whatever cannot stand that ordeal must submit to its fate. Lies and imposture, no matter how powerfully sustained, must prepare to depart. In that supreme tribunal man may place implicit confidence. Even though,

philosophically, it is far from absolute, it is the highest criterion vouchsafed to him, and from its decision he has no appeal.

The argument of this work is no way concerned with the antiquity of man, or the question of unity or plurality of species. The Peruvian and the Chinese have run, or would have run through analogous phases of civilisation with the European and the Arab, only varied by the adventitious circumstances of soil, climate, and foreign intervention. This will be considered perhaps by professed anthropologists the weakest part of the undertaking. But until some more general agreement upon those controverted points has been come to in the scientific world, it is as well for the philosophic historian to regard such differences, even if they exist, as of small moment beside his main purpose. The equation of each nation may be different, but the rules for solving all must be the same. He who should attempt to treat history palæontologically, and having completed a survey of human races as they exist, should endeavour to calculate what they have been, and what they sprung from, would find the very first steps of the problem quite insurmountable. It is only in recorded history that we can trace the movement of mankind, and those nations or races which have none, or but a very imperfect one, can never present much enduring interest except to the anatomist and physiologist. In that way, and as a foil to the historic nations, their importance is great; but when the consent of the higher intellects has extracted from the chaos of the materials now called history, all that is really valuable, and arranged it in scientific order, and given each specimen, so to speak, of human or national activity its true place in the general series of human progress, there will still remain more than enough to task the most unremitting industry in the explanation of these phenomena, without giving any special attention to the department of the physical anthropologist. To the latter class of inquiry belongs the question why some races of man seem never to have had a history. But we must not be too hasty in assuming this to be the case, because the records have not reached us. The careers of Greece and Rome would never of themselves have left behind sufficient materials for giving those nations their true place in history, had it not been pieced out and interpreted by aid of the more complete information we possess of what has happened to ourselves in modern times. No one can doubt that Egypt, and probably Persia, have also enacted parts which want "but history's purchased page" to show their importance. They preferred mural inscriptions to the more fragile papyrus, and their experience was in consequence early lost to those who came after them, and Europe has had to go through the severe discipline of the dark ages before it could even appreciate the height from which mankind had fallen in the persons of the eastern nations.

The United States, again, can trace their course from the very beginning. They might denounce the origin of every other nation as barbarous compared with their own, as being deficient in all the real foundation for historical superstructure, that is, the knowledge of the races, the mixtures, or the aborigines of their country. It is not, therefore, to be wondered at, that the highest problems of anthropology should be so well handled in a country which has so many reasons and so many advantages for the cultivation of the last and final one in the series of the sciences. We accept this book as an earnest of what we may expect from the intellectual genius of a nation which is now going through an ordeal that must, in any event, be inconceivably brief and mild compared with those through which Europe has arrived at its Age of Reason.

RACES OF THE OLD WORLD.*

THE thanks of the world are undoubtedly due to any one who compresses into a reasonable form trustworthy information regarding a subject so vast, so various, so chaotic as the phenomena of mankind, and before taking Mr. Brace to task for the manner in which he has performed the promise of his work, it is only fair to quote one of the opening paragraphs of his preface, in which he says :—

“The present manual of the ethnology of the old world (Mr. Brace is writing from an American point of view) is designed not so much for the learned as for the large number of persons who are interested in the study of history, whether in academies or colleges, or among people of business and professions. Such (*sic*) often desire to ascertain readily the position of a certain people or tribe among the races of men, or at least to know the latest conclusions of scholars in regard to them.”

So we are not to expect in this work a discussion of the advanced and unsettled problems of ethnographical science, but rather a kind of summing up, or taking stock as it were, of the results of modern research, gleaned from all the most trustworthy and reliable sources, and set forth plainly and simply for the enlightenment of the profane crowd awaiting some sign without the temple of science.

“The aim of this treatise has been,” says our author, “to separate the theoretical and the fanciful from the scientifically true; accord-

* The Races of the Old World; a Manual of Ethnology. By Charles L. Brace. 8vo. London: 1863.

ingly the reader must not be surprised that we are often obliged to say, 'we do not know.' The scholar, in examining this work, will meet with many seeming deficiencies; he will naturally expect to find fuller accounts of certain favourite races," etc.

We suppose Mr. Brace by the scholar means the learner or novice. As we feel sure that the deeper the reader has gone into the learning of this science, the less will he expect an explicit statement of facts, unless supported by irrefragable proofs—it would have been better for him had he said, "I do not know" even oftener than he has done, and to abstain from asserting some theories upon somewhat imperfect induction; forgetting, or perhaps ignoring, the fact that the science is in its infancy, and that few things are so easy as to build plausible theories in questions of this nature.

Mr. Brace divides his book into eight heads: his first contains a general discussion of primitive races; he devotes two to Europe—one ancient, and two modern, separating them, however, by four others; two upon Asia, one middle-aged, two modern; one on Oceanic ethnography; and one on Africa; winding up with a chapter upon the antiquity of man and the questions regarding origin. This last section, however, he does not consider as in any sense a history of man in pre-historic times, his work being confined to races as they appear in history.

Having thus stated the scope of his work, we are brought to his definition of ethnology, which he says has come to mean the *science of races*, or rather he would call a treatise such as the present, "*ethnography*, or a description of races." The term race being, he says, chosen because it expresses no opinion regarding the ultimate oneness of origin in the stocks from which the kindred tribes descend, that is, whether such or such groups of men are *varieties* of a common stock, or *species* distinct in origin.

The word *race* (radix, root), is an unfortunate one, fertile in ambiguities; for when we assert of nations that they are of different race, we assert, in fact, that they are of different origin; and, as many modern anthropologists assert difference of race from the presence of certain characteristics in one group which are not to be found in another, the possibility of a common stock for two different varieties, and the probability of such diversity arising from natural causes is in a measure denied in the terminology, which is much to be regretted.

The remainder of Mr. Brace's introductory chapter is taken up with a statement of the ground upon which language, as a test of unity of origin, rests. The majority of these will be found in the pages of Professor Max Müller, and, as regards certain languages and people, are unquestionably of very great value when combined with history.

The approximation of the numerals in the Romance dialects, the existence in languages separated by wide spaces of the earth and apparently widely different, of like primitive words, as, *e.g.*, Father, Fader (Germ.), Pater (Lat.), Pitar (Sanskrit); Widow, Viduvó (Germ.), Vidua (Lat.), Vidhava (Sanskrit); and the extraordinary permanence of grammatical forms, even when the words are changed, as among the Lithuanian peasants and the Persians, will be familiar to most of our readers.

Without at all questioning "the calling of philology to be the mediator between the remotest ages, to afford us the enjoyment of preserving an unbroken identity through thousands of years with the noblest and greatest nations of the ancient world," or disputing the extreme value of some of the results obtained by investigating the links existing between different families of human speech, to which we give full value; we must not conceal from ourselves the extreme difficulty in getting satisfactory historical evidence to explain the phenomena and prevent our drawing false conclusions from insufficient data—"talking," as a very celebrated historian very justly says, "most ingeniously, but very often of things which never existed." If we take into account the fact broadly and truly stated by Niebuhr,* "that the further we look back into antiquity the richer, the more distinct, and the more broadly marked do we find the *dialects* of great languages, that they subsist one beside the other with the same character of originality, and just as if they were original tongues;" and that we are not bound to suppose "that two tribes of a common stock come from a single root," nor even to assert that a language found in a tribe is its own, or that of two places inhabited by similar tribes either is its original seat, and if, with other uncertainties of which these are only a few isolated specimens, we take the fact that long before the time when most of our history begins, the face of Europe was thronged with migrations in no respect inferior in power, or as to the swarms which took part in them, to those which gave rise to later revolutions in the history of mankind; we shall see how rash are many of the deductions advanced regarding the earlier races. "However high," says Niebuhr, "we may mount towards the epoch which marks the beginning of the human race, the annals of the Egyptians and Babylonians would not fill up more than a small part of the inscrutable period during which nations must have been in no less active collision than in after times."

It will not do, then, to rest conclusions so vast and portentous regarding remote antiquity upon any one calculus, if we may so call it. Professor Max Müller would, we feel confident, be the last person to

* Rom. Hist. i, 54.

wish any grand theory of the human race to be built upon his labours, or to ignore the infinite difficulty of establishing, with certainty, affinities of blood based upon affinities of speech, either direct or implied.

Perhaps the best exemplification of the evil is the classing, as of one undoubted stock, the various tribes which, from a resemblance, either real or imagined, between their mode of composing their words and sentences are asserted to be Turanian; *i. e.*, descended from a common stock, originally occupying that part of Asia lying without Iran and north of Persia, and nearly represented by Bokhara; while the Aryan races are made to be all descended from common ancestors who resided further to the south, a higher and more noble race. Mr. Brace divides the race of man into three great *streams* of languages and family: it would have been safe to have said *groups*, the Semitic, the Aryan, and Turanian. Considering the race of "mighty Cham" the earliest crystallisation of the Semitic peoples, though upon what authority he does not inform us; nor does he give us chapter and verse for his assertion that "wherever the Semites and Aryans came they found a previous population apparently of Turanian origin, which they either expelled or subdued." There is no doubt that the people whose origin can clearly be traced to the north-east of the present Russian empire, were generally nomadic, that their language, as of all nomadic tribes, would naturally vary rapidly, while it would retain, in all probability, certain characteristics; but we can hardly argue from this circumstance their universal prevalence, even though further grounded upon the existence of a similarity between the dialects of certain low caste races at various points of the earth at the present day.

It would lead us too far to go into the very interesting question of the problems connected with these wild tribes. Much that is said about them must be somewhat obscure, and rest upon deductions about which there will be sure to be some difference of opinion; for there is no question that in the general ethnological problem or puzzle, as we choose to consider it, the wild tribes of low civilisation whenever they appear, in whatever age are the unknown quantities. They tell little or nothing of themselves; their language is primitive and poor; their traditions and mythology often nil; their arts and manufactures of the simplest kind, and where they are nomadic they scarcely leave a trace. It is here that anatomy and physiology come in so effectually, they become even omnipotent; while in dealing with the high caste races, the Semites and Aryans, they are at most ancillary to investigations which have elaborate works of brain and hand to deal with, written and unwritten history, myths, traditions,

systems of religion to examine and interpret, elaborate dialects, with authentic history to interpret their origin and relations, with arms and implements of an elaborate character as food for the reasoning of the archæologists.

It is, perhaps, true, that occasionally the physiologists, giving too much weight to their deductions, have been too much like the shoe-maker, who thought that "there was nothing like leather;" but the value of their researches, with regard to races of a low type has not been sufficiently considered; and it is also forgotten that, as an engine in discovering truths long buried, the science is still in its infancy. It would lead us into endless labyrinths of discussion to follow Mr. Brace's lead through the generations of the past. Perhaps the fault of the book is a desire to say something about every nation and tongue and people. His book reminds us somewhat of a passage in the *Filum Labyrinthi*—"He thought also that knowledge is uttered to man in a form as if everything were finished; for it is reduced into art and method, which in their divisions do seem to include all that may be. And how weakly soever the parts are filled, yet they carry the show and reason of a total; and thereby the writings of some received authors go for the very art; whereas antiquity used to deliver the knowledge which the mind of man had gathered, in observations, aphorisms, short and dispersed sentences, or small tractates of some parts which they had diligently meditated and laboured; which did invite men both to ponder that which was invented and to add and supply farther." We hope we are not misapplying Lord Bacon's words, but we think them specially applicable to so comprehensive a work written upon a subject which in its various parts needs to be treated after such a different fashion, about which we have infinite need of more "Small tractates of some parts diligently meditated and laboured," rather than of methods which carry the show and reason of a total, while their parts are but weakly filled.

INQUIRY INTO THE PHYSICAL CHARACTERISTICS OF THE ANCIENT AND MODERN CELT OF GAUL AND BRITAIN.*

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AMONG the terms of a distinctive ethnical significance, derived from classical authorities, and applicable to living races, few have been employed more loosely and indefinitely than that of *Celt*. The causes of this arise, in part, from the great antiquity of what appears on many accounts to have a just claim to be ranked as the oldest member of the Aryan family of European nations. The peculiar relations traceable between the various Celtic dialects and any assumed common mother tongue of all the Indo-European languages, appear to indicate that the former separated at an earlier stage than the classical languages. I have assigned reasons in a former paper† for believing that the historic advent of the Gauls, on their invasion of Rome and Central Italy in the fourth century, B.C., so far from indicating their first appearance in Europe, in reality marks the commencement of their decline and decay. They were then beginning, as I conceive, to be displaced in central Europe, by the movements of the Germanic nations from beyond the Baltic into their later home in the Rhine valley.

In the time of Herodotus, the Greeks knew vaguely of a people called *Κέλται*, occupying the remotest regions of Europe, bordering on the Atlantic. At later dates allusions are made to them by Xenophon and Aristotle; and the latter indicates an increasing knowledge of them in his day, by the references to their customs and most characteristic traits which occur in his philosophical works. But the very imperfect knowledge of this ancient people manifested by the most observant Greek writers, suffices to illustrate the extreme isolation of the nations within the period of authentic history. Transalpine Europe was still a *terra incognita*; and the *Κέλται*, whose language is the key to much of the earliest topographical nomenclature of Central Europe, from the Atlantic to the head of the Adriatic Gulf; and who must have been a numerous and powerful people long before they made their hostile incursions into Italy: were, nevertheless,

* Reprinted from Canadian Journal, New Series, No. LIV, November, 1864.

† On the Intrusion of the Germanic Races into Europe; Edinb. Philosoph. Journal, n. s., January 1855.

known only to the Greeks through some obscure rumours, probably of Phœnician voyagers. Slight, however, as are the early notices of the Keltai, they reveal to us the presence at the dawn of authentic history of that remarkable people who seem to constitute a link between the prehistoric and the historic nations of Europe. If we do indeed look upon them for the first time in the beginning of their decline, when younger nations were already intruding on the ancient Celtic area, and effecting the first encroachments which finally resulted in their dismemberment and denationalisation: it suffices to illustrate the great age of nations. Upwards of two thousand years have since elapsed; and still the fragments of that once powerful branch of the European family of nations preserve their ancient tongue, and struggle to assert for themselves an independent nationality. To the Romans they had made themselves known as haughty conquerors, while yet the imperial city on the Tiber was but the nucleus of an infantile state; but the earliest authentic details regarding them, as the occupants of what is regarded as their native territory, are derived from the narrative of Cæsar's conquests; and the subsequent reduction of the tribes of Gaul and Britain by the Legionaries of Rome.

Unfortunately the ethnologist has at every step in his researches to deplore the indefiniteness of nearly all the notices of the barbarian races with which the Greeks or Romans were brought into contact; and in seeking their aid to determine the physical characteristics of Kelt, Gaul or Briton, the results are little less vague than when he attempts to fix the ethnical character of the Pelasgi, or to group the Etrusci among indigenous races of Italy. The controversies, moreover, of which the term *Celtic* has furnished the key-note, were long embittered by the narrowest spirit of national prejudices, and exposed thereby to well-merited ridicule.* One recent champion of the Celt, in a communication to the British Association, after characterising the Saxon as "a flaxen-haired, bullet-headed, stupid, sulky boor," proceeds to define the Celtic characteristics recognisable in men who have taken a distinguished place in English or Scottish history, as "a long cranium, high and expressive features, dark or warm complexion, and spare or muscular frame."† Pinkerton, the Teutonic partisan,—who, in like fashion, maintained the opposite side in this controversy, by affirming, "What a lion is to an ass, such is a Goth

* The only occasion where Dr. Prichard is tempted beyond the simple language of the scientific investigator is where, in his *Researches*, he contrasts Pinkerton's views as a man "of clear and strong sense, though somewhat peremptory and wrong-headed," with "the weak and childish dreams of the Celtic antiquarians, who descend with amazing absurdity, through entire volumes, upon their Phœnician, Punic, Scythian, Spanish, and Magogian ancestry!"

† Mr. John McElheran.

to a Celt,"—assigns to the latter, "dark hair and eyes, swarthy complexion, and inferior stature to the large-limbed, red or yellow-haired Goth, with fair complexion and blue eyes. In so far as the form of the head marks the difference between them, the supposed cranial contrast is indicated in the globular or "bullet-head" assigned to the Saxon, and the long cranium and high features ascribed to the Celt. The latter, at least, is an idea maintained, with more or less definiteness, by some of the most observant ethnologists; and so long as the Celt was supposed to belong to an essentially different division of the human race, it was not unnatural to assume that the opposite type of head must pertain to the Saxon. Few points, however, connected with physical ethnology rest on more uncertain evidence than the distinctive form, colour of hair, and other characteristics, not only of the ancient, but of the modern Celt.

The Gauls and Britons are the recognised representatives of that ancient people, who after being long regarded as in the most literal sense European aborigines, are even now commonly assumed to be the originators of all primitive art-traces pertaining to purely archæological, in contradistinction to geological researches. Of this, however, there is not only no proof, but the existence of pre-Celtic races, to whom the implements and arts of the European Stone Period were assignable, had been maintained both on technological and philological grounds, before the traces of Cave-Men, or the Flint-Folk of post-pliocene ages, had been demonstrated by the geologist, from evidence derived to a great extent from the French drift, where it is overlaid by the graves and buried arts of the ancient Gaul and his Roman conqueror.

From the date of Julius Cæsar's conquests, the native population both of Gaul and the British Isles have been made the subjects of descriptive comment by some of the most observant writers. But their notices of the tribes on both sides of the English Channel, suffice to remind us, that in speaking of the Celts we are not dealing with an isolated and homogeneous people, but with diverse nations of a common race, which once filled Central Europe; and which, moreover, in the earliest period of their definite history, were the occupants of a diminishing area, encroached upon by Germanic and other nations, before the Romans stepped in to complete the changes already in progress. There were Gauls or Kelts to the south, and to the east of the Alps, to the south of the Pyrenees, to the north of the English Channel, and—according to archæological evidence—seemingly even to the north of the Baltic sea. Among the numerous tribes of a common stock thus brought into contact with the most diverse races of Europe, we must anticipate considerable variations

from any assignable type. But this contact has been of a far closer and more influential character since the fall of the Roman Empire ; so that it is little more difficult to ascertain what were the specific characteristics of the ancient Gaul or Briton, than it proves to be to determine the typical attributes of the modern continental or insular Celt. Few races of European origin, for example, show less indications either of physical or moral affinity than the so-called French and Irish Celts of Lower Canada : the one warm-hearted, but irascible, pugnacious, and prone to excitement ; the other gentle, impassive, and amiable to a fault. How far the common term is applicable to both will be considered on a subsequent page.

Cæsar's account of the Gauls in the sixth book of his *Bellum Gallicum* supplies the most comprehensive details we now possess in reference to their manners and religion ; and to him also we owe similar notices of the Belgæ and other continental tribes, seemingly most nearly allied to others of south Britain, the Germanic or Celtic affinities of which have been made the subject of much controversy among modern ethnologists. In the previous book* Cæsar expressly states that, while the inhabitants of Britain are regarded as aborigines, the sea coast is occupied by tribes derived from the country of the Belgæ, and bearing names corresponding to those of the states they came from. Strabo describes the Britons of about the commencement of the following century, in part from observations made on some of their young men seen by him at Rome ; and he discriminates between them and the Gauls, assigning to the latter yellow hair, a fairer complexion, and smaller stature, than their insular neighbours.† This suggests a comparison with a description of the Caledonians given by Tacitus, in which he notes the huge stature and red hair of the latter, and recognises in them an approximation to the German type.‡ The Silures, or West Britons, on the contrary, he contrasts both with them and the southern tribes, as *colorati vultus et torti plerumque crines*. They were of florid, or, rather in this case, dark complexion, with abundance of curly locks ; and to this Jornandés adds that the hair was black. They thus contrasted very strikingly both with the northern and southern tribes ; and Tacitus, in referring to an Iberian origin ascribed to them, adds the probable confirmation arising from the position of their country, standing as it does opposite to Spain. To the southern Britons alone, a common origin with the Gauls was assigned ; though Tacitus himself recognises the correspondence between the whole of those insular tribes and the continental Gauls, in customs, language, and religious rites ; and obviously attaches more

* Bell. Gall., lib. v., c. 12.

† Strabo, lib. iv.

‡ Vit. Agricola, c. xi.

importance to these points of agreement, than to those of physical difference.

The allusions to varieties of physical character are so far valuable, though deficient in many important details. Virgil, Claudian, and other poets repeat them, but without enlarging their details, or adding to their credibility; and when every reference has been carefully weighed, it is surprising how little that is definite can really be inferred beyond the one important fact that considerable diversity prevailed. So vague is all that can be deduced from such references, that Niebuhr, Prichard, Lawrence, Latham, and other writers, have debated the questions: were the Gauls xanthous or swarthy; yellow, red, or dark-haired; and blue or black-eyed? and of the Britons, in like manner, it is still a moot point, whether they were fair or dark, and their long shaggy locks black, brown, red, or yellow. Dr. Beddoe, an intelligent observer, applied the test of personal experience, a few years since, to determine some of the same questions, and found it little less puzzling to arrive at any definite results in reference to their modern representatives, than to reconcile conflicting evidence relative to the Celts or Gauls of two thousand years ago.* Niebuhr, confounded by the assurance conveyed to him by an English correspondent, that all modern British Celts have black hair; in the last edition of his *Roman History* places this supposed fact in contrast with the yellow hair assigned by Ammianus Marcellinus, a resident in Gaul, to the continental Celts. Dr. Beddoe, on the contrary, was forced at last to the conclusion "that black and red hair are not so diametrically opposed as is generally imagined;" and he ended by assigning to the British Celt: eyes grey or blue, passing through dark grey into brown and black; hair bright red or yellow, passing through various shades of bright brown, into dark brown and coal black. The Teutonic Briton differed in the red hair being light, and the yellow flaxen; while the brown tints were dull; and neither eye nor hair exhibited the pure black.

Difficult as it thus appears to be to determine the complexional peculiarities of the Gaul or Briton, either of ancient or modern times; it might seem an easier task to define the form of head characteristic of each. The light of their eyes may be quenched in dust, and the bright locks have yielded up their lustre to the grave, but the skull, though not imperishable, has in many cases resisted decay. Of the Roman supplanters of the Gaul and Briton, many skulls are preserved, some of which, recovered from inscribed sarcophagi, not only reveal the race

* A Contribution to Scottish Ethnology, by John Beddoe, B.A., M.D. London: 1853. On the Ancient and Modern Ethnography of Scotland; *Proceedings Soc. Antiq. Scot.*, vol. i, p. 256.

of the deceased, but the name, age, rank, and term of military service or foreign residence of each. When we turn to the contemporary Gaulish or British barrow, we look in vain for information so minute or exact. Nevertheless, the evidence is sufficient for all practical requirements, and it is indisputable that hundreds of crania have been recovered from French and English grave mounds, contemporary with the era of Roman occupation.

It may be assumed as a recognised fact, that the form of the human skull is essentially distinctive of race. The difficulty is to determine the characteristic differentiae, especially in approximate races; and hence considerable diversity of opinion still prevails as to the methods best fitted to express the ethnical significance of form, proportions, prognathism or orthognathism, and other characteristic diversities. But as the study of craniology, and anthropology generally, continues to receive ever increasing attention, the simple broad distinctions, such as those which satisfied Blumenbach or even Retzius, disappear; and now we have brachycephalic, dolichocephalic, kumbecephalic, scaphocephalic, macrocephalic, sphenocephalic, acrocephalic, and platycephalic skulls, with numerous subordinate modifications. Of those forms, five, at least, occur among ancient British crania, and include types of extreme diversity. To some of these I have already repeatedly referred in former papers; and have indicated in other publications some of the grounds that lead me to infer the existence, at some remote period, of races distinct from the Celtic tribes found in occupation of the British Islands at the period of Roman invasion.*

Briefly, the evidence already set forth points to a megalithic era, with huge chambered catacombs of cyclopean masonry, and traces of a race remarkable for long, narrow heads, moderately developed zygomata and cheek bones, and small under jaws, as their builders. To this it is objected that by assigning priority to the constructors of the elaborate and massive chambered catacombs over the simpler barrow builders, the probable order in the succession of constructive remains is inverted. This idea, however, proceeds on the assumption that primitive arts must invariably proceed from the rudest to more ingenious and elaborate works. The recently discovered carvings and engravings, found by M. Lartet and Mr. Christy in the Dordogne Caves of Central France, rude though they are, suffice to prove that artistic ingenuity is no modern acquisition of man. But we are dealing with races nearer the confines of the historic period than the con-

* Ethnical Forms and undesigned Artificial Distortions of the Human Cranium; *Canadian Journal*, vol. vii, p. 399. Illustrations of the Significance of Certain Ancient British Skull Forms; *ibid.*, vol. viii, p. 127. *Prehistoric Annals of Scotland*, 2nd ed., pp. 227-298, etc.

temporaries of the reindeer of Central France. The cyclopean catacombs of the British kumbecephali have no claims to a primeval rank among the recovered traces of early human arts. Supposing them to be three, four, or five thousand years old, grave-mounds, barrows, and tumuli of every form and proportion may have preceded them, and been erased. Neither history nor definite archæology, moreover, confirms any such "natural order." On the contrary, in Egypt, India, Greece, and Italy; in Peru, Central America, and even in some of the islands of the Pacific, the oldest traces of architectural or constructive efforts survive in megalithic remains, ascribed for the most part to unknown and ante-historical races. Less substantial mounds or catacombs, which may have preceded or accompanied them, necessarily experienced the fate of all ephemeral structures; and it is probably mainly due to the cyclopean masonry of the chambered-barrow builders, that any evidence of the physical characteristics of so ancient a race are still recoverable.

But to this race succeeded a short-headed one—the brachycephali of the later tumuli—which apparently survived in Britain to Roman times. The characteristic skull-form of this period has been repeatedly defined; and the significance of the vertical or obliquely flattened occiput of frequent occurrence, has been repeatedly discussed by me in former communications to the Canadian Institute. The point specially to be noted at present is, that not only considerable variations from any assumed typical British or Celtic cranium occur; but that at least two types of the most striking diversity mark the sepulchres of the megalithic era, and the seemingly later earth-barrows and cists. Their relative chronology is not indeed of permanent importance in the present inquiry. Both undoubtedly occur in ante-Christian and ante-Roman sepulchres. In referring to the doctrine of a pre-Celtic population for the British Islands, maintained in my *Prehistoric Annals of Scotland*, Dr. Thurnam remarks: "Previous to inquiry as to the form of the skull in any possible pre-Celtic race, it is necessary to determine the form of the Celtic skull itself. Proceeding from the known to the unknown, we may then hope to trace the form of the skull in races which may possibly have preceded, or been mingled with the early Celtic population of Britain."* If possible, this is unquestionably most desirable; but as Dr. Thurnam here assumes that there is a specific Celtic skull-form, both the above forms—to the correct knowledge of which he has largely contributed,—cannot be grouped under it. At least two types of extreme diversity belong to the ancient

* *Crania Britannica*, c. 7, p. 55. The author adds, "such an inquiry is an important object of the present work." But the concluding Decade, with its summary of results from the accumulated evidence, is still unpublished.

British pagan period: the one, the extremely long skull of the megalithic tombs; the other, the short and broad brachycephalic skull abounding in British barrows of ante-Roman and Roman centuries; while the ovoid dolichocephalic skull of the pagan Saxon is intermediate in form, when compared with the two.

More than one hypothesis is open to us to account for such diversities. There is the probability of an Allophylian, possibly Finnic, Turanian, or other pre-historic race, which was in occupation of Britain before the first Celtic immigration. Retzius from the examination of two Basque skulls was led to the conviction, which accorded with his preconceived opinions, that the Basque head-form is brachycephalic. M. A. d'Abbadie confirmed this opinion by his observations on the living head; and the result has been generally accepted as an established fact. But recently, two members of the Anthropological Society of Paris recovered with their own hands, from a Basque cemetery, in the province of Guipuscoa, sixty crania, which are now deposited in the museum of the Society. Of these, M. Paul Broca remarks, in his address delivered before the Society in 1863: "Of the sixty Basque skulls in your collection, two or three only are really brachycephalous; most of them are altogether dolichocephalous; and, what was quite unexpected, the mean type of the series is much more dolichocephalous than that of the French in the north." Here it is seen M. Broca unhesitatingly styles them "Basque skulls;" but though the old Iberian tongue survives in the Basque district, its race may be, and probably is, not less mixed than the Gaelic speaking people of the Lewis, for example, among whom both Finnic and Norse features and head-forms are affirmed by one recent experienced observer, Captain Thomas, R.N., to predominate.* The unexpected results of the anatomical study of so large a number of crania from a cemetery within the Basque area, are, however, deserving of the most careful study. They help to add to the regret that the abundant dark locks of the Silures prevented Tacitus from reporting on the form of head of the British tribes to whom an Iberian origin was ascribed.

To the comparative proportions of the head-forms of Guipuscoa and the north of France I shall again refer. But, returning meanwhile to the diverse ancient British forms: another opinion specially maintained by Dr. J. Barnard Davis, is, that the brachycephalic head of the barrows is the true Celtic skull-form, and that all others, not Anglo-Saxon,—including even the kumbecephalic crania of the megalithic tombs,—are mere exceptional deviations, or what he styles "aberrant forms." A third hypothesis may be started, which would receive confirmation from the opinions advocated by one class of ethnologists

* Manuscript Letters to the author, *Prehistoric Annals*, vol. ii, p. 208.

on philological grounds, that the Cymri and the Gaels are two essentially distinct races;* in which case the two very diverse forms of head may be physical tests of the two races. A fourth idea cannot be overlooked, in reference to some points discussed in subsequent pages, that the head of the Gaul and the British Celt may have undergone modifications in the course of time, wholly apart from any admixture with other races. One other opinion, in special favour among certain purely philological ethnologists, need not be discussed here, viz., that craniology is valueless for ethnical classification.

Looking meanwhile to the osteological evidence derived from the British Islands, this much appears to be established, that at some remote period, lying beyond the earliest glimpses of any definite British history, the kumbecephalic, or long-headed race, occupied Britain in such numbers as to be capable of the combined labour required in the construction of vast chambered cairns and barrows. These sepulchres I cannot doubt are the mausolea of a royal or privileged class, and not common receptacles of the dead. They exhibit the laborious but unskilled architecture of a megalithic era, lavished ungrudgingly on the sepulchres of the honoured dead. The only works of art found in them, or at least appearing strictly to belong to their original contents, are bone and flint implements, and rude pottery. This race, as appears from some of the crania recovered from the megalithic chambers, was not altogether ignorant, at some period of its presence in Britain, of another, characterised by an essentially different form of head. The circumstance under which the latter have been met with seem to justify the opinion that this brachycephalic race occupied a servile relation to the other. When, however, we pass into a later, but still pre-historic era, the long-headed race disappears; and the simple earth-barrow and small cist characteristic of the latter race, reveals almost exclusively the brachycephalic type of skull, with prominent parietal tubers and truncated occiput. This is the form chiefly occurring in native British graves of the Roman period; and on this, as well as on other grounds, it is assumed by Dr. J. B. Davis and others to be the true type of the British Celt. I have already advanced reasons for thinking that a race of brachycephali, Turanian or other, to whom the rude stone arts of pre-historic Britain chiefly pertained, intervened between the kumbecephali of the long chambered barrows and the true Celtæ.† The linguistic affinities between the latter and the great Aryan family of nations,

* Celtic Language in reference to Race, by John Crawford, Esq., F.R.S. On Gaels and Celts, by M. Lagneau, etc.

† Prehistoric Annals of Scotland, 2nd ed., vol. i, part i, chap. ix. Canadian Journal, vol. vii, p. 405.

prove that the Celtæ branched off from the parent stock subsequent to the evolution of numbers, the development of metallurgy and many other arts of civilisation. The contents of the earlier cairns, cromlechs, and barrows do not therefore correspond with their progress; and the very term *cromlech*,—gael. *cromadh*, Wel. *cromen*, a *roof* or *vault*, and *clach*, or *lech*, a stone:—indicates as total ignorance of its sepulchral character, as the English name: Druidical Altar.

In this state of the question it becomes a matter of interest to ascertain what direct evidence is still accessible, and how far it can be made available for throwing light on the physical, and more especially the cranial characteristics of the Celt.

One form of the Anglo-Roman period—the historical age of Celtic Britain,—undoubtedly approximates to the brachycephalic type, notwithstanding many aberrations. But on the other hand this is by no means the predominant skull-form of the modern Welchman, the Highlander of the most purely Celtic districts of Scotland, or the seemingly unadulterated native population of south-western Ireland. On this subject Dr. Anders Retzius remarks: "During an excursion in Great Britain in 1855, I was able to satisfy myself anew that the dolichocephalic form is predominant in England proper, in Wales, in Scotland, and in Ireland. Most of the dolichocephalæ of these countries have the hair black, and are very similar to Celts."* The Anglo-Saxon cannot be affirmed to be a pure race. Apart from later Danish, Norse, and Norman intermixture: it differs mainly, as I conceive, from its Germanic congeners, by reason of a large admixture of Celtic blood, traceable primarily to the intermarriage of English and Saxon colonists with the British women. Such a process of amalgamation is the inevitable result of a colonisation chiefly male, even where the difference is so extreme as between the white and the red or black races of the New World. But the Anglo-Saxon intruder and the native were on a par physically and intellectually; and while the former was pre-eminent in all warlike attributes, the latter excelled in the refinements of a civilisation borrowed both from the pagan Roman and the Christian missionary. There was nothing therefore to prevent a speedy and complete amalgamation. But if this was an admixture of a dolichocephalic with a brachycephalic race, the result should be a hybrid skull of intermediate form; whereas the modern Anglo-Saxon head is essentially longer than the continental Germanic type. This, therefore, seems to me to point to ethnical characteristics of the British Celt according with the indications already suggested by philological evidence; and so to lend some countenance to the idea tha

* Archives des Sciences Physiques et Naturelles, Geneva, 1860, Smithsonian Report.

the Celtæ intruded on the brachycephalic barrow-builders of Britain, prior to the dawn of history, introduced among them the higher arts of the Aryan races, and themselves underwent the inevitable change consequent on an intermingling of intruding and native races.

The Anglo-Saxon is a very modern insular intruder. It is now little more than thirteen centuries since he encroached as a stranger on the home of the native Britons. We may allow the latter an undisturbed occupation for more than double that time, and lengthen the period of their presence in central and north-western Europe, thereby carrying them far back into its pre-historic night: and still ample time will remain for Allophylian precursors. But, so far as the British Islands are concerned, the comparatively recent intrusion of, at least, the Belgæ, probably of the Cantii and Regni, if not also the Durotriges and Damnonii, and even, as some have maintained, of all the tribes to the south of the Brigantes, found in occupation by the first Roman invaders, is more or less clearly indicated. Britain, moreover, had not been so entirely isolated, prior to the era of Roman invasion, as to justify any assumption of its undisturbed occupation by a single native race through all previous centuries. To Tacitus, it is obvious no such idea presented itself as the probable theory of British population in the first century, though historical evidence to the contrary was little more available to him than to us.

The revolution recently wrought in the opinions of archæologists and geologists relative to the antiquity of man, renders the idea of the oldest historical race having been preceded by others, not only one of easy reception, but almost a necessary consequence of the evidence. But leaving altogether out of view the traces of the Drift or Cave-Man, and dwelling exclusively on the cranial evidence derived from regular sepulture, the proofs of physical and ethnical diversity are as striking as those which distinguish living races of very diverse character. When, moreover, the craniologist, already familiar with the cranial type of the latter pagan barrows, proceeds to determine that of the British Celt of any period subsequent to the Saxon invasion, he is compelled to classify it apart from the brachycephalic type of the Anglo-Roman period. I can scarcely conceive of this being disputed by any experienced observer; whatever inferences may be derived from the fact. It may be (1) that the brachycephalic skull of the barrows is not the true Celtic type; or (2) the difference observable in the modern Celtic head may be consequent on altered diet, habits, on cerebral and intellectual development; or (3) the modern representative may be no pure Celt, but variously affected by intermixture of Roman (in its widest sense, *i. e.*, not merely Italian, but continental), Saxon, Norse, Danish, and Norman blood; or (4),

all of those causes may have combined to produce the results in question.

In discussing the physical attributes of the Celtic race, Dr. Prichard asks: "Was there anything peculiar in the conformation of the head in the British and Gaulish races?" and thus replies: "I do not remember that any peculiarity of features has been observed by Roman writers in either Gauls or Britons. There are probably in existence sufficient means for deciding this inquiry in the skulls found in old British cairns or places of sepulture. I have seen about half-a-dozen skulls found in different parts of England, in situations which rendered it highly probable that they belonged to ancient Britons. All these partook of one striking characteristic, viz.: a remarkable narrowness of the forehead compared with the occiput, giving a very small space for the anterior lobes of the brain, and allowing room for a large development of the posterior lobes. There are some modern English and Welsh heads to be seen of a similar form, but they are not numerous."* But not only did Prichard thus recognise the essential disagreement between the brachycephalic head of the barrows and that of the modern British Celt; but he has also indicated his recognition of characteristics in the former, which appear to him other than Celtic. In noticing two well-known crania recovered from the Knoch-maraidhe tumulus in the Phoenix Park, Dublin, he remarks: "In these, especially in one of them, there is a considerable approximation to the Turanian skull;" and again in view of those from British cairns and cists, he repeats his belief that some of them give reason to suspect that they had somewhat of the Mongolian or Turanian form of head.†

It seems, at first sight, an undertaking sufficiently compatible with the results already achieved by craniology, to determine the typical form at least of the modern Celtic cranium; but the results have hitherto been of a very indefinite character. One source of error is doubtless traceable to the neglect of the important fact that a type is an ideal abstraction embracing the mean of many variations, and is not to be determined by the selection of one or two assumed characteristic examples. Opinions, however, have been advanced on the authority of experienced observers, in favour of one or more specific forms as that of the true Celtic head. Referring to the small anterior region characteristic of the skulls in ancient British graves, Dr. Prichard remarks: "In this particular, the ancient inhabitants of Britain appear to have differed very considerably from the present."‡ Mr. Wilde, on the contrary, after referring to two ancient races, whose

* *Researches into the Physical History of Mankind*, 3rd ed., vol. iii.

† *Researches*, vol. iii, p. 20.

‡ *Ibid.*, vol. i, p. 306.

remains are found in Irish cairns and sepulchral mounds, the one "globular headed," and the other having skulls "chiefly characterised by their extreme length from before backwards, or what is technically termed their antero-posterior diameter, and the flatness of their sides;" adds: "we find similar conditions of head still existing among the modern inhabitants of this country, particularly beyond the Shannon, towards the west, where the dark, or Firbolg race may still be traced, as distinct from the more globular-headed, light-eyed, fair-haired Celtic people who lie to the north-east of that river."* Here the Irish archæologist describes two essentially distinct ancient skull-forms, and not only recognises the living representatives of both, but finds the diversity of form accompanied by other distinctions in hair, eyes, and complexion.

Nevertheless it has been generally assumed that one well defined form of head is recognisable as characteristic of the true Celt. Dr. Morton, in defining the Celtic family, says: "They have the head rather elongated, and the forehead narrow and but slightly arched. The brow is low, straight and bushy; the eyes and hair are light, the nose and mouth large, and the cheek-bones high. The general contour of the face is angular and the expression harsh."† Dr. J. Aitken Meigs, in discussing the characteristics of the race, as represented in the Mortonian Collection, selects a cast bearing the memorandum: "Descendant of an ancient Irish King, Alexander O'Connor, —original in Dublin." Of this he remarks: "No. 1356—a cast of the skull of one of the ancient Celtic race of Ireland—appears to me the most typical in the Irish group. This head, the largest in the group, is very long, clumsy, and massive in its general appearance. The forehead is low, broad, and ponderous; the occiput heavy and very protuberant. The basis cranii long, broad, and flat; the orbits capacious; and the distance from the root of the nose to the upper alveolus quite short."‡ Dr. Kombst, also, who, during a residence of some years in Scotland, devoted considerable attention to the determination of the Celtic, as distinguished from the Germanic type, states that "the Celtic skull is elongated from front to back, moderate in breadth and length, and the face and upper part of the skull the exact form of an oval."§ Professor Retzius, after studying the modern Celt both in France and Britain, assigns to the cranium of the common race a form of peculiar length, compressed at the sides, narrow and generally low in the forehead. At the same time he ascribes to the true Celtic type of head greater breadth, though still describing

* Lectures on the Ethnology of the Ancient Irish.

† *Crania Americana*, p. 16.

‡ *Indigenous Races of the Earth*, p. 301.

§ Johnston's *Physical Atlas*, c. viii.

the skull as long, oval, and narrow.* In his latest matured views he groups the Celts as European orthognathic dolichocephalæ, under the heads "Scottish Celts, Irish Celts, English Celts, and Welsh;" and when referring to a skull sent to him by Dr. Prichard as the first Roman one he had seen, he remarks: "It had been picked up on an ancient field of battle near York, with another skull of different form. The latter was smaller, much elongated, straight and low, and had evidently belonged to a Celt."† This judgment, he adds, fully satisfied Dr. Prichard. But when commenting on the Ugrians, Turks, and Slaves of Europe, all of whom he includes in his *orthognathic brachycephalæ*, Retzius remarks: "On different occasions I have met with brachycephalic Scots from northern Scotland and the isles to the north. During my last sojourn in Scotland I encountered again divers individuals pertaining to this same type, having an expression altogether peculiar, their visage being often short and somewhat large, their hair red, the skin of their faces marked with freckles. Since then I have learned from the reports of travellers that this type is common in the Highlands, where it is indigenous from a remote antiquity. I suppose it has descended from the Finns, or perhaps the Basques." The observations of Professor Retzius are confirmed by those of my friend Captain Thomas, R.N., whose experienced eye has detected a peculiar type of form and features both in the Orkneys and the Hebrides equally distinct, as it appears to him, from Celt and Scandinavian, which he also conceives to be Finnic. It is well worthy of note, however, that this globular head-form appears to pertain to the Scoto-Scandinavian districts; for, as will be seen, a similar type prevails in the Gallo-Scandinavian district of Normandy; and the same type predominates, according to Mr. Wilde, in the region to the north-east of the Shannon, where, in like manner, the influence of the Northmen may account for the distinction he defines between them and the long-headed Firbolgs beyond that river. When, however, Dr. Retzius quotes vaguely, "the reports of travellers that this (the brachycephalic) type is common in the Highlands," the opinion must be received with caution. My own opportunities of observation led me to an opposite conclusion; but from the great difficulty of arriving at any certain results in reference to the relative proportions of the living head, without actual manipulation and measurement, I feel assured that the reports of ordinary travellers on minute distinctions of the kind in question are valueless. It is of a nearly corresponding type that Dr. Prichard remarks: "There are some modern English and Welsh heads to be seen of a similar form, but they are not

* *Kraniologisches. Müller's Archiv*, 1849, p. 575.

† *Smithsonian Report*, 1859, p. 253.

numerous." But the significance of this globular, or brachycephalic head-form will again come under review in other geographical relations.

Dr. Beddoe, whose observations on the complexion, eyes, and hair of the modern Celt have been already referred to, in a communication to the Society of Antiquaries of Scotland on the ancient and modern ethnography of the country, states that his deductions relative to the physical characteristics of the Scottish population are based on observations made upon about twenty thousand individuals. The complexional character chiefly attracted his attention, but other features were not overlooked. Of the people of Upper Argyleshire and Invernesshire he remarks: "The men have the bony frames, the high cheek bones, prominent brows, and long noses, aquiline, sinuous, or curved upwards towards the point, which I have observed in almost all the more Celtic districts of Scotland;" and he thus indicates the idea he has formed of the Celtic head-form, when referring to the fisher-folk of Buckhaven, St. Monance, Newhaven, and Fisherow: "The narrowness of the crania and faces in many of the women tells against their Teutonic origin, and the family names of the Newhaven and Fisherow folk are just those of the neighbouring counties; some of them, indeed, as Caird and Gilchrist, are Gaelic."*

The zeal with which anthropological researches are pursued by the savans of Paris, renders their opinion on this department of ethnical classification, in which they have so peculiar an interest, of the highest value. Unfortunately my access to their published results is greatly more limited than I could desire, though perhaps sufficient for the purpose now in view. Mr. J. J. d'Omalius d'Hallooy remarks in his *Des Races Humaines*, "It is difficult in the present state of the science to express any positive opinion as to the true characteristics and the actual development of the Celtic family;" and after referring to the wide area occupied by it in ancient times, and its later intermixture everywhere with encroaching races of conquerors, he adds: "It is probable that the peoples who still speak the Celtic languages are not the pure descendants of the ancient Celts, but that they have resulted from an admixture with the Aramæans, whom we suppose to have been their precursors in Central Europe, and with the Latins and Teutons, who intruded subsequently. Moreover their characteristics are not uniform; and whilst, for example, the Bas-Bretons have in general their hair and their eyes black, and the stature of the inhabitants of the south-west of France, we frequently meet with blond complexions among the Gauls."† Among the scientific anthropologists of Paris, however, the same idea, already referred to, of the elongated skull being the true Celtic type, appears to maintain its

* Proceedings of the Society of Antiquaries of Scotland, vol. i, pp. 254, 256.

† *Des Races Humaines, ou Eléments d'Ethnographie*, p. 37.

ground. M. Paul Broca, the learned Secretary of the *Société d'Anthropologie de Paris*, in an ethnological* *resumé* addressed to the society in 1863, when contrasting two distinct types of skull—the one brachycephalic and the other dolichocephalic—recovered from sepulchres of the Burgundian period, affirms of the successive occupants of French soil: “The Celts, the Cymri, and the Germans, were dolichocephali; and so were the Romans in a less degree. There is therefore,” he adds, “no question that the brachycephalic type, still so prevalent among us, is derived from populations prior to the arrival of the Celts.” Again, M. Pruner-Bey, in discussing before the same body the ethnical affinities of the Neanderthal man, characterised by a skull little less remarkable for its great length and narrowness, than for the extreme development of the superciliary ridges, says: “let us try if it is possible to classify the Neanderthal skull. Is it the representative of a lost race, or can it be identified with any of the stocks which are known to us? In my opinion it is undoubtedly the skull of a Celt; it belongs to a large individual; it is capacious and dolichocephalic; it presents the depression on the posterior third of the sagittal suture common to the Celts and Scandinavians; and finally its occipital projection is equally characteristic of these two races.” M. Pruner-Bey then produces one Helvetian and two Irish skulls as illustrations of the true Celtic type, and thus proceeds: “Whilst they all present the same general type, these three skulls exhibit slight differences. There even exists a fourth variety, represented in the collection of Retzius by an ancient Belgian, whose skull is more compressed laterally than that of the first Irishman, which is almost cylindrical. In the gallery of the museum there is a sufficiently numerous series of ancient French skulls of the same type in every respect as those before us. . . . Without entering into descriptive details respecting the ancient Celtic skull, you will recognise that all the ancient skulls before us present a very depressed forehead, compared with the enormous facial development; but that which the forehead loses in height it gains in length.” He then, in considering the evidence that the skulls produced are really Celtic, refers, among other proofs, to “comparison by the retrogressive or progressive method with skulls of Bretons, French, and modern Irishmen, in which the mass are undoubtedly Celtic,” and adds: “Although the Celtic skull has undergone some secondary modifications, its type is at the present day the same as in the most remote ages. I refer to the beautiful series of modern skulls in the museum, derived from Brittany, and to my own collection of modern Irish skulls.” In a

* The title of the article is “Histoire des Travaux de la Société d'Anthropologie.” EDITOR.

letter on the same subject, addressed by M. Pruner-Bey to Mr. C. C. Blake, of the London Anthropological Society, he refers to "the elliptic form (segmental) of the occiput as well as of the coronal as truly characterising the Celtic type."* The crania selected by him as typical Celtic skulls, measure, in centimeters, longitudinally and parietally as follows:—

Helvetian,	length,	19·5 ;	breadth,	14·5.
Irish No. 1,	„	20·0 ;	„	15·0.
Irish No. 2,	„	20·5 ;	„	14·3.

The discussions originating in Dr. Pruner-Bey's observations on what he finally designates "The long-headed Celt of Neanderthal:" though they elicited opinions at variance with his ethnical classification of the remarkable skull discovered in 1837 in the Neanderthal cave, have not, so far as I am aware, led to any challenge of the typical form thus asserted for the Celtic skull of France, as well as of Switzerland and Ireland.

It accordingly appears thus far, from the various authorities referred to, that considerable unanimity prevails in the ascription of an excess of longitudinal diameter as one of the most marked characteristics of the Celtic cranium. A long but low frontal development, in which, as M. Pruner-Bey defines it, "The forehead of the ancient Celt gains in length what it loses in height;" a flattening of the parietals, and a tendency towards occipital prolongation, are all more or less strongly asserted as characteristic of the same head-form. There are marked exceptions, however, to this apparent unanimity. Professor Nilsson—who, in his earlier definitions, had spoken of the Celtic cranium as intermediate in proportions to the true dolichocephalic and brachycephalic skull-forms,—when writing more recently to Dr. Thurnam, remarks in reference to that cranium: "I consider nothing more uncertain and vague than this denomination; for hardly two authors have the same opinion in the matter. It would indeed be very desirable if, in England, where it might most conveniently be done, one could come to a proper understanding as to what constitutes the Celtic form of cranium, and afterwards impressions in plaster-of-Paris be taken of such a cranium as might serve as a type for this race."† The demand of the Swedish naturalist is more desirable than easy of accomplishment. What tribunal is to determine the coveted cranium embodying in itself the ideal type? Dr. Spurzheim directed a series of minute observations with this object in view; and other evidence shows that the body of British cranioscopists called into being by the teachings of Dr. Gall and his *collaborateurs*, systematically aimed at determining this and other leading ethnical types. The collection of the Edinburgh Phrenological Society includes a cast marked as

* Anthropological Review, vol. ii, p. 146.

+ Crania Britannica, dec. i, p. 17.

the Celtic type: one of a series described in the *Phrenological Journal* as "selected from a number of the same tribe or nation so as to present as nearly as possible a type of the whole in the society's collection."* It is characterised in the catalogue as a "long Celtic skull;" and as will be seen from its measurements,—No. 16, in the following table of crania, otherwise obtained from ancient Celtic areas under circumstances that afford the greatest presumptive evidence of their truly representing the native race,—it is remarkable for its length and narrowness. It is also characterised by the narrow, elongated frontal region, which French anthropologists appear to recognise as a typical Celtic feature.

An unbiassed judgment, as well as great sagacity and experience, is required to determine such a selection in comparative craniology. Wilde, as we have seen, describes the heads of the Irish beyond the Shannon as distinct from what he calls "the more globular headed, light-eyed, fair-haired Celtic people" to the north of the same river. The former, with long heads, he designates the dark or Firbolg race, the representatives as he conceives of the aboriginal Irish Cromlech-builders. But who the Firbolgs were, and whence their name is derived, are questions still in dispute among Irish antiquaries and historians. They came into Ireland, according to the *Annals of the Four Masters*, A.M. 3266. O'Flaherty, in his *Ogygia*, fixes their advent at the still earlier date of A.M. 2657. Keating, Algernon Herbert, and others believe them to have been a colony of Belgæ, or other Gaulish tribe; and the last-named authority regards the date of their arrival in any part of the British Isles as little more than a century before Christ.† On this latter theory, it is in no degree remarkable that a comparison of Breton, French, and Irish skulls in Parisian collections, should produce such harmonious results. But Dr. Davis, who assumes the short crania of the barrows to represent "the typical form of cranium of the ancient Britons," describes them as "somewhat short or brachycephalic, not ill-developed, nor remarkable for a small facial angle. The bones of the face, and especially the upper maxillaries, upright or orthognathous, but also rather short. The chin is usually prominent, the exterior surface of the upper maxillaries depressed, the nose abrupt and short, surmounted with a frowning eminence, marking the situation of the frontal sinuses."‡ Having thus determined the typical Celtic head-form, Dr. Davis disposes of the remarkable class of extreme dolichocephalic crania already referred to as found in Britain, by classing them, along with other variations from his Celtic type, as "aberrant forms." Here therefore

* *Phrenological Journal*, vol. vi, p. 144.

+ Irish Nennius, pp. 44, xcix.

‡ On the Crania of the Ancient Britons; *Proceedings Acad. Natural Science*, Philadelphia, February 1857, p. 42.

we see to how great an extent the selection of any assumed typical form is liable to be affected by preconceived theories.

But another difficulty meets us when we attempt to select the living representative of the pure Celt. M. d'Halloy classes the French, apart from the Celtic family, under *La Famille Latine*, but he adds: "It is probable that the French derive their origin principally from the Celts; but these submitted during five centuries to the Romans, and not only mingled with them, but have entirely lost the use of the Celtic languages. Subsequent conquests, repeatedly effected by Teutonic people, subjected them to fresh admixture, and they took the name of French; but the descendants of the conquerors lost the use of the Teutonic languages, and the Latin dialects have prevailed. . . . It is probable that the people of Central France are those who remain most thoroughly Celtic; that those of the south have inherited the vivacity of the Basques; and that those of the north have undergone more change from Teutonic races. This influence has been chiefly felt in Normandy, which received its name in consequence of its settlement by Scandinavians in the tenth century."* Turning from France to Britain, the same difficulties are encountered; and even when we confine ourselves to what are commonly designated the purely Celtic districts of Wales, Scotland, and Ireland: the northern and western Highlanders of Scotland differ little less noticeably than the Irish on either side of the Shannon, while the Welsh are distinguishable in many respects from both. In Sir David Wilkie's graphic picture of the "Reading of the Waterloo Gazette," the characteristic differences between the English dragoon, the Highland sergeant, and the Irish private, are as obvious as the distinctive features of the Negro who mingles in the same jovial group. M. d'Halloy excludes the region of Brittany from the France assigned by him to its branch of the Latin family. But even the retention of the Celtic language is no certain test of purity of race; and it is more easy to imagine, than to estimate by any definite scale, the influence which Roman, Frank, Burgundian, Saxon, Dane, Norman, and other foreign blood, have exercised in effecting the diversities referred to. Taking, however, crania derived from Highland districts where the Gaelic language still prevails, and from cemeteries of the earliest Columbian and Pictish Christian foundations, we have some reason to anticipate in them an approximation to the true form of the Celtic head subsequent to the Roman invasion. The following table embraces such a selection, illustrating the character of the native population in different parts of the British Islands, at a period when the first Celtic missionaries of Scotland and Ireland were preaching to their converts in their native

* *Des Races Humaines*, pp. 38, 40.

tongue.* The measurements are *longitudinal diameter*, *frontal breadth*, *parietal breadth*, and *horizontal circumference*.

BRITISH CELTIC CRANIA.

	LOCALITY.		L. D.	F. B.	P. B.	H. C.
1	Iona	M	7.3	4.5	5.5	20.2
2	"	M	7.2	4.7	5.5	20.6
3	"	M	7.4	5.0	5.6	20.9
4	"	M	7.1	4.5	5.6	20.0
5	"	M?	7.3	4.6	5.7	19.9
6	"	M	7.3	4.3	5.4	20.7
7	St. Andrews	M	6.8	4.8	5.5	20.4
8	"	M	7.0	4.4	5.3	20.3
9	"	M	7.3	5.0	5.8	21.5
10	"	F	7.2	4.4	5.0	20.2
11	Kintyre	M	7.7	4.8	5.0	21.2
12	Larnahinden	M	7.5	4.6	5.1	20.2
13	Caithness	M	7.7	4.3	5.5	20.9
14	Northampton	M	7.5	4.4	5.4	20.6
15	Longford	M	7.8	5.1	5.6	21.9
16	Celtic type, E. P. M. ....	...	7.9	4.8	5.4	21.5
	Mean .....	...	7.37	4.64	5.43	20.69

In so far as a comparison can be instituted between this group of crania and those previously referred to, it will be seen that the latter are smaller than the examples of the Helvetian and Irish Celtic head. Nevertheless they agree with all other evidence in confirming the predominance of a head of unusual length, in more than one of the ancient insular races. But a comparison of the results of the above table, in longitudinal and parietal measurements, with the kumbecephalic and brachycephalic crania of British megalithic tombs and barrows, as derived from the mean results of examples of each class, is of more importance, from the remarkable amount of diversity it reveals among the ancient insular races.† For the purpose of comparing them with the typical Celtic crania of M. Broca, previously referred to, the measurements are given both in inches and centimeters.

	Length.		Breadth.
Kumbecephalic crania	7.44 or 18.897	...	5.27 or 13.385
Brachycephalic "	7.12 " 18.084	...	5.70 " 14.477
Celtic "	7.37 " 18.719	...	5.43 " 13.792

I shall now turn to another test, to which I have already repeatedly referred in former papers, as calculated to furnish useful comparative craniological data. The latter in the daily experience of his business

* For additional measurements, and the circumstances of discovery justifying their Celtic classification, vide *Prehist. Annals of Scotland*, 2nd ed., vol. i, p. 284.

† Vide *ibid.*, tables I, II, vol. i, pp. 237, 275.

transactions, necessarily tests the prevalent form and proportions of the human head, especially in its relative length, breadth, and horizontal circumference; and where two or more distinct types abound in his locality, he cannot fail to become cognisant of the fact. One extensive hat manufacturer in Edinburgh, states that "the Scottish head is decidedly longer, but not so high as the English. In comparison with it the German head appears almost round." But comparing his scale of sizes most in demand, with others furnished to me from Messrs. Christy, the largest hat-makers in England, the results indicate the prevalent Scottish size to be $22\frac{3}{8}$ inches; four of this being required for every two of the next larger and smaller sizes; whereas in assorting three dozen for the English trade, Messrs. Christy furnish four of $21\frac{1}{2}$, nine of $21\frac{3}{4}$, ten of 22, and eight of $22\frac{3}{8}$ inches. Mr. Rogers, of Toronto, in assorting three dozen, distributes them in the ratio of five, seven, nine, and five to the same predominant sizes, and allows four for the head of 23 inches in circumference, the remainder being in both cases, distributed in ones and two between the largest and smallest sizes, ranging from $23\frac{1}{4}$ to $20\frac{3}{4}$ inches. The summary of inquiries among the principal hatters of Boston is as follows:—"Larger hats are required for New England than for the Southern States. To New Orleans we send $20\frac{5}{8}$ to $22\frac{1}{8}$; and to New Hampshire $21\frac{3}{8}$ to 23 inches." One extensive New England manufacturer adds:—"New England heads are long and high; longer and higher than any European heads. British heads are longer than Continental. German and Italian heads are round. Spanish and Italian very small."

Let us now see if this experience acquired in the daily observation of the trader and manufacturer will yield any available results in reference to our present inquiries. An ingenious instrument, known by the name of the *conformateur*, was brought into use in Paris, I believe about twenty years since, and is now employed by many hatters, on both sides of the Atlantic, for the purpose of determining the form and relative proportions of the human head, so far as required by them. The instrument fits on the head like a hat; and, by the action of a series of levers encircling it, repeats on a reduced scale, the form which they assume under its pressure. By inserting a piece of paper or thin card board, and touching a spring, the reduced copy is secured by the impress of pins attached to the ends of the levers. Owing to this repetition being made on the top by limbs of equal length, acting, within a circle, at right angles to the main levers, the form produced is more or less exaggerated longitudinally in proportion to the length of the head. But this does not interfere with the value of comparative results derived from numerous head-forms taken by the same

instrument, and correspondingly affected according to their relative proportions.

Taking advantage of the precise data furnished by the *conformateur*, I have availed myself of the peculiar facilities which Canada supplies for instituting a comparison between the diverse races composing its population. Upper Canada is settled by colonists from all parts of the British Islands. In some districts Highland, Irish, German, and "Coloured" settlements perpetuate distinct ethnical peculiarities, and preserve to some extent the habits, and usages, and even the languages of their original homes. But throughout the more densely settled districts and in most of the towns,* the population presents much the same character as that of the larger towns of England or Scotland, and the surnames form in most cases the only guide to their ethnical classification. In Lower Canada the great mass of the population is of French origin, but derived from different departments of the parent country; of which Quebec is the centre of a migration from Normandy, while the district around Montreal was chiefly settled by colonists from Brittany. The French language, laws, religion, and customs prevail, preserving many traits of the mother country and its population, as they existed remote from the capital of the Grande Monarque, and before the first French Revolution. The establishment of the seat of the Provincial Government at different times in Montreal and Quebec, and the facilities of intercourse between the two cities, must have helped to mingle the Norman and Breton population in both. Nevertheless, the results of my investigations tend to show that a striking difference is still recognisable in the predominant French head-forms of the two cities.

My first observations, with special reference to the present inquiry, were made at Quebec, in 1863, when, in co-operation with my friend Mr. John Langton, I tested the action of the *conformateur* on heads of various forms, and had an opportunity of examining and comparing nearly four hundred head-patterns of the French and English population.† As each of the patterns had the name of the original written upon it, a ready clue was thereby furnished for determining their nationality. Since then, in following out the observations thus instituted, I have carefully examined and classified eleven hundred and four head-shapes; including those of two of the principal hatters in Montreal, and of one in Toronto.‡ In testing their various differen-

* The exceptions in the Upper Province are where a large coloured population has congregated; as at St. Catharines, Chatham, and Windsor.

† Mr. J. Ashworth, Quebec.

‡ Messrs. J. Henderson and Co., and A. Brahadi, Montreal; and Mr. J. Rogers, Toronto.

tiæ, I have arranged them by correspondence in form; by common origin, as indicated by French, English, Welsh, Highland, Irish, and foreign names; and by predominant malformations in those markedly unsymmetrical. The first noticeable fact in comparing the head-forms of the Quebec population was that they were divisible into two very dissimilar types: a long ovoid, and a short, nearly cylindrical one. This is so obvious as to strike the eye at a glance. I accordingly arranged the whole into two groups, determined solely by their forms, without reference to the names; and on applying the latter as a test, the result showed that they had been very nearly classified into French and English. In all, out of nearly a hundred head-forms marked with French names, only nine were not of the short, nearly round form; and no single example of this short type occurred in one hundred and forty-seven head-forms bearing English names. A more recent examination of patterns from Montreal led to a very different result. There, where out of the first fifty English head-forms I examined, one example of the short globular type occurred; out of seventy French head-forms (classified by names), only eleven presented the most prevalent French head-type of Quebec. But the French head of the Montreal district, though long, is not the same as the English type. It is shorter, and wider at the parietal protuberances; and with a greater comparative frontal breadth, than what appears to be the Celtic subtype of the English head: though also including some long heads of the latter form. So far, therefore, it would seem a legitimate inference from the evidence, that the brachycephalic and nearly globular head of the Quebec district is the Franco-Norman type; while the longer French head of the Montreal district is that of Britany, where the Celtic element predominates.

But again, amid considerable diversity in minute characteristics, the English heads appear to be divisible into two classes, of which one, characterised by great length, and slight excess of breadth in the parietal as compared with the frontal region, appears to be the Anglo-Saxon head; the other, also long, but marked by a sudden tapering in front of the parietal protuberances, and a narrow prolonged frontal region, is the insular Celtic type. These inferences I deduce from the following data. A certain number of the head-forms, marked by the extreme characteristics of great length and nearly uniform breadth, all bear true English or Saxon names, *e. g.*—Anderson, Bell, Booth, Brown, Beard, Blackie, Cosford, Chapman, Dean, Forster, Fisher, Guest, Giles, Mason, Steel, Sanderson, Thompson, Westby, Waddell, etc. Out of upwards of four hundred heads more or less nearly approximating to this type, only two presented the exceptional names—O'Callaghan and Donovan. The form which I distinguish from this

as the British Celtic type, is equally long, but otherwise very different, approaching to what may be most fitly designated the pear-shape. Of this I have found representatives of all the insular subdivisions of the Celtic race, *e. g.*—Campbell, Fraser, Grant, McLean, McKenzie, McDonald, McMillan, McLeay, McKay, McLennan, McGregor, Stuart, etc.; Beaven, Davis, Evans, Flynn, Hughes, Jones, Owen, Gwynne, etc.; and Donelly, Flaherty, Flannigan, Kelly, Macguire, McCaul, McLeary, McCollum, O'Brien, O'Calaham, O'Reilly, etc. The subdivisions which such names suggest are scarcely less obvious than those which, in Lower Canada, separate the Browns, Smiths, Hendersons, Thompsons, Masons, Langtons, Fenwicks, Frisbys, etc., from Charlebois, Barbeau, Charpentier, Chartraud, Deslauner, DeLusingnan, Durocher, Filiatreault, Labelle, Lafontaine, Lemieux, Montigny, Nadeau, Perrault, Robital, Simard, Saudier, Verrier, etc.

But the Saxon and Celtic names of the British Islands indicate races which have been intermingling for centuries, until many lines of demarcation have been nearly effaced; whereas the French and English populations of Lower Canada are still separated by the clearly defined traces of recent contact. The latter condition of things is illustrated in their head-forms. With few exceptions they can be distinguished from each other at a glance. Whereas, although the two types which I conceive to be the Saxon and Celtic head-forms of the British Islands, are satisfactorily classed apart, by such evidence as I have indicated: yet many modified forms occur, disclosing all intermediate gradations between the two; and occasionally the pure Saxon type bears a Celtic name, or *vice versâ*. Normandy did indeed once furnish its quota of colonists to Britain as well as to Lower Canada. But, if the followers of William of Normandy included those of the brachycephalic type now met with in Canada, they have long since intermingled with, and been absorbed into the common mass. Exceptional forms are traceable at times, where the evidence is accessible, to the miscellaneous sources of intrusive population. One head of peculiar and marked brachycephalic form, with a common English name attached to it, proved to inherit its specialities from a Hindoo mother; another, no less striking for its peculiar length, was that of a "black Douglas." In these cases the names were calculated to mislead; but in general they furnished the desired clue. In arranging a large collection of head-forms according to their shapes, I found on one occasion that I had thrown sundry exceptional patterns aside as failing to classify under any of the determinate types of French and English heads. On returning to examine the names, they read as follows — Kleisen, Lansberg, Rosebrugh, Snider, Kauffman, Kendrick, DeWintol, Bastedo, Hirsch, Levy, Benjamin. The list of names abundantly ac-

counts for the miscellaneous character of their head-forms, if there is any ethnical foundation for such a system of classification.

So far, then, as this evidence indicates, the French head, as found in the Montreal district with its Breton population, presents a longer type than that of the Quebec district with its colonists from Normandy. This, therefore, seems to point to the assignment of the longer head to the more Celtic French race. Again, the Celtic head form of the British Islands appears to be still more dolichocephalic; and so constant is this, that out of ninety-three head forms bearing Celtic names, I have only met with six approximating to the short, or brachycephalic type; and out of five hundred and forty-two with Anglo-Saxon names, only thirteen of short type; and this among a population intermarrying with their fellow-subjects of French origin, and with no permanent barrier to the ultimate blending of the two races into one. So far as the cranial evidence defines a difference between the two types of head of the French habitants, it accords with the historical data referred to by M. d'Halloy in his *Races Humaines*, where—after referring to the predominance of Teutonic influence on the population of Northern France classed by him in the Latin family, as distinct from the Bas-Bretons and others of the Celtic family, he adds:—"Cette influence se fait surtout sentir en Normandie, contrée qui doit son nom aux établissements que des Scandinaves y ont formés dans le 10e siècle." The population was distinguished by language, as well as name, from the Celtic north-west of Neustria, long before the invasion of the Northmen. Romanised Gauls, Franks, and Burgundians were mingled under Merovingian, Carolingian, and Scandinavian conquerors, by processes very analogous to those which made Celtic Britain Anglo-Saxon. Nor is the character of the Franco-Canadian wholly inconsistent with the idea of a temperament modified by some infusion of Norse or Danish with the older Gaulish and Frankish blood. Instead of what Tennyson calls "the blind hysterics of the Celt," the Canadian habitant is marked by a docile and kindly temperament, which presents some analogies to that of the Scoto-Scandinavian population of the Orkneys. Sheriff Robertson, of Orkney, after long experience in the exercise of his judicial functions there, illustrated the character of the population by referring me to one of the islands forming a distinct parish with several hundred inhabitants, who dwelt there without resident justice, magistrate, or constable, and had never given him occasion to bring his judicial services into requisition. This he contrasted with the more irascible fervour of the Celtic population on the neighbouring Scottish mainland. But if the brachycephalic head of the Quebec district is not Celtic, it is not Scandinavian, but rather belongs to

the round and short form of cranium, which constitutes one of two marked types, recovered by M. Brullé of Dijon, from what he believes to be sepulchres of the time of the Burgundians. Specimens of those, and others of the same type, are in the Parisian Society's Gallery; but they appear to be universally assigned there to a pre-Celtic race.

Here, again, we see the influence of preconceived ideas. The Finnic hypothesis of Arndt and Rask lies at the foundation of the opinions advanced by Prichard, Retzius, d'Abbadie, Pruner-Bey, Broca, Thomas, and others, as to the Finnic type of the Basques, and the pre-Celtic head form of Denmark, France, England, and Scotland. This assumes the Finnic physical type to survive from periods long anterior to the arrival of Celts or other earliest historical races in Europe. But it is possible that we are tempted by the present tendencies of anthropological research, in its alliance with geology, to slight recent for more remote sources. That the Scandinavian nations shared with a Finnic population, their common country, is as certain as that the Franks intermingled with the Gauls, and the Angles and Saxons with the Britons. It can scarcely be doubted, moreover, that the Finns—occupants of a diminishing area within all recent centuries—formed a larger proportion of the population of Northern Europe in the ninth century than they do now. In that century it was that the Norwegians and Danes commenced their inroads on the British Islands, North Holland, and Normandy; and that Norsemen, Danskermen, and Ostmen, Fion-ghaill and Dubh-ghaill, began to effect settlements in those countries where their traces still abound. But the Finns, who are elsewhere a hypothetical element of the population of pre-historic Europe, occupied the isolated Scandinavian peninsula in common with the Northmen, and are even now to be met with on Norwegian fiords from whence the marauding vikings were wont to issue forth. Subsequent, however, to A.D. 1000—the era of S. Olaf—increasing intercourse with other nations has tended to approximate the Scandinavian to the Germanic type. Seeing, then, the independent concurrence of so much evidence in proof of the predominance of a brachycephalic head form, approximating to the assumed Finnic type, in the very regions of Orkney and the Scoto-Scandinavian mainland, in the north-east of Ireland, and in Normandy, where Norse influence most abounded; is it logical to ignore this, and seek the source of such ethnical peculiarities wholly among hypothetical precursors of the historic races? Wherever a native population holds its ground as a race in the midst of its conquerors, intermixture in common interests, and in blood is inevitable. Gaul joined with Frank in the struggle against Rollo and his Northmen, Gael and Saxon fought together for

Scottish independence against the Edwards; Welsh and English shared with the Norman the triumphs of the Black Prince; as the modern Hindoo, Affghan, Red Indian and Negro, have been enlisted in the service of their Anglo-Saxon masters. The discrepancy of races in most of those instances surpasses that which results from the assumption that the wild hordes of Norse marauders included Finns as well as true Scandinavians. Their intermixture in recent centuries is no mere assumption, but a well established fact.

The Northman of the ninth century was, by the nature of his geographical position, more Finnic than the Dane. The Norwegian and Swede are so even at the present day. I have carefully examined a series of Scandinavian and Finnic crania in the collection of the Academy of Sciences of Philadelphia, with a view to this question. The true Norwegian and Swedish head is dolichocephalic, of moderate length and frontal elevation; but the "Swedish Finn," or mixed race—of which the collection includes three examples—is short and semi-globular, partaking of the characteristics of the true Finn, with its marked parietal, and short longitudinal development. The Philadelphia collection contains nine pure Finn skulls and a cast, in addition to those of the Scandinavian and mixed races, nearly all selected by Professor Retzius, and highly illustrative of the two distinct types, and the intermediate hybrid form. It seems, therefore, in no degree inconsistent either with scientific or historical evidence, that we should trace a historic, as well as a prehistoric Finnic element in the brachycephalic and semi-globular head-forms of Orkney, the Hebrides, the north-east of Ireland, Normandy, and the Quebec district of Lower Canada. But on any supposition we must not overlook the characteristics of the races with whom the intruders intermingled. Among the Scandinavian crania of the Mortonian collection, are three ancient Swedish skulls of extreme dolichocephalic proportions, which would probably be classed as Celtic by those who regard the elongated cranium as the unvarying characteristic of the latter type, and maintain the preoccupation of Scandinavia by a Celtic race. To assume that the Franco-Roman population of Neustria prior to the Norman invasion was purely Gaulish, would be to ignore all history from Julius Cæsar to Charlemagne. "All the foreign peoples of the Indo-European stock," says M. Broca, when referring to the intermixture of races on the French soil, "who have, one after another, invaded, conquered, or occupied the whole or part of our country, the Celts, the Cymri, the Germans, were dolichocephalic, and so were the Romans, though in a less degree. It is, therefore, not doubtful that the brachycephalic type still so prevalent among us, is derived from populations anterior to the arrival of the Celts."

Taking then the known elements as our guide : if all but the Celtic form can be determined, there can be no insurmountable difficulty in ascertaining its type. Assuming the modern German head as a key to the influences of Frank and other Germanic intermixture, it is decidedly shorter and more globular than the Anglo-Saxon head. Indeed my attention was first directed to the hat-gauge as a useful cranial test by a remark of the late Dr. Gustaf Kombat, that he could never procure an English-made hat that would fit his head, owing to the greater length and narrowness of the English head. Leaving out of consideration, then, for the present, any race prior to the Gauls, it is wholly consistent with historical evidence to conceive of them modified by successive interfusions of trans-Rhenic and other Roman legionaries, the later Franks, and others of Germanic blood; and then of Danes and Northmen, with whatever amount of Finnic element the latter may have been affected. Still the type of head characteristic of the population of Normandy, and of Lower Canada at the present day, requires, either that the undetermined Celtic element modified by all those dolichocephalic foreign influences, must have been brachycephalic; or, that, altogether prior to the first Roman invasion, there existed there a large predominance of such a pre-Celtic element as the Finnic one, assumed as unquestionable by M. Paul Broca and other French anthropologists;* for no permissible augmentation of a Scandinavian-Finnic element would suffice to account for the modern head-form, on the theory of an extreme dolichocephalic Gaulish cranium. Against the conclusion that the Gaulish head resembled the brachycephalic type of the British barrows assigned by Dr. J. B. Davis to the British Celts, two arguments are of considerable weight. (1.) the modern Normandy-head, though brachycephalic, has more affinity with the semi-globular type of the mixed Swedish-Finn than with that of the British barrows. (2.) The Breton head, in which it cannot be doubted that the Celtic element predominates to a much greater extent than in that of Normandy, instead of approximating more closely to the British brachycephalic type, confirms the idea of a dolichocephalic Celtic head-form. But the analogy of the modern Germanic head, with its numerous sub-types, suggests the probability that the once widely diffused Celtic nations included variations in physical form no less definite than those which distinguish the Cymric from the Gaelic subdivisions of their language. The Gaulish and British head-forms must be assumed to have belonged to a common type; but it is probable, if not indeed demonstrable, that they included varieties not less distinct than those of the modern German

* The word in the original is "ethnologists", evidently a slip of the author's pen. EDITOR.

and Anglo-Saxon. The inquiry, however, is just at that stage when the careful setting forth of the whole evidence—even where it may seem to conflict—is best calculated to lead to a satisfactory decision. The known, unknown, and undetermined elements of the proposition may, I think, be fairly stated as follows; leaving the Celtic element to be determined by comparison between the modern head form as the sum of the whole, and the value of the ascertained elements. Thus tested, the weight of evidence appears to be in favour of the dolichocephalic as the undetermined, and therefore the Celtic element:—

BRETON HEAD-FORM.

Pre-Celtic, Turanian, or Finnic element	Brachycephalic?
Frank and other Germanic elements	Dolichocephalic.
Native Celtic element	_____?
Modern Head:— <i>Dolichocephalic</i> .	

NORMANDY HEAD-FORM.

Pre-Celtic elements	Brachycephalic?
Germanic elements	Dolichocephalic.
Scandinavian: Norse element	Dolichocephalic.
Finnic element	Brachycephalic.
Native Gaulish element	_____?
Modern Head:— <i>Brachycephalic</i> .	

ENGLISH HEAD-FORM.

Pre-Celtic element: Megalithic race	Kumbecephalic.
Pre-Celtic (?) element: Barrow race	Brachycephalic.
Germanic elements: Anglian, Saxon, Frisian	Dolichocephalic.
Scandinavian elements: Danish, Norman	Dolichocephalic.
Native British element	_____?
Modern Head:— <i>Dolichocephalic</i> .	

SCOTTISH HEAD-FORM.

Pre-Celtic element: Megalithic race	Kumbecephalic.
Pre-Celtic (?) element: Barrow race	Brachycephalic.
Germanic elements: Anglian	Dolichocephalic.
Scandinavian elements: Norse, Danish	Dolichocephalic.
Celtic elements: Gaelic, Erse, British	_____?
Modern Head-Form:— <i>Dolichocephalic</i> .	

The results of comparisons instituted from time to time between English and Scottish heads, and confirmed by the practical experience of hatters in both countries, lead me to the belief that they differ in the greater length and less height of the Scottish than the English head. Leaving out of question the pre-Celtic elements, in both cases, the others can be defined with tolerable precision. The traces of the Briton in Scotland are as unmistakable as those of the Gael in Wales. Nevertheless, the British is the predominant Celtic element in the South, and the Gaelic in the North. Of the Germanic elements the Saxon is exclusively English, the Anglian, and apparently the Frisian, Scottish. Of the Scandinavian elements, the Danish predominates in England, the Norwegian in Scotland, and the latter was very slightly

affected by any Norman element. It is also important to bear in remembrance the relation in which the races stood to each other in the two countries. In England the remnant of Romanised Britons rapidly disappeared before the Saxon and English colonists; so that when the Danes followed in their wake, they found only an Anglo-Saxon people to resist or to intermingle with. In Scotland, on the contrary, a race of Celtic kings occupied the throne of the united kingdom till the death of Alexander III in 1286. There also the Northmen of the Islands and Sutherland intermingled with a purely Celtic population. In the war of independence the Isleman and the Highlander of the mainland made common cause with the lowland Scot; and the Gaelic and Anglo-Scandinavian races intermingled in perfect political equality; the Gael only exchanging the Celtic for the English tongue when he passed beyond the Highland line, and merged into the mixed stock of the low country.

It thus appears that where the Celtic element most predominates, the longer form of head is found. It is also noticeable that there are indications of the Gaelic and Erse type of head being longer than the British. The results, as a whole, of the classification of the known and unknown elements in tabular form, appear to involve the assignment of dolichocephalic characteristics to the undetermined Celtic element both of the French and English head.

The question invites further research in all its bearings; and as one subsidiary source of information, the population of Lower Canada furnishes materials valuable alike to the ethnologist and the historian. There a people of French origin has been isolated from the great revolutions which have wrought such changes on their European congeners. Their physical, moral, and intellectual development, all admit of curious comparison with those of the modern Frenchman. The first has been subjected to novel climatic influences for upwards of two centuries; the latter have been moulded by political and religious institutions, brought with them from their old home by the colonists to Louis XIII; whose descendants have only recently emancipated themselves from seigniorial tenures and other shackles of a feudal system of centralisation. Those, with the habits of life incident to a climate so diverse from that of northern France, may account for some characteristic traits. Others may be still found among the kindred population of Normandy or Brittany. But assuredly the summary way in which Dr. Knox has dealt with this element of the European population of the New World, as "The French Celts of the Regency," is wholly unworthy of acceptance.*

Apart, however, from all theory or inductive reasoning, the follow-

* *Races of Men*, p. 75.

ing facts appear to be indicated in reference to the colonists of Lower Canada: 1st. That the French Canadian head forms are, as a rule, shorter and relatively broader than the British. 2nd. That the former are divisible into two classes, of which the short globular, or brachycephalic head occurs chiefly in the Quebec district, settled from Normandy,* while the longer type of head predominates in the Montreal district, originally colonised by a population chiefly derived from Britany and the Department of Charente Inférieure. The mode of investigation thus indicated yields certain definite results, and admits of wide application. Should the anthropologists of Paris be induced to turn their attention to it, the means of comparison supplied by a similar determination of the head forms of regiments composed of conscripts from Bretagne, Normandie, Franche Compté, Languedoc, and Gascoigne, might go far towards eliminating the true Gaulish type, and could not fail to supply other information no less acceptable to the ethnologist.

But there is another aspect of the inquiry into the significance of cranial forms which derives striking illustration from the mode of investigation now referred to. When treating in a former communication,† of the various causes tending to produce unsymmetrical cranial development, I remarked: The normal human head may be assumed to present a perfect correspondence in its two hemispheres; but very slight investigation will suffice to convince the observer that few living examples satisfy the requirements of such a theoretical standard. Not only is inequality in the two sides of frequent occurrence, but a perfectly symmetrical head is the exception rather than the rule. The examination of the head-forms already described amply confirms this opinion. Examples of extreme dissimilarity between the two sides, and of abrupt inequalities of various kinds are far from rare. Of one group of three hundred and seventy-three head-forms carefully tested for their unsymmetrical characteristics, only forty-eight could be set apart as uniform, or only slightly unsymmetrical, and not decidedly developed in excess on one side or the other. Of the French heads sixty-seven exhibited a decided development towards the left, with a flattening or depression on the opposite side; and twenty were correspondingly affected towards the right side. Of the British heads, including those with Celtic and other patronymics, one hundred and

* In the summer of 1863, immediately after examining the Canadian head-forms of the Quebec district, I made a tour through Normandy, and specially directed my attention to the head-forms of the peasantry. A short form of head appears to prevail; but without positive measurement no precise results can be attained.

† Ethnical Forms and undesigned Artificial Distortions of the Human Skull; Canadian Journal, vol. vii, p. 414.

sixteen exhibited a decided bulging on the left side, and thirty-one a less decided development in the same direction; while sixty-three had the same characteristic feature no less strongly on the right side, and twenty-three a less decided bulging to the right. In all, the results on this point were, that out of eleven hundred and four British and French head-forms, four hundred and forty-two were developed in excess to the left, and three hundred and eighteen to the right; leaving three hundred and forty-four nearly symmetrical. It thus appears that the tendency to unsymmetrical deformity is nearly as three to one; and that in the abnormal head the tendency towards excess of development towards the left, is upwards of two to one. But so far as my opportunities of investigation have extended, this tendency is more decidedly expressed in the brachycephalic (French) heads than in the dolichocephalic, and in those the sinistral is to the dextral excess fully in the ratio of three to one. I have discussed the probable causes of such deformations in former papers, and need not resume the subject here.

Another slight, but curious, indication of the unsymmetrical arrangement of the two sides of the head is shown by the position of the ears. To this my attention was drawn by my friend Mr. Langton, when examining the French head-forms at Quebec. By attaching a paper frame to the rim of a hat, and marking a line corresponding with the centre of each ear, the oblique distortion, which is best observed by looking on the base of the skull, is readily detected in the living head. The extent to which the ears diverge from the opposite points of a line drawn at right angles to the longitudinal diameter is frequently startling to those whose attention is directed to it for the first time. No ethnical significance can be attached to such irregularities in cranial conformation. The same, I doubt not, will be found among all races; and the habits of civilised nations tend no less to their production, than the undesigned usages of savage tribes. One of the most remarkable examples of an unsymmetrical skull which has recently come under my notice, is that of a Chinese, in the collection of Dr. Warren, at Boston, which is distorted obliquely, with predominant development on the left side.

One other question, which may receive illustration from a sufficiently extensive series of observations, is that already referred to, of the possible changes of head-form by mere lapse of time, with the accompanying modifications of diet, climate, and habits of life. Among the short head-forms occurring as exceptions to the general Anglo-Saxon type, is that of my friend, Dr. T. Sterry Hunt, F.R.S., the descendant of a New England family dating back nearly to the first voyage of the "May Flower." It suggests the desirableness of a minute com-

parison of head-forms of the old New England families. The experience of the New England hatters points, as we have seen, to the prevalence there of an unusually long and high type of head. But the percentage of native Americans of old descent even in the longest settled States must be small, situated as these are on the seaboard, and receiving the annual influx of emigration to fill up the gaps caused by wanderings of their own population into the new West. Indications of the development of a New England type, or variety of the Anglo-Saxon colonists have long been noted with interest; and minute data relative to the cranial type of the pure descendants of the earliest settlers would be of great value in their bearing on this subject. So far, however, the diverse forms still clearly distinguishing the French colonists of the Quebec and Montreal districts of Lower Canada, rather indicate the permanency of the cranial race-forms, and their consequent value as a clue even to minute subdivisions of the same nation, though severed for centuries from the parent stock.

Miscellanea Anthropologica.

Extracts from *Du Danger des Mariages Consanguines*, Paris, 1857. —“On the Danger of Consanguineous Marriages.”—For the physiologist and the physician, consanguinity in marriage is the violation of an organic law. Every physiological combination is due to a real *vital affinity*. This affinity acts upon fecundation; it is at least proved that fecundation requires certain relations of differences. Physicians have frequently observed that alliances between parties too uniform to each other are frequently sterile, however well constituted each party may be; and that prolificness is the more assured the greater the difference between the temperaments of the parents; hence the greater part of unions between very near relations are far from successful. There exists, in this respect, little divergency of opinions among physicians. Those who, like Burdach, maintain that consanguinity has not, at least as far as animals are concerned, any such injurious consequences, have, as Lucas observed, confounded community of race with community of family. When the race is sufficiently numerous, and occupies a large tract, so that the families live at a distance from each other, and have not exactly the same diet, mode of life, etc., these alliances among families are only conservative of the type of the race. . . . Marriages between near relations are more common in small isolated villages and towns. We know in such places uncles who have become sons-in-law of their nieces, etc. It is among such families that the decay of females may

be traced. Such alliances are also frequently contracted to preserve the property in a wealthy family.

From a number of cases selected since 1846, we have arrived to the result that consanguineous marriages run counter to the increase and the health of the population. Such unions are either sterile or the offspring is unhealthy. If certain families, says Rilliet, seem to escape the injurious action of consanguinity, it is to be feared, that though the first generation be spared the influence will manifest itself in the succeeding generation, until the family becomes extinct. In eighty-two cases of such alliances twenty-two were sterile: they dated from eight to ten years and were contracted between first and second cousins. In four cases uncles had married their nieces.

CONCLUSIONS.

1. Marriages between near relations are essentially opposed to physiological laws and the nature of man. Instinct rejects them. From time immemorial the religious customs of various peoples have condemned the practice.

2. Experience has shown that such unions are sterile, and if prolific, anomalies, arrest of development, etc., are the result. We have observed a very curious fact, namely, a retard of dentition in children issued from consanguineous marriages. Thus we know some of them who at three to four years had no teeth, and a physician at Lyons, Mr. Ollier, assures us that he observed the same. This retard of dentition is accompanied generally with an arrest of development in body and mind.

3. The influence of consanguinity may spare the first generation, but show itself subsequently.

4. When such consanguineous marriages are continued in the same family, it decays physically and intellectually, and becomes extinct.

5. Consanguineous marriages are, strictly speaking, infractions of public hygiene, and require the interference of the legislator. We ought still in the meantime to act upon public opinion, so that consanguineous marriages should be generally reprobated.

Acclimatisation. Extract from *Der Mensch und seine Physische Erhaltung* ("Man and his Physical Preservation," by F. Oerterten. Leipzig, 1859.) We now come to the great question of acclimatisation, or in other terms, whether we can accustom ourselves to foreign climates, and thrive there as in our own, or at least like the natives of these climates. We regret to state at the outset that the men of science are not agreed on this question, for it is too complicated, and our actual experience is as yet insufficient to solve the problem which each person now explains according to his own fancy. This much seems certain, that man possesses the capacity of acclimatisation in a much higher degree than any other creature, and that the white race excels in this respect any other. The white man is least chained to one soil, one temperature, and one kind of nutriment; and by his civilisation is able to guard himself against many dangers of a foreign climate. On the other hand it is undeniable that acclimatisation is dearly purchased in the tropics, where every region has its peculiar

diseases, which the stranger must pass through, if he be not suddenly cut off by sunstroke or abdominal affections. . . . It is now ascertained that though the human species, considered as a whole, may thrive in any spot, this is not applicable to man as an individual. Each chief race seems rather confined to a certain climate. Many, no doubt, can resist the influences of any climate, but this does not apply to the majority. Especially in the tropics, and even in Algiers, Europeans do not seem to become perfectly acclimatised, nor to thrive as colonists. Everywhere the deaths exceed the births; after a few generations they either become extinct or degenerated.

The Negro in the South.—The severity with which masters treat their slaves in the South may be judged from the statement of Mr. Edward S. Philbrick, superintendent of cotton lands on St. Helena Island, S. C., published in the *New York Post*. He had 400 labourers under his charge, and he says: "Many have done, habitually, double the amount of work they were formerly required to do by their masters in a day, and, as they say, with no more fatigue." What Northern free labourer could double the amount of work required of him by his employer, and yet remain unfatigued? This report, by the way, though written by a man who is as much of an Abolitionist as is consistent with any practical talent, contains many other facts of importance, which, coming from such a source, are especially valuable. For instance, Mr. Philbrick has found out, contrary to Abolition dicta, but in accordance with all experience, that "the natural tendency of the freed negro is to rest satisfied with supplying his simple wants, which he can do in the Southern States with a very small amount of labour." He thinks this may be overcome by a trick analogous to that of fastening a bunch of hay so that it will swing before an ass just out of reach, to make him go on. "This fault is easily corrected by bringing within his reach, by purchase at low rates, articles which minister to new and civilised wants, stimulating industry for the sake of gratifying his newly acquired tastes." Mr. Philbrick only needs a little longer experience to satisfy himself that this scheme will not work permanently, or with any certainty.—*Boston Courier*, March 4.

Discovery of an Ancient British City near Edinburgh.—A few months ago (says the *Scotsman*) we reported the exhumation of a large number of stone coffins in the vicinity of the "Cat stane," about six miles from Edinburgh, by Mr. Hutchinson, of Carlowrie. We have now to notice a discovery of much greater antiquarian interest, made chiefly through the instrumentality of the same gentleman—viz., the remains of an ancient British town on the western side of Craigiehill, which is about a mile distant from the former relics, on the Linlithgow side of the Almond river. Many years ago, when cutting a road through Craigiehill, between Kirkliston and Cramond, the workmen came upon a stone kist, the end of which is still to be seen projecting from the bank over the carriage way. Several attempts have been made by archæologists to unravel the mystery of this memento of bygone ages, but without effect. Some time ago, Professor Simpson, in one of his wanderings, thought he had

observed on the hill indications of an ancient British city; and recently he wrote to Mr. Hutchinson on the matter, requesting him to obtain permission from the proprietor of the hill, Mr. Hope Vere, to make explorations. This permission was at once readily and cordially granted, and on Friday, the 22nd ultimo, Mr. Hutchinson examined the hill; and his men, after some search, came upon traces of three walls or ramparts enclosing a space near the western top of the hill, upon which were numerous raised circular rings of stones, apparently the foundations of such dwellings as our "rude forefathers," are known to have occupied. On the following day, Professor Simpson, accompanied by Mr. Macbean and Mr. Hutchinson, made a much more extensive and systematic investigation, the result of which was that they exposed portions of the faces of the three lines of walls, and one of the raised circles inside. They also were fortunate enough to discover a gate which had formed one of the entrances to the encampment. The ramparts are ranged in a fortified manner, as parallels, and towards that part of the hill from which alone any attack could be made, the other sides presenting natural barriers which, in those times, no invading force could have hoped to overcome. Excavations were made behind the old stone kist, which would seem to have been placed just outside the city walls, but nothing of interest was found there. We understand that Professor Simpson is preparing an elaborate paper on the whole subject, which is to be submitted to a meeting of the Antiquarian Society during the ensuing session. It is not improbable that, in the district where this discovery has been made, there will yet be found other numerous relics throwing light upon the habits and customs of the ancient Britons.

Hybridity. Extract of a letter from Dr. Callaway, Local Secretary of the Anthropological Society of London for Algiers, to Mr. Bol-laert:—"To all my inquiries about hybridity I can only hear, and this is ratified by personal experience, that the French and Arab (women, I suppose) produce a capital breed. The specimens I have seen are both mentally and physically excellent. The Jews never marry out of their own people. The Arabs mix well with negroes (negresses). I do not, however, despair of receiving some information about the hill tribes. We must bear in mind that all the *indigènes* are well fed, and, unlike the Indoos, eat animal food, and thus their physical powers are greater than the Asiatics."

Human Hybridity.

Wilmot House, Bradford, November 3rd, 1864.

SIR,—I agree with Mr. Bendyshe that the paragraph he quotes in the last number of the *Review* from Judge Therry's recently published *Reminiscences*, is testimony against the opinion that M. Broca seeks to substantiate relative to the paucity of half-breeds between Australians and Europeans. I am not aware of the number of half-breeds of this kind whose names are on the electoral rolls of the several colonies, but I believe there are many, though I do not think

they constitute any great proportion to the total in the country. From my own experience I can also substantiate Mr. Therry's assertion, that these half-breeds evince a tendency to prefer a savage to a civilised life; I have found many of them living among the aboriginal tribes in all respects on an equality with their companions, and fully participating in their habits and ways.

After several years residence in Australia, and much personal observation as to the condition of the aborigines, I believe that the number of half-breeds is much greater than is generally supposed. I have met with many living as I have described, but, from the smallness of the tribes, within ordinary reach of civilisation, from their wandering habits, and from the fact that we do not often get information upon points like these from settlers, who have the best means of supplying it, we only hear of the small minority who choose to prefer the association of civilisation.

I take exception to many of the premises upon which M. Broca, referring to this point, seeks to arrive at his conclusions, but to enter upon that as fully as it deserves would occupy too much of your space.

I may, in conclusion, and by way of parenthesis, observe that a healthy and numerous offspring is arising in Australia from the inter-marriage of Chinese with European (chiefly Irish) women. This I think deserves attention.

Yours faithfully,
RICHARD LEE.

LIST OF PUBLICATIONS RECEIVED.

1. The Journal of the Royal Asiatic Society of Great Britain, part i, vol. i. 1864. Trübner and Co.
2. The Popular Science Review. Edited by Henry Lawson, M.D. November, December, 1864; January, 1865.
3. The Westminster Review. January, 1865.
4. Buddhism in Tibet; illustrated by Literary Documents and Objects of Religious Worship. By Emile Schlagintweit, LL.D. 1863. Trübner and Co.
5. L'Homme: Problèmes et Merveilles de la Nature Humaine: Origine de l'Homme. Par W. H. A. Zimmermann. 1865.
6. Lectures on Man: his Place in Creation and in the History of the Earth. By Professor Carl Vogt. Edited by James Hunt. 1864. Longman and Co.
7. Gehirn und Geist. Von Dr. Th. Piderit. Leipzig: 1863.

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THE SCIENCE OF RELIGIONS.*

1. ON tracing back, according to the exigencies of method, the history of religions, we perceive that the application of dogmatic principles to the conduct of life is a fact of recent times, which characterises the last arrivals among religions—those of Mohammed, Christ, and Buddha.

In the Koran, metaphysics have scarcely any place, and are almost reduced to an affirmation of the absolute unity of God, in opposition to the Christian idea of the Father and Son. Rules of conduct, on the other hand, and moral suggestions, occur at every step, under the different forms of precept, tale, and parable. If we follow the development of Mohammedanism, both in the East and in the West, we must observe the extreme weakness of the Moslem philosophy, compared with the important part played by metaphysics among the Greeks, and the Indians of the Brahminical period. Perhaps we ought to attribute the scientific poverty of the religions founded on the Koran less to the specially moral character of the Moslem revolution than to the nature of the Semitic mind, always inferior, in point of science, to the genius of the Aryan nations. This opinion, which has been for a long time current among the learned, is confirmed more and more every day, and tends to become a point quite incontestable. It is, in fact, certain that there is scarcely any theoretical philosophy in the Semitic books which have preceded the Koran; that is to say, in the Bible, and in the other Hebrew writings.† If we had no other religions under our eyes except those which have

* "La science des religions, sa méthode et ses limites". By Émile Burnouf. *Revue des Deux Mondes*, 15th Dec. 1864.

† Renan, "Averrhoës".

been deduced from the Mosaic, we could not establish the law which displays to us religions that can take no practical character until after they have been, so to say, strangers to morality; though it is certain that the purely Aryan religions have been developed according to that law.

Buddhism* remained in India for centuries confused, as to its metaphysical part, with certain Brahminical schools. Later, when it was separated from them, that is, when it left India, and began to spread in Tibet, in Ceylon, and amongst the yellow peoples, it preserved, though with some modification, the greater part of its Brahminical symbols. On the other hand, Buddha, from the very first, presented himself to men as the founder of a moral doctrine founded on virtue and charity. When his disciples assembled in council to establish the primitive Buddhist church, the single end they proposed to attain was, not to teach men new metaphysics, but to change their morals, which were bad, to relieve the mind of the passions which debased it, and to reunite them in an universal sentiment of love. Hence sprung that proselytism, that abnegation without measure, which turned its apostles into civilisers of barbarous peoples, like those of Tibet and the trans-Gangetic peninsula. These peoples have remained very poor metaphysicians, but their manners have been softened; and they may date from Buddhism the commencement of their civilisation. Hence, also, that spirit of religious association which has procured so great an empire in the East for Buddhist churches; which has made *preaching* one of the first duties of the priest; made confession an ordinary practice; and which, urging many men to aim at a morality which is almost impossible, has peopled with convents a whole section of Asia, and shows us at this day populous cities entirely composed of monasteries.

Brahminism is far from having given the same universality to the institution of morality as Buddhism. It is true, in very ancient times, we see the Brahmins who redacted the laws of Manou occupy themselves with the conduct of men; but this book, which is the code of the Brahmins, has rather for its object the fixation of the basis of the social constitution, and the political organisation of India, than the guidance of all men, without distinction of castes and races, in the path of virtue. The law of Manou does not demand much of that in the case of men of inferior condition: it is more severe for noblemen of royal caste: but it imposes moral purity and perfection on men and women of the priestly caste alone. On the other hand, metaphysics occupy an important place in the laws of Manou: that subject alone occupies almost entirely the first and last book. There is

* Eugène Bournouf, "Introd. à l'hist. du Bouddhisme Indien".

more theory in that single Sanscrit volume than in the whole Buddhist literature.

Let us go further back in the past. The Vedas precede Brahminism, and afford it a point of departure. Now, morality has no place at all in the Vedic hymns. It must, therefore, have been in the interval comprised between that period, which extends over several centuries, and the establishment of the Brahminical constitution, that the Aryas of the South-east began to deduce from their doctrines the moral consequences of which they contained the germ. Brahminism, coming afterwards, fertilised these primitive seeds, and formulated to some extent the primeval practices; but it never lost sight of the diversity of castes, aptitudes, and functions. It was only in the sixth century B.C. that the Buddhist preachings gave to practical morality that universal character which belongs to it, and made of it a law common to all mankind.

Whilst these events were taking place in the East, the ancient nations of the Aryan race, Greeks, Latins, Germans, had not yet emerged from the Vedic period, and had not undergone the same moral revolutions as the nations of India. When we endeavour at this time to distinguish the moral part of the religions which are called pagan, we are astonished at encountering a negation. It is certain that, amongst the Greeks, it was not their religious instruction which provided their men with a rule of life, and gave them a knowledge of virtue, but it was their philosophers. The lives of these, as we learn them from Diogenes Laertius, prove that a notable part of the Greek philosophy, especially the morality, came from the East, where the learned had gone to search for it. As to religion, it remained a public institution, with which many individual practices were agglomerated; but its only real worth consisted in the metaphysical symbolism which served it as a foundation. When Christianity penetrated into the Western world, it was the first to preach morality in the name of religion, and to make the rule of life a portion of dogmatic teaching. The Christians made it a reproach to the Pagan religion, that it was not only a stranger to morality, but was often actually opposed to it, by holding up to men an example of vice. Christianity, therefore, was not preceded by any morality among the nations of the West: it is a useless attempt, besides being utterly unscientific, to endeavour to show that all Christian morality is to be found in the writings of the Greek or Latin philosophers before the time of Jesus Christ. There is nothing surprising in the fact, and I do not see why it should not be admitted, that the Christian moralists from the very beginning copied from the dissertations of the philosophers; but, even if this was proved, the fact would still remain, that

Christianism was a moral revolution in the West which extended itself to all men, and a revolution which proceeded by the way of religion, and not by that of philosophy. This is the real point. It is certain that, previous to Christianism, there had never been in the Western world a moral and popular education which had presented itself under a religious form, and constituted part of a creed. That religion had, therefore, in its commencement the character of a moral revolution. Later, towards the end of the second century, it commenced developing its metaphysics, which, in the discussions of the fathers and philosophers of Alexandria, attained the height to which it had been carried by the disciples of Plato and of the East; but whatever it was, and whatever may still be the importance of Christian metaphysics, the true influence of Christianism, and its true greatness, reside in the moral action it exercises.

Thus, the further back one goes in the series of ages, the more one sees among the Aryan peoples a religion distinct from morality. And when one arrives at the Vedas, or the polytheism of the Western peoples, we find in religion only its two essential elements—God and worship.

The same elimination takes place in the analogous case of the priesthood. There is no social system where the order of the priests has been consolidated into so firm an hierarchy as in the three modern religions, Mohammedanism, Christianism, and Buddhism. The Brahminical priesthood owes its duration not to its particular constitution, which is nothing, but to the *regime* of castes, of which it is, so to speak, the keystone. All Brahmins are equal, and have never since their origin recognised any one of themselves for chief. Their common origin, figured by the mouth of Brahmâ, renders them independent one of another: no one amongst them can impose an obligation or give an order to another; if any Brahmin acquires in time an authority which others have not, he owes it to his science, and not to any superiority of function. This hierarchical equality of the priests has as a consequence freedom of opinion; if there is such a thing as orthodoxy in India, it is not the authority of a chief or any council whatever of Brahmins which has determined it, but solely its conformity with the Veda, that is, the Scripture. There, consequently, room always exists for the discussion of any point of doctrine, without the possibility of being accused or condemned by any ecclesiastical power: liberty of thought is absolute in the priestly caste. If we go back beyond the Brahminical times, we find no trace of any regularly constituted priesthood, or any clergy at all: there are no more priests distinguished from the rest of men; every father of a family is priest at the moment he fulfils the sacred function, just

as he is soldier in war, and labourer in the field. It is only towards the conclusion of the Vedic period that one sees the sacerdotal function become fixed in certain families, just as the royal power and military rule become fixed in certain others; but up to that time the Aryan community had formed a conception of its gods, and practised its rites, without the intermediate action of any organised priesthood.

An attentive perusal of the *Iliad* of Homer shows us the same state of things among the Greeks. There are sacrificers attached to certain temples, who sometimes transmit to their children the sacred function; but, side by side with these, the ceremonies are most often fulfilled by the hands which hold the sword, and the prayer is pronounced by the mouth which will a moment afterwards raise the cry of war. Agamemnon is, according to circumstances, warrior, judge, or sacrificer. The sacerdotal function had not then the precision it acquired later; and if we find it so slenderly defined at the time of the Homeric poems, ought we not to suppose that at an anterior epoch it had been what we find it to be in the most ancient hymns of the Veda? The development of the priesthood had taken place by degrees in India; starting from the outline which we find in the hymns, it had taken the form of a caste in the Brahminical world; then in Buddhism the caste had given way to a powerful hierarchy, of which Siam, Ceylon, Tibet, and China present examples. In the West, to the weakness of the Grecian priesthood, which rested neither on caste nor hierarchy, succeeded abruptly the organisation of the Christian church; an organisation which we might have supposed modelled after that of the Buddhist clergy, if we did not know that it took partly as its model that sort of political religion of which the Roman emperor was the sovereign pontiff, and that it arose from the necessity for unity which the Christian society experienced whilst it was still only a secret and often persecuted community. We need not give a sketch of what all the world can see: the Christian churches, and, above them all, the Catholic church, present the sight of a priesthood of which the hierarchy went on strengthening itself from year to year, in proportion as the authority of its head was recognised as the sole source of all sacred power.

Thus, then, it appears that morality and the priesthood, which are two important parts of modern religion, appear more and more diminutive as we mount up the series of centuries. There remains at last nothing more, as essential elements of religions, than one intellectual fact, the dogma, and one exterior action, worship.

As the science of dogmas and worships can only be created by mounting up the stream of years, it takes necessarily as its point of departure the present state of religions. The first chapter of this

science is a simple exposition of that which exists, the second forms part of history. Now existing facts can evidently only find their explanation in those which have immediately preceded them; that is, unless we consider the history of humanity as an uninterrupted series of miracles, which is contrary to science. Human reason, reduced to its most simple form by modern psychology, is at bottom nothing else than the idea of God; only that idea can only arrive at being clearly understood by a course of analyses, which eliminate it by degrees from its surrounding medium. These analyses are not to be made in a day; on the contrary, they require much time; every philosopher does them for himself, according to methods well understood, but humanity takes centuries to understand the humblest of them. At every step it takes, it realises a definition of God which is more exact than those which have preceded it, but to which it could not have arrived, if the others had not come before. He who does not admit this principle, can understand nothing of the history of religions, which are subordinated, like everything here below, to the laws of succession and connexion. One discovery cannot be made, except in consequence of an anterior discovery, to which it is tied like the burning fire to the spark which has kindled it. The idea of God traverses the centuries, almost identical at bottom, but receiving in its expression perpetually fresh additions. The gods of the Vedic hymns do not answer any more to the idea we now have of God, although they were adored during a number of centuries, and though at that time the poets considered them as far superior to what had been adored before them. The material God of the first chapters of Genesis has scarcely anything in common with the God of the Christians, who is a spirit pure and perfect. Nevertheless, the most learned metaphysicians of the east recognise the Veda as the foundation of their doctrines. The Christians see in Genesis the most ancient of their sacred books, and that from which, by tradition, they have received the notion of God. It is then evident, where faith agrees with science, that the belief of to-day finds the cause of its existence in the belief of yesterday, and that, in order to construct the science of dogmas, we must trace all the steps humanity has passed; but the successive additions to religious conceptions and institutions cannot be explained, unless one has unceasingly before one's eyes the metaphysical basis which constitutes human reason.

Still, the science of religions is far from being that of philosophers. The latter move much more quickly, and seem to go headlong in comparison with the slow and uninterrupted march of sacred dogmas. Philosophical systems are the work of learned men, and do not step out of the narrow circle composed of a few men given up to medi-

tation; they only answer to a spiritual necessity, and seldom have any interest for real life. The great religious movements affect at one and the same time both that society which is literary and that which is not; they agitate the popular masses, and put in motion the sentiments which animate them. A philosophic revolution is mere child's play compared with a religious one. The science of the one cannot be that of the other.

But, inasmuch as the philosophers live in the bosom of a religious society, whether they credit its dogmas or not, the questions they consider have their echo in the medium in which they live; the solutions they propose make their way across men in proportion as the practical consequences which flow from them interest a larger number of minds. It is certain that neither Socrates, Plato, nor Aristotle exercised any immediate influence over the Greeks of their own time; but their opinions, spreading as they did by little and little, alienated men by degrees from polytheism, and prepared its fall. Many centuries were necessary for that consummation, in this way. The sum of individual ideas makes up the creed of a people: these ideas themselves are produced by complex actions, very small, and varied in a thousand ways. When the sum of new ideas surpasses that which constitutes the public faith, the equilibrium is disturbed, the latter gives place, and disappears by little and little. We must not suppose that paganism was immediately displaced by the religion of Christ. This religion had mounted the imperial throne for more than two hundred years, but sacrifices were still made to the gods in many temples of Greece; and we know ourselves, in this country, that many saints and Christian personages have only managed to supplant the ancient gods, by adopting a similar name, or by becoming the object of analogous worship. Numberless traces of ancient religions still exist in the bosom of christianism, which has never succeeded in entirely effacing them. All the facts collected in recent times, both in Germany and in France, prove that religions do not make a *tabula rasa* when they supplant one another, but that they inter-penetrate in a sort of way, like the two successive forms of an insect undergoing its metamorphosis, the new form substituting itself by degrees to the ancient, and only disentangling itself entirely in time.

These general laws, which are admitted now by all men of science, have this consequence to study: that the more modern and universal a religion is, the more numerous are the elements which it has united, and which it embraces in its bosom; in other words, its beginnings are more heterogeneous.

It is only an ignorant or a timorous mind that can imagine christianism drew its origin exclusively from Judea; for not only is the

Christian thought by no means entirely in the Bible, as some Israelites are so ready to believe, but in its course it has borrowed much from Greek and Latin notions, and afterwards from those which prevailed during the middle ages in the feudal society. If we pass from dogma to rite, we see that the greater part of its elements have an eastern source, and a symbolical application by which it approximates to the Indian worships; but if one goes back beyond Christianity and the religions of Buddha, the great religions are seen existing isolated the one from the other, or only inter-penetrating reciprocally in some of their relations. Finally, when we arrive at the most ancient of the sacred memorials that we possess, especially if we add to them those anterior facts which have been best established by comparative philology, we see the primitive religions appearing altogether independent, like the human races amongst which they flourished.

Many Christians suppose that all the religions of the earth sprung from one primordial revelation, of which they are nothing more than different degenerations. Of course, this is no article of faith, but an idea which has been spread far and wide since the time when Bossuet composed his *Histoire Universelle*, on quite insufficient materials. Since then, science has advanced; there is no man of learning now who does not consider that opinion as false; it is contradicted at one and the same time by the knowledge of the texts, which show no point of contact between the Hebrew books and the Veda, by the comparative study of languages, which distinguishes the origin of the Semitic idioms from those of the Aryan, by that of human races, which we see succeed to one another according to their order of perfection, by the philosophical impossibility of deducing the Grecian faiths, and above all those of India, from the monotheism of Genesis, and finally by one simple reflection, which domineers over all the facts, that when humanity has once discovered and possessed itself of a true principle, there is no example of its having allowed it to perish. If, then, the Christians admit the reality of a primordial religious revelation, they must bring themselves to an agreement with science, and instead of seeing in the different religions so many degenerations from divine truth, they should regard them as human attempts by which the nations step on slowly towards Christianity.

After Indian researches, and above all the study of the Veda, had put science in possession of the most ancient sacred book of the Aryan race, we have begun to understand the continuous march of religions, and have definitely renounced the idea of Bossuet; his book may still afford some edifying reading, but it has no scientific value at all. In reality, the religious world is subordinated to two tendencies, of which neither is yet worn out. One of them is Semitic; it

has its origin ascertained in the books of Moses, and its development in the Christianity of the day. The other is Aryan; its most ancient expression is in the hymns of the Veda; its latest expression is Buddhism. The immense majority of the civilised world is divided between these two doctrines. The number of Christians is estimated at two hundred and forty millions, and that of Buddhists at two hundred millions. Nevertheless, the societies in which these two dominant religions were born have not entirely given up their ancient faiths. The Jews turn but slowly to Christian ideas and Christian ceremonies. The Indian state of society has remained almost entirely Brahminical, after having expelled Buddhism from its bosom, and only preserved the trace of it in the modern sect of *Jainas*. In addition, the Semitic tendency has given origin to Mohammedanism, which, though constructed exclusively for the Arabs, has extended over a considerable portion of the ancient continent.

The two streams of religion, which have issued from the sources of Genesis and the Vedas, or, to speak more exactly, from the southwest of Asia and the Valleys of the Oxus, have been continually inter-penetrated by three philosophical systems, those of creation, emanation, and atheism. By the absolute negation, not only of God, but of every spiritual object, atheism has never exercised any influence on religious dogmas, nor mingled among them in any quantity, and has modified in nothing either the idea of God, or the worship. When it has appeared in the bosom of the ancient religions, or in modern societies, it is by its negative theory that it was separated from the public creeds; amongst the moderns, above all, by the immorality of its consequences. Amongst the ancients, an atheist was considered as a man who deceived himself; at this day, it would be considered disgraceful to be an atheist. In every way, atheism and the doctrines engendered by it, will never be able to exercise any direct action on the march of religions, nor give them any assistance. An almost universal repulsion is what they have always met with in the religious societies where they have appeared. The case is not the same with the two other philosophic systems, those of creation and pantheism. Both the one and the other have sufficed to animate the great religions, in the bosom of which they have been freely developed. Moreover, as they are by no means altogether incompatible, history shows us, on the one hand, religions founded upon the system of creation, vivified in some parts by doctrines borrowed from pantheistic systems, and on the other, entire nations, who have been brought up in a pantheistic religion, receiving from an external source doctrines derived from the idea of creation. Thus, not only successive religions have been partly incorporated with each other, but

the two great paths which they have pursued have had points of meeting, where their metaphysical systems have approached each other.

Science has proved that the original tendency of the Aryan nations is Pantheism, whilst Monotheism, properly so called, is the constant doctrine of the Semitic nations.* These are truly the great channels in which the two sacred rivers of humanity flow; but facts show us in the west, people of Aryan origin in some sort Semitised by christianism. All Europe is at once Aryan and Christian, that is to say, Pantheist by origin and by natural disposition, but habituated, through a religion which has come to it by the Semites, to admit the dogma of creation. This fact, which has been demonstrated by science beyond all dispute, has only been just caught sight of by Dr. Philipson in his *History of the Religious Idea*. Not sufficiently recognising the oriental origin of the European peoples, he was of opinion that the exterior part of the Christian creeds, and the fundamental doctrine of the plurality of the divine persons, are so many relics of paganism. He has only seen in Christianity a compromise between the Greek faiths and Judaism; concluding that the function of the Jews continues to be the conservation of the pure and primitive religious truth, and that Israel is always the people of God. According to him, the portion of christianism which proceeds from the Greeks and Latins is destined to disappear, and so the Christian nations will find themselves re-united to the doctrine of Moses; a false conclusion, which proceeds from an incomplete view of the reality, as if the nations ever went backwards, especially in religion, above all other matters, and as if christianism could revert to its point of departure, and renounce all the truths which it asserted the day when it separated from Judaism, and those which it has acquired during the succeeding centuries. If a radical transformation could be effected in the Christian doctrine, it would rather take place in a way opposite to that imagined by Dr. Philipson; for the Christian nations belong almost all to the Aryan race, the genius of which has just as much persistence as that of the Semitic, and possesses a scientific energy superior to that of the descendants of Israel. Besides, the reformation which M. Philipson looks for in the future, was tried, about twelve hundred years ago, in the very bosom of the Semitic races, that is to say, under the most favourable conditions for the expulsion of the Aryan element. That attempt produced the Koran, the doctrines of which are in some respects superior to those of the Jews, but are singularly surpassed by those of the Christians. The Arabs and the Jews form in humanity a section of pure race whose religion has borrowed but very little from foreign nations; monotheism of the most exclusive

* See "l'Histoire des langues semitiques", by M. Renan.

kind is the foundation of their faiths; for them God is not only unique, but an individual totally apart from the world, whose personal unity is absolutely indivisible, even in idea. It is the only human race which has conceived God with these attributes. When the monotheistic idea went out from the Semitic race to be diffused over the Aryan world, among the Greeks, the Latins, and, still later, among the nations of the north, it lost in their hands, its extreme rigidity and inflexibility. When the Christian doctors, when the Greek and Latin fathers, developed and constituted the Christian metaphysics, they thoroughly understood that the evolution of the world and its government are only to be intelligible by making of God a being much nearer to the world, and, consequently, more similar to the idea which the men of the Aryan race have always had of him. We may then say truly, with Dr. Philipson, that christianism has derived something from Judaism, and also from other religions. But we must say so in quite a different sense, and understand that Christian metaphysics have sprung from the encounter, and the mixture of the two great religious channels in which humanity has flowed—the Semitic and the Aryan current.

It is the business of science to discriminate the portion which belongs to either. The Christian monotheism, with the idea of creation, which is the consequence of it, has certainly a semitic origin, for neither the divine individuality, nor the doctrine according to which the world has been produced out of nothing, have ever appeared at any time in the Aryan religions: in Sanscrit, there is not even a word which means *to create*, in the sense which the Christians mean. Still it is well known at what time and under what influence the Trinity of the divine persons was theoretically discussed and definitively established. It was at the time when the school of Alexandria developed its theory of *hypostases*, a term which was adopted by the philosophers of that school, as also by the Christians, to signify what are called in Latin the *Persons* of the Trinity. The Christian doctrine did not lose sight of the individual unity of God the Creator, such as they had received it from the Semitic tradition, and the persons of the Trinity could only be the different aspects of God, equal amongst themselves, and equal also to the fundamental unity which contained them all. It was besides necessary for that doctrine to reconcile itself with that of the Incarnation, which the pure Semitic dogma was too narrow to admit. The creation, the trinity, and the incarnation of the son in the human figure of Jesus, constitute a dogma where the Semitic and the Aryan element have united without being lost in each other. The Alexandrian philosophy is, on the contrary, exclusively Aryan; for it proceeds at once from Platonism, and

the doctrines of India and Persia, which had been fermenting in Alexandria for four hundred years. Pantheism admits neither the individuality of God separated from the world, nor the possibility of a creative act producing something from nothing; but, on the other hand, the Absolute Being cannot pass into action and develop itself by virtue of the law of emanation, except by first of all clothing itself in secondary forms to which the philosophers give the name of *hypostases*. The diversity of these hypostases does not allow any one of them to be equal to the Absolute Being, in which they reside: it is their sum which is equal to it, and when each one of them develops itself in turn by virtue of the same law, none of its modes is equal to it, but it is equal to the sum of its modes. We now see in what limits the doctrine of the philosophers exercises its influence on the first development of the Christian metaphysics, and how the latter are found equally in opposition with the Alexandrian pantheism, and with the Semitic monotheism, having all the time certain affinities one with the other.

As to the incarnation, it constitutes the point of dogma which separates at the present day most completely Christianity from the Semitic religions. In the Bible, God inspires the prophets. In the Koran, Jesus or Mahomet; but in order for God to be incarnate, it is necessary he should have several hypostases; which brings the Aryan doctrine in formal opposition with the Semitic. Christian orthodoxy has never shown any weakness on this point, and it has been right: the doctrine of the incarnation is the first foundation of christianism: he who does not admit the divinity of Jesus Christ is no Christian. The history of heresies shows with what energy the orthodox dogma disentangled itself from all those which only appeared to compromise it. The West, then, must give up being Christian before it can yield to the Jews on a point of such importance. I add that it must cease to be Aryan, which is impossible. It is more easy for a man of our race to admit the incarnation of God in a corporeal form than to conceive the prophetic inspiration in the Jewish or Mussulman sense. The belief in the biblical prophecies has been much weakened in the present century, and may die out altogether. The belief in the divinity of Jesus will endure, because it is conformable to the Aryan intellect, and can be reconciled equally with the idea of emanation as with the idea of God the Creator: now these are the only two metaphysical systems which can make any figure amongst men.

The two tendencies to which the better part of humanity is subjected find themselves united in Christian metaphysics, and make of the Christian a truly universal religion. The Semitic beliefs, on the contrary, proceed exclusively from one alone, that to which the name

of monotheism has been given; a name badly chosen, because at bottom the Aryan pantheism demands the unity of God just as much as the doctrine of the Jews and Arabs. That which is exclusive in the Semitic idea has had two consequences which have been developed in history; in matters of religion, the Semitic nations have preserved themselves from every foreign influence, and they have not been able to propagate their dogmas beyond themselves, except by violence. The Jews have never attempted to convert other nations; they have been content with regarding themselves as privileged and superior to the rest of mankind. The development of Islamism appertains rather to political and military history than to the science of religions. It has extended itself over the nations of Aryan origin in Central Asia and Hindostan, and also over the yellow races in many countries of Asia. But it is by war that it has made these conquests, and by force that it preserves them. Amongst those nations who have definitively adopted it, the violent energy which animates them has become the most striking feature of their characters, and what is true of the white or yellow races who have been semitised by Mahometism is all the more so of the black races. The natural mildness, then, of Christianity is derived from the Aryan race, where it has been disseminated, and not from the Semitic element in it; the intolerance which has been borrowed from it sometimes, is neither in the essence of its dogmas, or its spirit, which is a spirit of mildness. If it has sometimes used intolerance, it is its alliance with the temporal power which has been the cause: a candid study of history leaves no doubt on this point.

II. The duality of origin which we have perceived in the Christian dogmas is found equally in their rites. The history of the Christian ritual has never been made; science in that respect is far from being perfect. Everything which has been written on this subject before the discovery of the Veda is insufficient; as to ourselves, we can only give here indications, and trace the path which science may essay to pursue. That book has yet to be written. The science ought, of necessity, to commence with a perfect picture of what goes on at the present day in our churches; to classify the ceremonies; to distinguish according to orthodoxical doctrines those which are accessory from those which are fundamental, and give none but the authentic interpretation of any one of them. After that, we can proceed to the history of the ritual. That history must be constructed like that of dogmas, by going back through time; in fact, the existing state of ceremonies is a solid ground on which a science may be founded; but if one were to go down the scale of time, we should have to commence by that part of history which is least easy to elucidate, that is

to say, by the beginnings. If the Christian ceremonies proceed from the Gospel, the Gospels themselves are not, as to the ceremonies contained in them, the original books, because they were preceded by the entire development of the Hebraic ritual. We must then set out from Genesis, which answers to the most obscure period, and what is in some sort the most mythological one of the Hebrew nation.

And we must add to this, that everything goes now to show that a considerable portion of the Christian ceremonies comes from sources which are not Hebraic, nor even Semitic, in such a way that we are obliged to assert at first starting certain facts as settled, which, on the contrary, ought not to present themselves except in the very last conclusions of science. As we mount up the stream of years, we make successive eliminations, we see the ceremonies getting more and more simple as the most recent disappear, and when we approach the real origins of the ritual, it becomes possible to distinguish the sources from which it emanates. This kind of history does not, indeed, resemble a river whose principal course is formed by streams which come to it on all sides, but to a reservoir, which after having united the waters of two or three sources, spreads them out in an infinite quantity of channels. We are, so to speak, at the extremity of the channels, and we cannot arrive at the primitive sources excepting on the condition of mounting patiently up the stream.

When we apply this method to the study of the Christian ceremonies, we arrive at this result, that many of them, examined by the aid of the Bible and the Hebrew customs, have an origin quite un-Semitic; others, on the contrary, were practised amongst the Jews, and passed from their ceremonies into the Christian. Thus many of the great festivals of the year bear Hebrew names, many objects consecrated in the churches are reminiscences of the ancient law; but almost all the parts of the sacred office, the altar, the fire, the victim, everything which gives a visible representation of the dogma, or the story of the incarnation; and again, in another order of facts, the temple, the bell, many of the sacerdotal habits, the tonsure, the confession, celibacy, are so many symbols or usages whose origin ought to be sought anywhere else than among the Jews. We may say as much of the prayers and words which are pronounced in the majority of the sacred ceremonies; those which are not taken from the Psalms, or otherwise quoted from the Bible, are animated with a spirit which is by no means Semitic; many of them resemble, both in form and substance, the chants of another race, the originals of which we possess.

It is proved by many documents anterior to Christ that Buddhism was known at that epoch in the south-west corner of the Mediter-

raneean. The Buddha is mentioned by the Hellenising Jew, Philo : the doctrine of the *Samanai* of India, which are nothing else than the *gramanas* or disciples of Buddha, was celebrated and appreciated in Alexandria, and in all the oriental parts of the Roman empire. The Bible is not the only foreign book of which the Greek scholars had knowledge at the time of the Ptolemies. The foundation of the Museum, suggested by a celebrated professor of the early days of the kingdom of Egypt, Demetrius Phalerius, had created a centre for studies where the doctrines and frequently the sacred texts of all the religions then known were incessantly discussed with a scientific liberty, to which our schools are a stranger. At the time when the Christian ceremonies were established in the societies so often clandestine of the primitive church, Buddhism with its doctrine, its ceremonies, and its hierarchy, had already existed six or seven hundred years, and had sent out its missionaries from India into almost all the countries of the earth. On the other hand, it is certain the Veda was known to the Grecian world before the coming of Christ. In the Alexandrian poems, published under the name of *Orphica*, there are verses translated word for word from certain hymns of the Veda ; there are names of divinities which are found in these hymns only, and which never appeared in the true Greek pantheon. The ceremonies which are performed on Holy Saturday, after the renewal of the fire, not only have a most decided Vedic character, but contain a certain prayer, which can be altered into a Vedic hymn, merely by substituting the Aryan and Dasyan words for the Hebrew and Egyptian ones. Here are some facts enough to set us out on a new path.

We are told from Berlin* that a considerable part of our ceremonies comes from India ; but as the science of the Christian ritual has not even been sketched out, we dare not announce as certain an assertion which reposes on hypotheses, or even at the very best on probabilities ; and for this very reason we have insisted on this point in hopes that the science will lose no time in advancing in that direction. However that may be, it is certain that the Christian rites have more than one origin, and manifest in their development the double tendency which is also remarked in their dogmas.

We ought not to be surprised at this, if it is true, according to a theory which is confirmed by a general observation of facts, that the ceremony follows the dogma, and is its sensible and symbolical expression. The Hebrew ceremony follows from the Hebrew dogmas alone, and these are of a rigidity which has never allowed them to bend to the necessities of other races, or receive anything from with-

* A. Weber, " Histoire de la littérature Indienne".

out. Israelites admit amongst themselves from other nations, nothing but their material products. They were to them the object of a lucrative commerce, which from the time of King Solomon extended to India from the Red Sea, and finished by propagating itself throughout the ancient world; but all their manifold collisions with strangers never changed their religion, which continues to last. The invectives of the Holy Ones of Israel against the introduction of foreign ceremonies and the harsh penances which the people of God had to suffer more than once before being restored to favour, are so many proofs of the inflexibility of the Hebrew rites and the spirit by which they are animated. By selecting from them the human element and adopting Aryan rites whose grandiose symbolism accorded well with the new dogmas, the early Christians placed themselves on neutral ground, which was open to all nations, and have instituted a worship which is truly universal.

Besides, this double tendency did not produce all its effects at one blow. It would be a mistake to suppose that when we have got back to the epoch of the preaching of Jesus, we had arrived at the beginning of the Christian dogmas and ceremonies; both go back very much higher; but it is only at the time of Jesus that the equilibrium between the old wants and the new wants was found to be broken, and that Christ by his life and death consummated a work which had been prepared long before. Men only see a revolution when it explodes; but science studies the march of slow actions whose accumulated effects at last produce revolutions. The Christians of the first centuries had from their dogmas and their symbols a sentiment full of enthusiasm; little by little, both were developed, and the sentiment became divided and lost its energy. At this day the meaning of the Christian rites is known to scarcely a single individual, not even by the priests who perform and preserve them; their origin is generally ignored. As to the dogma, although formed out of everything which is most pure and most human in the metaphysics of past ages, it has seen the lay philosophy separate itself from it; for this, given up to the study of human thought and admitting without demonstration a dogma of creation just as absolute as that of the Jews and the Mussulmans, has lost the feeling of the orthodox creation operating by divine persons. By attributing the creation of the universe to an Absolute Being who will not admit multiplicity of essence under any form, it asserts in fact a miracle which is more incomprehensible than that of the Christians. The result was, that Christianity underwent in its dogmas and its worship one of those crises to which all religions are subject when they are traversed by a system of philosophy. It was the Semitic tendency, concentrated in philosophy,

which produced this rupture, for the Aryan tendency in science as in religion, has always leaned towards the theory of divine emanation.

The double influence under which Christianity was born and has been developed, renders the study of it much more difficult than of either of the two Semitic religions. It has always been very hard to disentangle the Aryan element which it contains, either in modern times, when it proceeds directly from the spirit of the European nations, so opposite to that of the Semitic; or in the first centuries, when it was born and strengthened under the action of the ideas and usages of the East. It was impossible that the separation of these two elements of doctrine could begin to operate till after the discovery of the Indian books, when it became possible to understand the relations of the East with the Greco-Latin world, and penetrate the beginnings of mythology. There is in christianism a very important symbolical portion, which, without this discovery, would have remained for ever inexplicable; for the Hebrew doctrine, from which the other part is derived, excludes, so to speak, all symbolism, and everything which can clothe itself in the forms or attributes of humanity. The same obscurity prevailed over the ancient religions of Europe, and would never have been dissipated, had not a knowledge of the Vedas and of comparative philology, to which it gave a foundation, arrived and illuminated the subject. From the day when the hymns of the Veda became known, science has seen unrolled before it a gallery of representations, whose prominent features we will now point out.

It is but a few years ago since mythology was considered as a collection of fables, that is to say, of pieces of wit and of poetic creations, with which the ancients had illustrated their works and embellished their buildings and their gardens. All the world remembers the decision of Boileau on

“All those gods who are sprung from the brains of the bards.”

and the course he advised the rhymsters and the artists to follow in consequence. Looked at as sacred conceptions, they were called false gods, and the religion of the nations who adored them was paganism or idolatry. At the time when christianism, in the enthusiasm of its novelty, was still struggling against the genius of antiquity, the iconoclasts, a sect animated with the exclusive spirit of the Semites, came to an identical verdict upon their rivals, and began to break the images. But the Aryan mind gained the advantage, and a less severe opinion of images and symbols finally prevailed. Among the moderns, the gods of paganism found a home in art, where they

still remain. Only their religious character has entirely disappeared, and they are considered as nothing more than poetic allegories.

The science of our day has, in its turn, again reconsidered that appreciation. We have seen in the east great nations of the same race as ourselves adoring gods exactly like those of Greece and Rome. We have seen, in one of those religions which has the greatest number of followers, and which in so many ways resembles that of Christ, in Buddhism, these same divinities reunited into a true Pantheon, without the men of that worship being taxed with idolatry. Finally, going back from century to century, the learned have been able to discover the very origin of these sacred figures, whose primitive symbolism is still manifest in all its glory. This is the great path of the Aryan intellect, which has thus by degrees displayed itself with all its subdivisions. When its progress has been free and spontaneous, it has manifested itself under three successive forms. The last is Buddhism. The intermediate form is Brahminism, with Mazdeism, or the religion of the ancient Persians. The most ancient form embraces the religion of the Vedas, the mythologies of the Greeks, the Latins, and the northern nations. The history of religious revolutions shows us the mythologies of the west preserving up to their last moments their primitive character, undergoing only internal and unimportant modifications, and finally disappearing in the space of some centuries before christianism, with which they have been in part incorporated.

To study with any profit the spontaneous movement of the Aryan religions, it is in Asia that we must go and seek them. Mythologies can only be illustrated by comparing them with the dogmas and worships of the east. As to the remains which have been preserved in the popular traditions of Europe, they would be completely unintelligible, if we were not able to find out their origin and signification in the Vedas. But, from the time of their arrival in India to that of the propagation of the Buddhist faith, the Aryans of the south-east have lived isolated from the west. The chain of mountains which, towards the central ganglion of the mountains of Asia, detaches itself from the great diaphragm of Dicearchus, and descends from there, southwards, down to the sea, separates the basin of the Indus from the southern provinces. To the north, the Himalayas present an insurmountable barrier. The only passage which allows of communication with India towards the west, lies towards Attock, and leads down the basin of the Oxus. It was by this path that the Aryans of the Vedic period descended into Sind. By sea, the most ancient relations of their descendants with the Semites date from the kings of Israel, and are posterior to Rama, the hero of one of the

great Brahminic epic poems. These relations were exclusively commercial, and, according to all probability, did not extend beyond the shores of the continent and the island of Ceylon.

When, in the sixth century, before our era, the Buddhist revolution, which had been preparing for a long time before, came about, the external influences which had been exerted upon the Brahminical religions had been only in very insignificant proportions, and at the very utmost only by the introduction of some legends, rather poetical than sacred, like that of the deluge.

Science now considers it to be actually demonstrated that Buddhism was produced by the spontaneous action of internal causes in the Brahminic civilisation. The Siamese ambassadors who came to the court of France during the reign of Louis XIV were Buddhists. Attention was directed to the religion of these men, who appeared very civilised. The name of Samanocodom, the Sanscrit *çramana Gautama*, was recognised, which is the same as Buddha. The extraordinary resemblances which were observed between the religion of the Siamese and Catholicism gave rise to the idea that they sprung from an ancient Christian sect, that of the Nestorians. An acquaintance with the Buddhist writings of Siam and Ceylon rectified this mistake in the first instance. Later, the Nepaulese MSS. which were brought to Europe, and the knowledge of Tibetan and Chinese Buddhism, left no room for doubting that the Buddha Cākyaṃuni lived nearly a thousand years before Nestorius, five centuries and a half before Christ, more than two centuries before the foundation of Alexandria, and fifty years before the establishment of the republic of Rome.

We have indicated the dominant character of Buddhism, which sprung from a revolution in morals, and not from any radical change of doctrine. Although metaphysics occupy one of the three parts of the collection of Buddhist writings known under the name of *Tripiṭaka*, it would be quite as unjust to Buddhism, if we were to judge it from that point of view alone, as it would be to christianism, if we were to neglect the moral and civilising action which it has exercised since its birth. The theory of *Nirvana*, which has been made the special Buddhist dogma, was known to the Brahmins long before the advent of Cākyaṃuni. It is, therefore, a secondary point; but such is not the case with the moral regulations introduced by Buddhism, with the moral purity, humility, and universal charity, which form its fundamental precepts. The success that it has obtained outside of India, among the yellow races, and in Oceania, the long ramifications it has extended towards the east, up to the old Grecian world, and by the eastern ocean, even into ancient Mexico, can only be explained by

the moral transformation which emanated from it. It was driven from India in consequence of the equality which it established between the Brahmins and the other castes, and the right which it gave all men to aspire to, and be clothed with, sacerdotal functions.

In other respects, all the morality of Buddhism springs from its metaphysics, of which it is only a new application. These metaphysics are in fact pantheism, conceived under its most absolute form, and comprising all real or ideal beings in a hierarchy where man can occupy different degrees, according to his knowledge and his virtue. These two qualities are not presented arbitrarily, as homes from which emanate the characters which legitimately distinguish men from each other. The Buddhist theory only arrived at that point after psychological analyses and æsthetical considerations which have never been surpassed by the philosophers of Europe. It is hence have been derived all the practical consequences which make of Buddhism one of the religions which exercise the most energetic moral action on the soul. In proportion as Indologists advanced more and more in their knowledge of the east, they discovered new bonds which attached the morality of Buddhism to its metaphysics, and that again to the Brahminical theories which had preceded it. From the point at which science has now arrived, we may consider the religion of Buddha as the issue, by natural evolution, and without any exterior influence, of the pure Indian mind, and that it is a spontaneous consequence of pantheism.

We should have generally but a very incomplete idea of Buddhism, if we regarded it merely as a moral institution. There is the great development of a priesthood in full hierarchy, and centralised northwards, both in Tibet and China, and southwards in the islands and the peninsula beyond the Ganges; a spiritual power analogous to that of the Pope, and which, after being at one time united to the temporal power, has been again separated, and shows, at present, the example in the kingdom of Siam, of two kings reigning simultaneously in the same capital, and exercising without conflict their two powers; a worship whose splendours often surpass the most brilliant catholic ceremonies; an extension of the monastic life which leaves far in the rear the convents of Spain and Italy; finally, a very large number of rites and usages, which make the religion of Buddha approximate to that of the Christians. All this, moreover, is only the outside of the matter, and merely that which must attract the attention of the most inattentive traveller. The perusal of the Buddhist *sutras*, the translation of many of them, have enabled the learned to get to the very bottom of these doctrines, and disclose to us a moral education which may be said to equal that of the Christians by its elevation, its purity,

and the empire which it exercises wherever Buddhism is dominant in the east.

We must insist on this point, which is now undisputed by any one, because an acquaintance with Buddhism, considered from this point of view, has given us the laws which the religious spirit of the Aryan nations obey, and also because it rectifies one of the most exclusive theories of our European moralists, that which concerns the morality of pantheism. Explained for the first time clearly, in his lectures on the *Droit naturel*, by M. Jouffroy, that theory has been adopted by his school, and is now taught everywhere in France. We need not contest it now on speculative grounds; but when we approach it with the new facts which the study of the east provides us with, it has been contradicted in the most formal way an *a priori* theory can be; for, of two things, one; either the nations who for twenty-five centuries have adopted at once the metaphysical theories and the moral precepts of Buddha have committed the grossest inconsequences in practices which their daily life is interested in, or pantheistic doctrines have none of those consequences which French theorists have sought to deduce from them. This contrast between a system which philosophers imagined was established, and a fact which has persisted so long, and embraces such numerous populations, is explained in the eyes of orientalists by the very incomplete knowledge of pantheism possessed by philosophers up to the present time. Abstract theories, however well deduced, are never, in point of fact, equal to experience, and experience in this case is offered to us by oriental Buddhism, realised before our eyes in gigantic proportions.

The second station of the Aryan mind in Asia is marked by two great antagonistic religions, that of the Persians, and that of the Brahmins. The first existed a long time in its proper principles without undergoing any important alteration in its contact with the non-Aryan races; so it is in the books attributed to Zoroaster that we must now search for its original form. The *Bundehesch* and the *Shah-Nameh* of Firdousi, which are of later date, already afford many legends and even beliefs whose origin is certainly not Aryan, and which come either from Assyria and Chaldæa, or even from countries further south. Before the text of the *Avesta* had been translated and commented on by the learned of our time, the pantheistic character of the Persian religion had not been, so to say, understood. People had only been struck with the exterior symbolism of the worship, and the dualistic appearances presented by the myth of Ormuzd and Ahriman. Since then, it has been seen that this last personage is far from being placed in the same position as his rival, for he is represented in the legend as neither eternal nor immortal, and is destined one day

to disappear. As to Ormuzd (*Ahura mazda*), science has ceased to consider him solely under the personal form given him by the legend and the worship; for the study of the Zend texts has proved that he is derived from a metaphysical conception of a much more abstract character, that of an Absolute and Universal Being, such as is found in all the pantheistic systems of the East. It was not in the metaphysical substratum of its doctrines that Mazdeism was found to be in opposition to Brahminism, but through its symbols, which are the part of religions which is most accessible to the people; through its worship, which springs from the symbols, and is accommodated to it; and through the particular form which a worship always gives to a civilisation.

As to the origin of the Medo-Persic race and religion, European science finds itself in face of a great hypothesis, which was indeed very probable, but which had not been demonstrated by clear and authentic texts, until we had in our hands the hymns of the Veda. Ever since the invasions of Darius and Xerxes, Greece had learned to recognise brothers in her enemies; the reader will recollect the beautiful allegory of Æschylus in the *Persæ*. Later, in Alexandria, the relationship of the two nations was made plain by the alliance, which was effected between their doctrines; the introduction into the Roman Empire of Persian worships, like that of Mithra, seems also to show that a certain affinity existed between these religions and those of the west. But it is only in our time that it has become possible to follow the march of religious ideas in that important part of the ancient world. The study of Sanscrit has opened the way, the discovery of the Vedas has unveiled the beginnings, and it has been possible to recognise in the religion of Zoroaster one of the most original, and at the same time one of the most grandiose, productions of the pantheistic spirit of the Aryans.

In any case, the Zend literature, even with its most recent additions, is so restricted, that it cannot offer to the science of religion documents comparable to those which India has furnished it and still continues to promise. The whole of the sacred books of Brahminical India would make up a library. Although the date of many of them can only be approximately fixed, and oscillates in most cases between limits at a distance of more than five hundred years from each other, still we can see our way a little, and we are already able to follow the march of Brahminical doctrines, and mark the principal moments of their evolution. Brahminism offers two striking features, which are in some sort unique in the history of religions. It has survived a great religion to which it gave birth, viz., Buddhism, and has also undergone internal transformations, which have made of it as it were

a series of distinct religions. Besides, as we have said, it seems to have contributed to some extent to the explosion and the first evolution of Christian ideas, both in Egypt and in the eastern part of the Roman empire.

The rising of Christianity was fatal to Judaism. The dispersion of the Jews, the destruction of their temple and that of their sacred city, did less to reduce them to the state they are in now than the religion, although it sprung from theirs, and in the midst of them. In the centre of India, in the best days of the Brahmin religion, the metaphysical ideas of a school which was already ancient, joined to the highly elevated moral sentiment of a prince, in whom centred the public need of a restoration of manners, gave birth to a new religion. A church (*sangha*) was seen to be formed, animated with an ardent proselytism in the bosom of a society which had no church, and where no attempt had ever been made to convert any one. The reform was hailed with acclamation by the people, whose condition was elevated by it; it was welcomed by the kings, because it did not attack their privileges; and accepted by many of the Brahmins, by reason of the purity of its morals. But the equality of birth of the Sudra and the Brahmin which was proclaimed by the Buddhists, the accordance of the priesthood indifferently to all men, armed against the new religion the Brahminical party, which was the preserver of castes, and, after existing ten centuries, Buddhism was chased out of India, and has never entered it again.

Nevertheless, Buddhism added nothing to the Brahminical conception of the Deity, and, consequently, could not legitimately introduce new rites. Its church and its powerful organisation did not tend towards the establishment of a new and more perfect religion. Buddha was not considered either a god, or as an incarnation of any divinity. In Brahmin India, that reform could therefore only be regarded as a revolutionary attempt, which aimed at the suppression, or at all events the weakening, of the institution of caste. By the substitution of a priesthood recruited from the very lowest ranks of society, to the hereditary priesthood of the Brahmins, who were pure Aryas, and whose families could be traced back to the Vedic times of the invasion, it put an end to the institution of caste, and caused a social revolution in India, in comparison with which our revolutions of the west were only child's play. Finally, that came to pass which unfortunately almost always happens, that the reform of morals was sacrificed to reasons of state. Thus, Brahminism survived, and still exists.

We may then trace, by going back through the series of ages, the progress of religious ideas, and the development of worships in Brah-

minical India, from the present time up to their beginnings. Their history is the exact counterpart of the Semitic religions. The monotheism of Genesis, in the course of its transmission from generation to generation, has undergone none but secondary transformations. Its history is reduced in some sort to the purification of the idea of an individual God, an idea which cannot be extended or diversified, and which can engender nothing out of itself. On the other hand, when it once took life in the minds of the Aryas of the south-east, the pantheistic conception of an universal God residing in the bosom of the universe is capable of putting on various forms in practice, and producing new worships. In fact, one of the fundamental ideas of pantheism is that of incarnation. He who does not admit the possibility of an incarnation, can no more be a pantheist than a Christian. In the Indian theory, which was very early pushed to its extreme limits, the absolute unity of the Being was the fundamental conception of its metaphysics. This absolute Being is neither creator nor father of the universe, for these two qualities suppose an active force, moving out of itself, besides which, it is possible to conceive something more still, which does not admit in any way dualism. Brahm is, as it were, the pivot on which turns all the metaphysics of the Brahmins. The name is neuter, in order to show that he is not the father of beings, and is indeclinable, in order to show that he does not enter into any relations, and therefore is absolute. The three forms which in times relatively modern make up the Indian trinity (*trimūrti*), Brahma, Vishnu, and Çiva, may be regarded as divine persons. We may say of them all that the Alexandrian philosophers have professed in their theory of the *hypostases*. Brahma, who is the active force which has emanated from the absolute Being, lives and acts in the universe, of which he is called the father, the ancestor, the producer. No one of these names ought ever to be translated by the word *Creator*, because once for all, the idea of creation has no existence in the Sanscrit language. It is by way of emanation that he engenders the universe, just as a father engenders a child; and it is by a law exactly analogous to that which the Alexandrians called the law of *return*, that he absorbs in himself all beings by destroying their perishable forms. That double law is symbolised in the Brahminical religion under the figure of the vigil and of the sleep of Brahma.

Regarded under his more strict relations to living beings, the Absolute Being takes the names of Vishnu and of Çiva, who represent in modern times, not the productive and destructive principles of the universe, as was long imagined, but the divine person which animates living beings, and that through which all the forms of life go to resolve themselves in God. If we desired to find in the Indian doctrines

a counterpart to the second person of the Christian Trinity, we should have to select Vishnu; but still we should find fundamental differences, because Vishnu is not the son of Brahma, and makes part of a pantheistic system. As to Çiva, there is nothing in Christianity which answers to him, because the law of *return* is not really found anywhere in it. Still, when the Brahmins had once for all been able to conceive the absolute unity of being, finding themselves in presence of a multiplicity of living beings, which people the universe, and who are subject to the immutable laws of generation, of transmission and the analogy of forms, they were naturally conducted to the theory of incarnation, which is nothing at bottom but that of the universal soul, or of Vishnu. In fact, in the doctrine of the creation, God remains as substantially separated from created beings as they are from each other. Incarnation is by no means a consequence, as is proved by the modern philosophy, which makes no mention of it, and the Christian doctrine, which presents it as a miracle or a mystery. But in pantheism, under whatever form it presents itself, there is always a theory which resembles that of incarnation, and in Brahminism incarnation is a natural consequence of the principles admitted. Vishnu is the divine Person which becomes incarnate. He is not incarnate once only and by way of miracle, he is always and everywhere incarnate. There is not a living being, however low in the scale it may be, which does not bear Vishnu incarnate in it. In men his presence is manifested not only by life and the qualities of the body, but also, and above all, by those of the mind, which are the thought and the moral action. When a man, by the superiority of his intelligence, and by the correctness of an energetic volition, exercises over those of his own time, and the generations which follow, a superior influence, he is more especially recognised as a divine incarnation. Such were the gods Rama, such are the sons of Pândou in the Sanscrit epic. The development of the religious idea in Brahminism operates constantly through a series of incarnations, or personifications of the Absolute Being. As this Being has never appeared in the universe, and is scarcely accessible to the thought, it cannot act except by the personal energies which emanate from it, and these great divinities engender in their turn an uninterrupted series of sensible living forms, to which the names of real beings have been given. These generations cannot be produced without having in their very beginning the duplication of the sexes, which is the universal condition of life, in such a way that in Brahminism, when arrived at its perfection, every god has his wife, which is his feminine energy, and his seat of production.

III. We cannot here enter any further into these metaphysics. It is sufficient to say that, from its beginning up to the present day, it governs the whole movement of religious ideas in the East Indies.

By following this step by step, science can at this day give an account of the transformations of the Indian worships, and the polytheistic appearances by which they are characterised. A man who arrived in France or Italy from the East, without any knowledge of the Catholic dogmas, would take our ceremonies for idolatry, when he saw the statues by which they are peopled, and the exterior ceremonies which are carried on in them. But, if he were to read the books where the dogmas are enunciated or interpreted, he would see that a symbolism was to be extracted from those appearances, which could render them intelligible; and, through that symbolism, the fundamental doctrines of the divine spirituality, the trinity, and the incarnation. Just the same in India. Neither the worship of Çiva Mahadeva or Parvati, nor that of Krishna, and still less that of Vishnu, nor the figures, strange as they are, which are scattered so numerously over the sacred places, constitute an idolatry; for all these different worships, which followed one upon another, and which co-exist without destroying each other, express at bottom an exoteric doctrine which is spiritualistic within, and of which the pantheistic unity of God forms the essence. This is proved by the perusal of nearly all the Sanscrit writings, not only theological treatises, but also those poems in which the sacred philosophy often occupies an important place.

There is in the Brahminical religions, side by side with these doctrines, a collection of ceremonies, the foundation of which is always the same, whose accessory parts vary according to the divine person to whom they were addressed. These secondary rites appeared along with new divinities. Thus the sect which adores Krishna follows a ritual which departs very much from Çivaism, and from the austere worship of the adorers of Vishnu; but, besides these secondary rites, there are in India certain fundamental rites, the analogy of which with the Christian has struck all the learned. The altar, the fire burnt upon it, the sacred bread and the spiritual liquor of the *sôma*, which the priest swallows after he has offered them to the divinity, the prayer he chants, which is always a petition in which a demand is made for physical and moral benefits; all these elements of worship are found in Brahminism, under all its forms, and at all epochs of its existence. Even if we did not possess the Vedic texts, we might presume that these essential rites are anterior to the organisation of the Brahminical society and the definitive constitution of that religion. This, however, is no more a mere hypothesis; since the perusal of the Vedic hymns has unveiled for us all at once, in these last years, the origin of the Oriental pantheism, of the Indian divinities, their impersonations, their symbolical attributes, and, finally, the permanent rites by which they are honoured at the present time.

Krishna is a modern incarnation of Vishnu. Brahma and Çiva are no more Vedic divinities than he. The word *Brahman* is often employed in the Vedas, but it means there the prayer, the ceremony, the worship, the performance of which takes place within the sacred precincts. The altar is there as a shape: it is quadrangular, looking to the four cardinal points, which was the reason afterwards why Brahma was represented with four faces. The conception of that god was substituted insensibly for that of Agni, which is at the same time physical fire (*ignis*), the vital heat, and the thinking principle, always united to life. Agni is the great divinity of the Vedic hymns. Pantheism is only to be found there in *embryo*, and in a state of preparation; but still there it all is, so to say, planned out in the commentaries of the Veda, which were composed between the period of the hymns and the epoch of Brahminism. It was, therefore, at this epoch that the Aryan mind took in India a definitive direction. Up to that time, naturalism had been the foundation of its doctrines: the great phenomena of nature alone had occupied the thoughts of priests, who were at the same time poets, fathers of families, labourers, and warriors. Beyond these phenomena, they had formed some idea of the forces from which they emanated; and, without at all deluding themselves as to the personal reality of those powers, they had lent to them intelligence and life. In this sort of mythological pantheon, Agni occupies the first place. The priest lights up the altar at the break of day. The spark engendered by friction is communicated to the dry, light wood. The alcoholic liquor of the *soma* and the clarified butter are poured over it, and unite. Then the priest summons the gods to the sacred festival, which is composed of milk and cakes, sometimes of flowers and fruits, sometimes also of an immolated animal. The gods arrive. None of the performers doubt their real presence round the hearth in the fire and the cake. These gods are especially those of the sky and the atmosphere. Vishnu, who inhabits the upper regions, whose chariot is the sun. Rudra, who stirs the air, and has under his dominion the resounding band of the Maruts, who are the winds. Indra, king of the upper regions of the air, where he fights the clouds, the lightning and the thunder, and causes the fertilising rain to descend upon the earth.

When the Brahmins came to reflect upon the part assigned to Vishnu, who in the Vedas is nothing but a symbol of the sun and its productive power, they were not slow in attaching to their idea of him all the phenomena of physical and moral life, since it is even at this day incontestable, as M. Janin has recently shewn, that the development of the physical life proceeds below from the heat of the sun, of which it is only a metamorphosis. On the other hand, the

Brahmins, not seeing anywhere in the world thought separated from life, concluded that the principle of one is identical with that of the other. And thus the penetrative energy of Vishnu becomes the very principle of the generation of living beings, and afterwards of incarnations.

It is now notorious that Çiva, who has become one of the three persons of the Indian Trinity, and whose worship is so very important in modern India, was at first Rudra, king of the winds. Rudra, by insensible transformation, has become a formidable being, known as the destroyer of life. As to Brahma, although we cannot sum up his history in a few words, we understand that the prayer (*brahman*) must be regarded as the expression of the thought in its most divine element, which, being personified, gives room for a great symbolical divinity.

Thus are prepared the elements, whose reunion made up later the Indian Trinity; Brahma representing the thought, and with it science and religion; Vishnu, life in his divine unity, and in his incarnations; Çiva, the law of *return*, by virtue of which all living and thinking beings, as well as inorganic substances, disappear and return to where they sprung from. As to Agni, the metaphysical portion of him being no longer necessary to his existence, he became nothing but the sacred fire, symbolical part of worship, mouth of the gods, messenger who transmits in odoriferous vapours the offering of those who adore them to their vast bodies. The only thing wanting to constitute pantheism, such as it has existed in the East for more than three thousand years, was to conceive these divinities as forms of one and the same Absolute Being, and to refer this diversity of figures to one unity, of which all representation was excluded. This is the unity which has received the neutral name of Brahma.

When we try to go back as far as possible in the history of the Vedic period, we do not find there the slightest trace of pantheism, excepting that there is an equal absence of any idea of creation. The most ancient hymns, and everything which gives us any opportunity of becoming acquainted with the times which preceded them, leave no doubt as to the nature of these primitive religions. These were nothing else but polytheism. This is a very important fact in science; for it is in formal opposition with what is believed by many among the Christians, that all religions proceed from the biblical tradition. That opinion is false, and must be entirely renounced. There is absolutely nothing in the Veda which emanates from the same source as Semitism. The more ancient its hymns are, the less we perceive any idea of a separate deity isolated from the world. God was first of all conceived by the Aryan mind under a multiplicity of forms.

These divine figures were at the outset nothing but physical forces deified and amplified. Later they put on metaphysical conceptions, transforming themselves little by little, and sometimes changing their names; and it is only after many centuries that the Aryan intellect was at last elevated to the conception of the absolute unity. As they had chosen for their point of departure the real things which fall under the cognisance of the senses, and the not less real facts which conscience reveals to us, they have never lost sight of the solid basis on which their religious edifice rests. Thought, life, the infinite succession of forms which pass one into the other without interval, as the waters of a river which flow without interruption—these are the things which have always occupied their minds, and which have conducted them by the most direct path to that pantheism, of which the Western nations have so incomplete, and often so false an idea. The idea of an individual God, isolated from the world, is to be found nowhere in the Aryan doctrines, neither at the end, nor in the middle, nor, above all, in the origins of the Vedas.

At the point where we now stand, a science of quite modern creation, comparative philology, begins to play a part which no other science could supply. It is not our present intention to give any account of it, or even a summary. We shall only say that its analytic and comparative method, applied to analogous words in allied languages, turns it into a means of investigation, which is at once inexpressibly important and exact. In fact, science has recognised the reciprocal independence of the Aryan languages. We know that Latin is not derived from the Greek, any more than German, Slavonic, or Lithuanian; and that these idioms have borrowed no words from each other till comparatively modern times. We know, also, that the Medo-Persic language, which goes by the name of Zend, is neither daughter nor mother of the Sanscrit; and that the same is the case with the European languages. Philology, having established these truths beyond all doubt, has at the same moment demonstrated very numerous analogies between all these idioms, and has thence deduced their relationship and common origin. Hence has sprung that comparative study of languages which is called comparative philology. The mother language, to which this method leads us, is now spoken nowhere; but science has reconstituted its foundation and its essential forms. It reposes upon this principle, that the ancient terms which are found in all the languages of the family, once belonged to the primordial idiom; and that this is also the case with every term which is common to any two of these languages, when it has been satisfactorily proved that it was not borrowed by one from the other. These last terms evidently existed before the most ancient of the two

branches was separated from the Aryan trunk ; and the terms common to all are anterior to the separation of the first of them. Now, amongst these terms, some express family relations, others social or political relations, others material facts, others, finally, religious conceptions. These last are more ancient than the most ancient sacred monument of the Aryan race, which is the Veda.

Thus has come into existence a new study, comparative mythology, which is for the religious past of humanity, or at least for that of the Indo-European nations, what geology is for the past of the terrestrial globe. From the day when the learned began to read the Vedic texts, the analogy of the divinities which they found there with those of Greece and ancient India struck them at once. Then they extended the comparison, and saw that they must comprehend in one and the same very ancient religious system, not only those three pantheons, but also those of the Germans, the Scandinavians, and the other nations of the north of Europe, as well as the original part of the myths of Persia and India. From that moment, there was an end of considering these mythologies as arbitrary conceptions ; looked at in their proper point of view, they became recognised as natural and spontaneous products of the Aryan intellect, in the religious development of which they mark the primitive or polytheistic period. Thus, the study of mythology returns within that of the general science of religions, forming, however, a distinct chapter.

When comparative philology is applied to mythology, it takes no account of the nature of the gods, and must not be seriously considered as a philosophic interpretation of polytheism. But as the names of the gods express the idea which was conceived of each of them, when each was thought out for the first time, a science which in a certain way pursues a word into the past, and establishes its primordial signification, may illustrate the study of myths and facilitate their interpretation. For some years it has been understood that in every mythology two parts are to be found ; one which is common to the whole race, and which the nations have brought along with them when they quitted their native country, and the other, which is peculiar to each of these nations, and which answers to a local evolution of polytheism. This fundamental distinction modifies the results to which German symbolism had committed itself. Thus, the division of the Grecian divinities into the gods of the Hellenes and the gods of the Pelasgi is no longer so distinct as formerly. Still philologists would do very wrong to despise labours such as those of Kreutzer and De Guigniaut. Those books have thrown a very bright light on the history of mythology, and at the same time have caused it to be regarded as a serious affair, although in the absence of the Veda,

with which they were not acquainted, they could not ascend to its first origin. Besides, the great theory of symbolism will always remain. It would be impossible to understand how poetic conceptions and figurative expressions could generate religions and worships, if behind these words they did not conceal divine personages, ideal symbols of real forces veiled by the phenomena of nature. The reality of the phenomena is manifest. The winds, thunder, rain, the heat of the sun and its effects, are neither abstractions nor words. They are derived from forces which make their power felt and whose reality is incontestable. The forces are invisible and impassable. They elude the physicist, who can only observe the effects. They are metaphysical beings, and if the religious sentiment is awakened, they become Gods. It is only necessary to have the conception that they infinitely surpass and are especially powerful enough to control the phenomena. Under these conditions, it is possible to understand that by applying synthesis, we may operate upon the phenomena, and so reduce the number of divine figures, in the same way that by analysis they might be multiplied. A single classification of observed facts, reverberating, so to speak, on the divine forces to which they are attributed, is sufficient to reduce to some regularity the divine hierarchy, and institute a pantheon. A nation, which is brought close to the phenomena and is very far off metaphysics, rejoices in multiplying its Gods. The learned, from an opposite reason, march more and more towards unity. The western mythologies never arrived at this unity. Pure polytheism lasted in Greece and Rome, as well as among the barbarians of the north and west, up to the appearance of christianism. But in the east the Persians arrived at the conception of unity, though somewhat disguised by the antagonism of Ormuzd and Ahriman. The Indians alone put the idea into full light, and from the moment it appeared in their theology, it never was effaced. Only the pantheistic unity of the Being is not incompatible with the Trinity of the great gods, nor with a multiplicity of secondary gods or angels, to use the expression of M. Pallegoix, Catholic Bishop of Siam; for these gods are only the different faces of one and the same Being, and the symbolical expression of the forces he displays in nature.

I have traced out the general lines of science as applied to the great religions of humanity. Although it is only just sketched out, and the efforts of the learned are directed at this moment over every portion of its extent, it is already possible to comprehend even on this unequal ground, where men are tending to. The two ideas which have produced religious systems and worships are two standards round which the nations have grouped themselves. Erected by the two youngest of the human races, they have for a long time guided

them in a state of isolation one from the other. At every step they have been to them as symbols of war. Buddha was the first of human beings who preached universal charity and gave the seal of peace. But, inasmuch as his doctrine was exclusively Aryan, he made no converts without, except amongst barbarous nations, or those destitute of religion. The west was closed to him. Christianity, which came later, sealed by its metaphysics and its worship the union of Aryan and Semitic thought, and conquered all the western Aryans. But the Semites have not accepted it, in spite of its doctrine of one personal God, nor the Aryans of Asia, in consequence of that doctrine. It has converted but few Jews or Mussulmans, and not a single Indian. So the two primitive sources continue to roll down their waters in two separate channels. Wherever there has been an attempt to unite them, it has not up to the present time succeeded in absorbing the two others and forming a third current of religious ideas, on which the people of the west can be the only ones borne on. Is it to the Veda, the Bible, is it to the Buddhist or the Christian church that will one day belong the glory of uniting all the nations? Science is dumb on these problems. Its object is in the past, not in the future. Altogether, we must believe that the victory will remain to that which turns out to be the most true of these fundamental theories, unless, indeed, another should arise, which can embrace them all in its synthesis, and shall reunite in one universal church all the human races, and all their religions.

THE PLURALITY OF THE HUMAN RACE.*

FEW things are more observable in the scientific world than the change of tone which has taken place within the last few years on the subject of authority. Everywhere the supremacy of facts is now recognised, and the only loyalty even professed by the more advanced minds is not a faithful adherence to tradition, but unswerving fealty to the truth. The battle fought and won by astronomy in the days of Galileo, was in truth but the beginning of the war, and alone would have proved utterly inadequate to teach men of science their strength, or theologians their weakness. This was shown in the reception accorded to geology, whose stupendous revelations from the page of nature were long expected to bend to a written record. It is still shown in the

* The Plurality of the Human Race. By Georges Pouchet. Translated and edited by Hugh J. C. Beavan, F.R.G.S., F.A.S.L. London: Longman, Green, Longman, and Roberts.

criticisms provoked in certain quarters by anthropological investigations. We are free to speculate on the age of rocks, and even to inquire into the succession of plants and animals; but man is a sacred, and, therefore, a forbidden subject. His origin, antiquity, and special relationships have all been settled by a tribunal that laughs at induction, and treats opposing facts with derision, and, indeed, regards the mere tendency to independent thought on such momentous questions as *prima facie* evidence of irreligion. Till very recently, even the greatest minds bowed in submissive silence to this unreasoning despotism. However free and untrammelled in other provinces of investigation, they paused upon the threshold of man. He was an exceptional instance in the grand scheme of creation, an isolated phenomenon in the great plan of nature, to make free with whom, after the ordinary fashion of inductive inquiry, was little other than an act of open and scandalous impiety. After much conflict, permission was reluctantly accorded to speak of centres of creation, but ethnic areas were still a forbidden topic. On special difference as attaching to brown and white bears, and of organic diversity in relation to African and Asiatic elephants, it was quite lawful to dilate, but an Esquimaux and a European, a Negro and a Persian, were to be invariably treated as of one species. Freedom of inquiry ceased with man. In reference to this crowning glory of creation, there were certain foregone conclusions, with which it behoved none to meddle, under penalties that few cared to incur. Under such circumstances, it is needless to say that ethnology was little more than a name, and that true anthropology was utterly impossible. As a preliminary to all real inductive investigation, it is necessary that the inquirer be free, not only to observe, but also to announce the result of his observations. He must not only question Nature and abide by her decisions, but he must be prepared at all costs to publish his discoveries and promulgate his conclusions. Short of this, inductive investigations are a pretence, and scientific publications a delusion and a snare.

It is in relation to this most important question, freedom of inquiry, and we may add, liberty of speech, on the part of men of science, that the anthropological societies now rising in various parts of Europe are doing such good service to the cause of truth. Composed of the most advanced minds in the countries where they are respectively organised, these bodies present a barrier to fanaticism, and ensure freedom of inquiry and discussion, at least within the limits of their own meetings, and in the pages of their own publications. Here facts can be stated and suggestions can be offered without offence, that would probably raise a storm of prejudiced indignation, even in such quasi-liberal gatherings as those which surround the

British Association at their annual meetings in the provinces. For let us not deceive ourselves; the public, even the educated public, are still unprepared for the full reception of the truth as it is in nature, on the subject of man. They want our statements to be toned down, and our conclusions to be modified into accordance with their limited ideas, ere they will give us a favourable or even an unprejudiced hearing. They have not yet given up their idols. They are still under the dominion of traditional ideas, and in plain language, are too much the slaves of authority to listen without fear to the echoes of a freeman's voice. Nay, this tendency to restrain perfect freedom of utterance on anthropological subjects is not confined to the *vis à vis* communications of the lecture room, but even pervades a large section of scientific literature, where the practised eye will easily detect the limiting effects of that "pressure from without" which is almost necessarily exercised by a public imperfectly acquainted with the facts and deeply tinctured with prejudices on the entire subject of man and his relationships. Hence, then, the necessity for effective organisation on the part of anthropological inquirers, not merely for the purpose of ensuring freedom of discussion among themselves, but also with the equally important object of supporting a literature devoted to the statement of facts, and the utterance of conclusions too far in advance of existing opinion for their easy reception by the general public, and yet eminently calculated to promote the cause of anthropological inquiry.

And while the first concern of every anthropological society should undoubtedly be to encourage the publication of *original* works, so as to aid in the primary object of adding to our common stock of knowledge, the next should be to promote the *faithful* translation of works, not calculated perhaps to pay in a merely commercial point of view, and yet of great and unquestioned value to the earnest student of ethnology. We have purposely used the epithet *faithful*, for even in the apparently simple matter of translation, suppression and modification have been carried to an extent which augurs but ill for the estimate formed by "the trade" of the liberality, and we may add, the intellectual manhood of the British public. To prepare a scientific continental production for unrestricted circulation in an English dress, its strongest statements, its most powerful arguments, and its most inconvenient conclusions had often either to be discreetly omitted or toned down, so as to take the sting, and with this it may be feared but too frequently the force, out of the entire work, so as to fit it for easy perusal in all the literary nurseries of the United Kingdom. Now, it need scarcely be said, that this is not what the members of our anthropological societies require. They want the truth. They

are afraid of no statements, nor do they stand in dread of any conclusion. They can hear without blenching whatever the strongest Continental has to say, and feel that they are quite competent to the reception of his facts and the digestion of his conclusions, without a careful selection of the former or a timid dilution of the latter.

It is under this aspect that the translations which have already appeared of Waitz and Broca are so valuable to the English student, who may feel assured that he has here a faithful and fearless transcript, not a weak adaptation, of the continental mind on his favourite science. From the pages of these writers he may learn what the anthropologists of other countries really think. By a careful study of these works, he may escape from his insular isolation, and place himself in direct contact with the collective mind of modern civilisation. And, as a farther continuation of this noble plan, we have now to hail the appearance of the work whose title appears at the head of this article. And, we may add, that we accept this last volume as being in an especial manner an earnest of the fearless courage and sterling honesty of the Society at whose instigation and under whose auspices it is published. Waitz, as a respectable monogenist, could offend nobody. Even Paul Broca, in his attempted demonstration of the ultimate infertility of hybrids, could only do so by implication. But Dr. Pouchet is offensive in his very title! Nor does that title belie the spirit of his book. It is not only independent; it is antagonistic. Not always contented with holding his own, he sometimes attacks his neighbours, in certain instances perhaps with more zeal than discretion. On this, however, every reader will, of course, form his own opinion; our consolation in the perusal of Mr. Beavan's verbally faithful translation being, that here, at least, we have the veritable sentiments of the author, with whom, therefore, we may agree, or from whom we may differ, with the satisfying consciousness that we are at all events dealing directly with himself, and not with some modified simulacrum, simply bearing his superscription.

If, indeed, there be an error in this otherwise excellent translation, it is not in the faithful rendering of the original, but in the scrupulous carefulness with which the translator, at every available opportunity, informs the reader of the extent to which he differs from his author, more especially on matters involving orthodoxy of opinion. This, we think, is carried to an excess. It encumbers the margin with needless notes, and sometimes painfully distracts the reader's attention from the text. For all the purposes which Mr. Beavan may contemplate in reference to himself, his own preface, with its disclaimers, was amply sufficient, or might have been made so. And as to the Society, they assuredly need not introduce their authorised translations

with an apology. They are above and beyond this, and in the calm consciousness of their noble motives, can afford to smile at the petty criticism, that would assail their proceedings, through the speciality of those foreign authors whom they are the means of introducing to the knowledge of the English public.

But it is time we should proceed to the work itself. As might be expected from the tone of the foregoing remarks, it is essentially liberal. The author commences by discarding sentimental anthropology, and *a priori* conclusions altogether. He argues from the facts of the case, quite regardless of ancient authority or existing prejudice, and if in doing this, he sometimes goes to an opposite extreme, the error is surely pardonable, considering the extent to which all ethnological investigations have been hitherto trammelled by theological dogmas.

As a necessary preliminary to all farther inquiry into man and his attributes, it is obviously desirable to settle his place in the animate scale. Is he a member of the animal kingdom, or the lowly germ of an order of being, superior to, and distinguished from it? On this important point, it strikes us that the facts and reasonings of Dr. Pouchet, though decidedly of a very advanced school, are nevertheless inconclusive and unsatisfactory. The problem is not grasped in its entirety. There are important data omitted, and powerful instrumentalities left unemployed. In saying this, however, we pass no especial judgment on the author, for such remarks will equally apply to nearly all other writers on the same subject. Nor are the causes of this unsatisfactory state of things far to seek; they obviously originate in the very imperfect state of cerebral physiology. With the whole subject of phrenology still *in dubio*, and with our greatest anatomical authorities in almost personal antagonism, what wonder that we can arrive at no satisfactory conclusion as to the place of man in the scale of being? We see in civilisation, with its religion, art, literature, and science, the effects of an intelligence, which we profess to be unable to discover in the organisation, and for whose explanation, therefore, we are driven to education and secondary forces, not perceiving, apparently, that the producing causes of a recurrent phenomenon like civilisation, must be sought in some organic proclivity of the type distinguished by this enduring tendency to culture and refinement. And if this cannot be discovered in the structure, then we may justly surmise that our anatomy or physiology must be at fault—for the facts are against us. It is the same with that grand intellectual distinction between animals and man; that they exist wholly in the concrete, while he occasionally rises to the abstract; that they are on the plane of fact, while he ascends to that of principle. If the cause of

this be not perceptible in the organisation, then the fault must be in the observer. But in truth there is no necessity for putting things in this subjunctive way. The organic source of the difference between man and animals, and even of the observed diversity between various races of men, is perceptible enough to the trained eye and hand of an observer, qualified for accurately estimating the cranial contour and cerebral development of each grand division in the organic scale. In the mean time, the most advanced anthropologists are scarcely prepared for this mode of investigating the subject, and we must not therefore quarrel with Dr. Pouchet because he does not employ it.

In his chapters on the Human Kingdom and on Comparative Psychology, the author cites many weighty authorities and states a variety of convincing facts, to show that the gulf between man and animals is neither mentally or physically so wide as is usually supposed, and embodies the results of his inquiry in the following succinctly stated law:—"From animals to man everything is but a chain of uninterrupted gradations; therefore there is no human kingdom." Now to the proposition, marked in italics, there can certainly be no objection; but what shall we say to the corollary? What, we may ask, will the outsiders think of us, if we allow such logic to pass unquestioned. Why, from the pebble up to man, there is an uninterrupted gradation; nay, from the grain of sand on the sea-shore up to the sun shining in the heavens, there is an uninterrupted gradation. All Nature is one. The whole creation is a vast unity; but must we therefore deny that it is separated into well-marked kingdoms? This is to allow synthesis to dominate analysis to such an extent, as to effectually disqualify us for the clear perception of necessary distinctions, an error of judgment as fatal in its results as the opposite condition of mind, which implies such weakness in the analogical faculty, that close resemblances are overlooked and profound relationships are disregarded. It was, perhaps, unavoidable after the statement of such a law, and, we may add, the manifestation of such reasoning based upon it, that Dr. Pouchet should come to the conclusion, which he does in his chapter on the Bimana, that "Man constitutes a simple family of the order Quadrumana." In a certain sense, it may be said that conclusions are the test of reasoning, and certainly if this of the talented author before us, be not a *reductio ad absurdum*, it approaches very nearly to it. Still, we by no means regret, that it has been so fearlessly stated, and, we may add, by so eminent an authority. The sooner the logic of error arrives at its inevitable terminus the better. Principles and processes must sometimes be seen in their results, if we would estimate the total amount of their perversity; and now that we find ourselves landed in such a practical absurdity as the foregoing,

we may, perhaps, be induced to reconsider the means by which we have been so misled.

In all recent discussions respecting the anatomical resemblance of the anthropoid apes to man, it seems to be forgotten that Nature abounds with transitional links, and that the quadrumana obviously constitute one of these; on their lower side, almost quadrupeds; on their higher, nearly bipeds. Again, it is equally forgotten, that man, even in his highest existent form, the Caucasian, is still but an initial type, only in the process of emergence; ethnically speaking, indeed, but the callow nestling of his order, while the inferior races, more especially the negroid, are still absolutely embryonic. Let us clearly understand, that until this great question of the relative ethnic maturity of orders, genera, and species, approach far nearer to a definite solution than at present, comparative anatomy, physiology, and psychology, can be merely tentative. And, lastly, throughout all these discussions, we have the error almost constantly repeated, of deciding special resemblances and differences from indications afforded by the periphery of effects rather than the causal centre of organic being. Thus we find writers, like our author, dwelling with exaggerated force on the structure of the extremities, while neglecting the stupendous indications afforded by the cerebral hemispheres. And because the foot of man is in certain races slightly prehensile, they confound him with the quadrumana, despite the incalculably important fact, that his brain is four times the weight of that of the gorilla; that its convolutions are immeasurably more complex; and that the relative proportion of its posterior, central, and anterior lobes is such as to indicate a mental constitution, so superior both morally and intellectually, that it is scarcely too much to assert of these two orders of being, that, psychologically, they are radically diverse, the passions and impulses being altogether preponderant in the one, the sentiments and faculties being predominant in the other. We trust that the severity of these remarks will not be misunderstood. We have the greatest possible respect for the labours of Dr. Pouchet, and all who with him have helped to put down the unreasoning despotism of authority; but in our free investigation of man, whether as to his origin or his place, let us not in the fervour of reaction against his undue exaltation, forget the palpable evidences afforded by structure and its correspondent function, of his vast superiority to every other type of terrestrial being.

Ere quitting this department of the subject, we would suggest to anthropologists, more especially in their anatomical and physiological investigations, the important fact that man, more especially in his higher types, is essentially a *cooking* animal. Hence his mouth, even in the negro, bears much too small a proportion to the remainder of the

face, and we may say the cranium, and even the entire organisation, to permit of adequate nutrition solely by the mastication of unprepared food. While it need scarcely be said that this remark applies with still more force to the superior races. Nor would we omit in such a consideration the relative proportion of the abdominal and thoracic viscera, the former apparently diminishing and the latter increasing as we ascend the organic scale, till in the nervo-fibrous temperament of the pure Caucasian we find respiration, and, we may add, cerebration, predominant over both alimentation and reproduction. It need scarcely be said that such data as the foregoing underlie all the more superficial controversies on dietetics, and go down to a depth little suspected by our good vegetarian friends, with their plausible theories, based on frugivorous teeth and a perspiring skin. Let us never forget that the true man, by which we mean the large-brained and small-mouthed Caucasian, performs the first part of his digestion in the pot, and that in virtue of the changes there produced by the fresh agency of *fire*, he constitutes No. 1 in a new alimentary series, where we suspect, data obtained from the gorilla with his stupendous jaws and most respectable paunch, will be found on further investigation, slightly inapplicable.

And while the facts to which we have been just alluding possess considerable value in helping to decide the true place of man in the animate scale, they are also of importance in the minor and subordinate province of racial relationship, and as such have indeed been very judiciously used by Dr. Pouchet, though not perhaps to the extent that might have been expected from his anatomical education. Indeed the proportion of the viscera in different races, and, we may add, in different temperaments of the same race, is a new inquiry, of which we owe almost the beginning to Dr. Pruner-Bey, but which is yet destined to furnish a most important field of inquiry to the more advanced anthropologists of the future. But it is time we should hasten to conclude our remarks on the work before us.

From the general tenor of the foregoing pages, it will be seen that we differ from Dr. Pouchet as to the grade of man, which we think he places too low. Still on such a subject dogmatism on either side would be quite misplaced, and we would rather be understood as indicating data than arriving at a conclusion. The true value of his book, however, is not in this its merely introductory portion, but in his facts and observations on races and their diversity. In the chapter on anatomical, physiological, and pathological varieties, the reader will find a carefully prepared collection of authorities, showing most extensive and varied reading, and constituting indeed an admirable *résumé* of existing knowledge on this department of the subject, and

which yet leaves on the mind the conviction that our travellers want training, and that even professed ethnographers are yet but imperfect observers. Dr. Pouchet here shows not only how much we know, but also of how much we are ignorant. But the conclusion to which every unprejudiced thinker must come after the perusal of this chapter is, that the more we know and the farther we carry our investigations, the more clear and convincing becomes the evidence of diversity. The more intimate our acquaintance with the various races of mankind, and the more profoundly we study their specialities, the more clearly does it appear that they differ, not only in structure and appearance, but also in function, and in susceptibility to disease. Indeed these are but parts of one great whole; for function must harmonise with organisation, and disease is but derangement of healthy function. Thus the negro's skin implies speciality in his emanations, and this, liability to some and freedom from other forms of disease; that skin again being profoundly related to his preponderant liver, and this again implying a peculiar respiratory relationship to carbon and oxygen, eventuating in a predominance of the venous over the arterial system. When we consider that in this way every healthy and rightly-constituted organism, when of pure type and on its own site, is in perfect harmony with itself, that all its powers and functions are perfectly balanced, and that the whole is in due relationship to the atmospheric and telluric forces by which it is surrounded, we shall cease to wonder at the unhealthiness and ultimate infertility of most hybrids, in whom this fine balance is lost, and who are in a sense the product of a generative chaos, that is, of conflicting forces, not constituted by Nature for harmonious conjunction. This also explains the historical disappearance of all colonial extensions of the ancient races on alien areas. While pure they were not in harmony with the telluric forces; when mingled, they were not in harmony with themselves. It is needless to say that these facts involve principles which are prospective in their results, because permanent in their action.

The chapter on the Intellectual and Philological Varieties is good, but far from exhaustive. It obviously wants the hand of a metaphysician and a linguist. But had we even this desideratum, it must be confessed we should still be deficient in the facts on which he might base his conclusions. Of philological ethnology, however, in the sense of defining races by language, independently of organic type, we have already had more than enough. We are glad to see that Dr. Pouchet maintains the sensible thesis, that every race is *relatively* perfect in intellect as in physical organisation, that is, it possesses all the powers requisite for the effective discharge of its peculiar duties

in the scale of being, and that the diversity of these endowments, as between different races, constitutes the harmony of the scale. Such ideas are an immense advance upon the state of things even ten years since, and show how much true anthropology has gained during the intervening period.

We could wish the author had gone somewhat deeper in his remarks on climate. He seems to confine this to atmospheric influences and temperature, neither of which does he think adequate to the entire modification of racial characteristics. But whether under this heading or some other, it is obvious that we want much additional knowledge on the cumulative influence of *place* on racial type. It should be remembered that the earth is a vast magnet, and in the cosmic sense of the term eminently and essentially *vital*. That the vegetable and animal life on its surface is the product of this planetary vitality acted upon by solar influences, and that the earth in this sense is the *mother* of all things living on her surface, whose relative place therefore as to her polar, equatorial, or medium regions must exercise an immense influence on their structure and character. Nor is latitude the only determining condition in this matter. It is obvious, for example, that the plastic forces of the old world are more positive than those of the new, and that perhaps as a result of this, animal life is at its maximum in the former and vegetable life in the latter. It is almost needless to say that these considerations must underlie all attempted definitions of ethnic areas and their effect on race. While at the same time the mere statement of such stupendous problems must show us how far we are from a mastery of the data requisite for their satisfactory solution.

The chapter on Hybridity is ably written, and abounds with profound observations that will amply repay the reader's attention; but after the masterly analysis of the subject by Broca, requires only a passing notice here.

In his remarks on Species the author avows himself a convert to the doctrine of development, or as he phrases it, the theory of *evolution*. Were this the place, we might here venture a few observations on the scientific *conversions* of our day. They are so frequent that individual opinion is beginning to be held as something rather unstable. For a man of eminence to start as the eloquent advocate of one theory and to end as a prominent supporter of another, has become so common, that it almost ceases to excite surprise. We can only say that while there are such phenomena on the surface, there must be some powerful undercurrents in the profounder depths of the scientific mind. From the time of Lamarck, and even before him, the idea of development as opposed to successive fiat of creation,

has been gradually gaining ground. While the earth with all its dependant organisms was thought susceptible of instantaneous projection by an effort of the Divine will, the popular theory of creation was seemingly tenable. But the immense periods of geology, with their organic sequences, implying the *habit* of miraculous interference with the ordinary course of nature, was inevitably fatal to a merely theological dogma so imperfectly based. Let the opponents of development remember that evolution implies *law*, that law implies *order*, and that order is only another name for that "BEAUTY" which has ever been esteemed the best evidence of an indwelling divinity with his resultant harmony and perfection. Rightly viewed, there is nothing atheistic—nothing even irreligious in the theory of development. It merely implies one mode of divine proceeding in place of another. It is moreover purely a question of science, and as such its decision must be left to those who are prepared to investigate the subject through the evidence of fact rather than the authority of dogma. Once for all, then, let us clearly understand that theologians as such, have nothing to do with this great controversy; their attempted meddling with which is an impertinence that the dignity of science can afford to treat with the silent contempt it so richly deserves.

The fundamental error of the advocates of development consists in their supposing that evolution proceeds by a succession of *accidents*. This is a doctrine from every point of view thoroughly untenable. Terrestrial organisms constitute a grand harmonic scale of form and function, obviously evolved in obedience to law and in the fulfilment of a plan. Classes, orders, genera and species, are parts of one great whole. Plants and animals, in short, are *organs* of the earth, and the degree of their development, could we read it aright, would indicate with unerring precision the stage of its maturity. To talk of *accident* in such a matter, is like saying that a man's beard or a lion's mane has come by *chance* at a certain age. Science must not only outgrow such phraseology, but also the vague ideas which have given birth to it. We think that Dr. Pouchet's views on this subject are not only far in advance of Lamarck and the Vestiges, but even of Darwin. But still he does not seem to have fully grasped the idea of law, nor has he a clear and definite conception of the necessary relationship of all subordinate forms of life to the one telluric organism of which they are harmonic parts.

Contemplated only as the highest type of the mammalia, man is still the crowning glory of the earth, and his appearance must have synchronised with some well-marked period in her planetary growth. As a merely initial type still in the process of emergence, much in

him both of form and function must be imperfect, and perhaps even rudimentary, so that in the noblest races he is still a promise rather than a fulfilment. Above all, we cannot expect his special diversities to be so well marked as in those older organic series that have arrived more nearly at ethnic maturity. The bimana are at the beginning of their career, and as the first birds were largely reptilian, so are they more especially in their lower divisions, partially quadrumanous, or if you will, even quadrupedal. Let us not, however, on this account confound them with the inferior plane of organic life, to which they are doubtless related in the order of sequence, but with which they are no more identical than reptiles with fishes. Dr. Pouchet would make a vertebrate kingdom, and if so we may ask, why not an intellectual kingdom? But without going to this extent, we are fully justified in regarding the bimana as a distinct order, perhaps as a separate class, still initial, but to be furnished in due time, with subordinate genera and species, of which existing races are the foreshadowment, if not the actual germ. Let us never forget that specialisation is the surest index of place in the organic scale, and that man is the perfection of this among mammals, his posterior extremities being as essentially locomotive as his anterior are prehensile. And he is the *only* terrestrial being thus characterised, the anthropoid apes being an approach to, but not a fulfilment of this great idea. To the comparative physiologist it is needless to say how all-important is such a fact, the sure index of much else. For this purely prehensile hand is the infallible accompaniment of a proportionately intellectual brain and a correspondently developed nervous system. It is in this logic of correspondences, this ability to perceive harmonic relationships, in which comparative anatomists usually excel, that anthropologists are so often deficient. And it is this want which has permitted Dr. Pouchet to regard the foot of man as truly prehensile, while at the same time he would be willing to admit that his anterior extremities are not in the slightest degree locomotive. Now it is this last fact which shows so clearly that he is at the goal (of specialisation) to which the anthropoid apes, and even the baboons, tend, but which bimanous and intellectual man, the only rational and morally responsible biped in creation, has yet reached.

But it is time we should terminate this lengthened notice. The real merits of the work and the importance of its subject must plead our excuse for such an intrusion on the editor's space and the reader's time. The subject is yet certainly far from being exhausted, and we trust that Dr. Pouchet may be induced, at some future period, to favour us with his more advanced ideas in a third edition. There are points on which we decidedly differ from him, but they are few as com-

pared with those in which we cordially agree with him. And in conclusion, we cannot but congratulate the English student on his possessing this valuable addition to his anthropological library.

ZIMMERMANN'S L'HOMME.*

WE will give the whole title of this curious and interesting book, "*L'Homme, problèmes et merveilles de la nature humaine physique et intellectuelle. Origine de l'homme, son développement de l'état sauvage à l'état de civilisation : exposé complet d'anthropologie et d'ethnographie à l'usage des gens du monde. Par le docteur W. F. A. Zimmermann, auteur du 'Monde avant la création de l'homme'. Traduit sur la huitième édition allemande.*" Verily, the learned doctor promises his readers enough information for any one book, or, indeed, we might say, for any one library, and we must now consider how he has fulfilled his promise. The volume itself is a goodly one, well printed, on fine paper; it contains 796 pages, and is properly illustrated with wood engravings. The subjects of these latter are good, but the execution far from being clear; and, to say the truth, the less said about the "art" portion of the work the better.

The author states in his first chapter the chief objects he wishes to place before the mind of his reader, and he states them as follows:—"The work we now present to the public has for its object the study of man; the study of his physical and moral nature; the study of the mysteries of his first origin; the study of the phases of his development and progress, through the thousands and thousands of years of his existence; the study of the remarkable contrasts and the characteristic traits of the different races of the human species; and in one word, the study of everything which natural science, the traditions of peoples, or history itself have collected from the researches and discoveries with reference to that creature which we call man." As we shall have to consider various points at some length, we will briefly glance at the contents of the first chapters. "*Où l'homme a-t-il été créé?*" is the title of the first. Concerning this point, we are not told much. Indeed, our author merely gives us an account of the ideas of various nations and peoples concerning the place of man's creation, and provides us with a map in order to illustrate his account of the Mosaic record.

According to a legend taken from the Ezour-Veda, he tells us,

* *L'Homme. Par le docteur W. F. A. Zimmermann. Bruxelles, C. Muquart; Paris, Schulz et Thuillie. 1865.*

Brahma, the Creator, came from the navel of the first man, Vischnou the preserver from his right side, and Schiva the destroyer from his left. This, however, as well as all the other wild tales, entirely fail in relating how this first man was created. According to this, the worshippers of Brahma would appear after all to consider him as second, as the offspring of some greater power, of whose creation or origin they profess to have no account. As to "how man was made," the doctor quotes M. Duhamel's idea, that man is merely an improved fish, and asks why this should not be possible. Schmitz, he remarks, thinks that the tulip is but the original form of the swan, and stranger still, that the serpent became a lion's tail, and falling off, changed in process of time to a palm tree. If such things are considered likely, or even probable, by our author, we shall not be surprised at anything we may hereafter find in his writings. However, we can only pity the unfortunate lion whose caudal appendage became loose enough to fall off, unless a new one were kindly provided for the occasion. Doctor Zimmermann does not say that he believes all this, but respecting the transition from a fish to a man, he certainly does say, as we noticed above, "Et pourquoi tout cela ne serait-il pas possible?" After many statements *pro* and *con*, our author allows us to consider him a polygenist, and opposed in opinion to Blumenbach and other authors, who consider that all mankind are descended from a single pair, saying, "That the manner of life, the difference of climate, and the peculiarities of the places in which they settled, introduced the differences which characterise the five principal races known in our days among the descendants of this first couple." A number of woodcuts are brought forward in order to show the varieties in the races of men, but for all anthropological purposes they are entirely worthless. The Siamese twins and the men with tails are touched upon at the end of the chapter, and then we come to the intellectual development of man and *humanity*. Here we have an account of the lake villages and Stonehenge, and a cursory glance at late discoveries of flint implements and fossil remains, from which our author infers that our ancestors existed at a much earlier period than is usually supposed.

The origin of language and writing is next touched upon, but we are not much the wiser after having studied the facts laid before us. Many of the mysteries and difficulties of speech are mooted, but there is little to explain the doctor's own ideas on the subject. He seems, however, to agree with M. Pouchet (*Plurality of the Human Race*, pp. 30-33) on several philological questions.

After a friendly visit to the Moa, a glance at the theories of the monogenist and the polygenist, and a hint or two about antediluvian weapons, we come to some chapters on zoology and the physical dif-

ferences between man and the ape. There is nothing very new in this, it is indeed a *resumé* of the best notes on the subject, with an account of the gorilla and its bony structure. The whole of this book indeed is a mass of generalisation, and consists more of a collection of the opinions of others than of any new ideas from the mind of the author himself. We admire the wonderful care and labour which have been expended in such a compilation, but can say little for its originality. The chapter on old legends concerning the flood is very amusing, especially that relating to Mexico, where it is believed that one man, named Coxcox, escaped destruction by water, and married the woman who had also alone escaped, by name Kikequelz. Truly, here is a fine point for genealogists, and those inhabitants of England who rejoice in one half of the Mexican Noah's name may claim Mexican descent with a great show of truth.

Of course we have a long account of the negro in that portion of the book devoted to the description of races. We do not know that much remains to be said on this question, since the appearance of the very able treatise on *The Negro's Place in Nature*, by the President of the Anthropological Society, but of course each author has his own ideas on the subject. Dr. Zimmerman tells us that the notion that a negro's colour is unchangeable is not the fact, and says it may be altered more or less by washing the skin with chlorine or lye-water.

The influence of climate is a very important point, and one deserving of some attention. It has always possessed its warm partisans and its equally warm opponents, who naturally enough go to extremes. There may possibly be a *juste milieu* in this case, and climate may be able to alter in some slight degree the type of a race, but neither so powerfully as some insist, nor in so slight a degree as is maintained by others. That climate and food bear an important part in the animal œconomy cannot be doubted for a moment, but the point to be determined is the *amount* of force it exerts upon the same. "It is sufficient," says our author, "to look around us in order to be convinced that well-fed men are differently constituted to those who live in want. The peasant of Pomerania, Holstein, and Oldenburg, thanks to his nourishing and rich food, is completely unlike the inhabitant of Central and Southern Germany. The Norwegian peasant is doubtless not so fat, and has less flesh on his bones, but he is stronger, since he lives well and takes plenty of exercise. His limbs have none of that roundness which fat gives to those of the northern German, but his muscles are firm, and he supports all the fatigues of his out-door life without any trouble. The Samoied, the Laplander, and the Esquimaux eat a great quantity of meat and blubber, and grow round and fat. The thick layer of fat under their skin renders them less sensible to

the cold. The seal and the whale, whose blubber is also thick, do not feel the cold of the North Pole." So much for food. But our author in the end declares that acclimatisation is a fallacy. "Tall or short, intelligent or stupid, men partly owe the differences which distinguish them to climate, but climate gives way before the influence of race and origin. It is then an error to suppose that we can pass from one race into another by submitting ourselves to a new climate and a new manner of life." A large portion of the work is taken up with a description of the manners and customs of the southern tribes, the Fijis, Australians, Malays, Dyaks, Africans, etc. This is certainly interesting, but we have no space to remark on the same beyond saying that it is a clever compilation, well and ably put together, and illustrated with many clear remarks from the learned author. "Man in a state of nature" gives occasion for several anecdotes of wild men and boys, and one concerning a wild girl, which is interesting:—

"In Sept. 1731, the servants of the Seigneur de Soigny (a village some leagues from Châlons) were surprised one day to see a young girl upon an apple tree, regaling herself with the fruit. She seemed to be completely wild, and to be about fourteen years of age. They attempted to seize her, but before that could be done, she had got over the garden-wall and had disappeared in the shrubbery. As soon as the Seigneur de Soigny heard of this, he examined the wood with all his servants, and soon discovered the fugitive. Ladders were placed against the tree in which she was sitting, but with the agility of a squirrel she sprang from branch to branch and eluded her pursuers. After this they had recourse to a stratagem. A vessel full of water was placed at the foot of the tree where she was last seen, and the servants and neighbours placed themselves in ambush. As soon as the young girl seemed to consider herself in safety, she came down the tree, and began to drink, plunging her mouth, nose, and chin into the water much like an animal.

"The pursuers rushed out, seized the young savage, and succeeded in overpowering her, although she made a desperate resistance. As soon as she was brought into the kitchen of the castle she was washed from head to foot, but before that could be done she seized upon two chickens which had been killed for the master's dinner, and, tearing them to pieces with teeth and nails, ate them up in an instant, certainly before the cook had time to rescue them from her clutches. For a long time this unfortunate creature lived entirely on raw flesh and blood. She would not wear any clothing, but tore it up directly it was put upon her. She soon began to become attached to the house, as she was kindly treated, and could come and go whenever she chose, a liberty of which she sometimes took advantage, and stayed away whole days at a time. It was noticed that on these excursions she ran so fast that she could catch hares. As soon as any game was caught she skinned it, drank the blood, and devoured the flesh. One day in winter she presented herself with two hare skins on her

shoulders, but it did not seem to be for the sake of warmth, but only in order to appear extraordinary, for she carried a club made of a heavy cane, and dressed herself up with a girdle of rushes. If it were not a naturalist like La Condamine who tells us all this, we should take it for a fable.

"Great pains were taken to make the child speak, but in vain. At last she was persuaded to wear a few clothes, at first very light ones, and by degrees ordinary apparel, and it was hoped that something might have been made of the poor girl, when unhappily M. de Soigny died. She was then shut up in a convent, and soon began to pine away, deprived as she was of air and liberty. She endeavoured to escape, and was then sent to another convent, where she soon died of pure melancholy."

We have several more instances, but chiefly those well known to anthropologists, some of which have already been noticed in our columns.*

We are told how nations degenerate, and that some people are very superstitious, and then we have an account of those races that subsist chiefly on hunting or fishing, of those who live almost entirely on horseback, and those who possess no horses at all, of those who roam about from place to place, and of others who lead a sedentary life.

We must complain, in some degree, of the large space devoted to geography and phrenology. Valuable as is the former science, it merely fills up a few hundred pages in the work, and tells us nothing either new or very interesting. The latter matter, phrenology, might have been left out altogether, with no loss to the reader.

As to language, we have a *résumé* of what others have written on the subject; but the author does not attempt to go deeply into philology.

The last chapter of this singular book commences thus:—

"The aim of this work being chiefly to present a sketch of the human race in its primitive state, so as to be a sequel to our work, 'Le monde avant la création de l'homme,' it is not necessary for us to describe the efforts which have been made by various peoples in order to improve themselves, and thereby gradually arrive at a state of civilisation; nor is it necessary for us to describe civilisation itself. . . . Men may be rendered perfect, or rather, are capable of any amount of improvement, and we may declare *à priori*, that any nation may progress if particular circumstances do not impede it. These circumstances generally proceed from climate, and the manner of life of which it is a consequence, and these may be classed into two categories. Either the climate condemns man to incessant labour, which prevents him from having the time necessary for the cultivation of his mind, or he spends

* See Anthropological Review, vol. i, p. 16.

his whole being in idleness, from being able to subsist without trouble, and from the attraction of a wild and vagabond life."

And then it concludes:—

"The first period is that of the reign of theocracy; the second, that of a struggle between philosophy and theocracy; the third will be characterised, we may safely affirm, by the victory of the spirit of liberty, and the acknowledgment of the principle that a science can only be formed by the means which God has placed at our disposal, and which are Reason and Experience. Such a progress would be immense; and if we added to it the suppression of hatred between races, and of war itself, we may declare that this earth would not so often deserve the name of the 'Valley of tears,' which poets have sometimes given to it; but even if we may predict this result with certainty, it is not quite so easy to determine its date, and *when* all this will come to pass. Besides, this would be a useless question. All that we have to do just now, is to work courageously, and to study the paths already trodden by others, in order to make our own shine with a clearer light. This is what we shall doubtless do in other works."

A bold promise, indeed; but we cannot doubt but that Dr. Zimmermann will attempt it. The enormous mass of material which is found in the present work proves incontestably that he is a man who is patient and diligent; for the labour required to collate all the authorities he mentions must have been very great. We can recommend his work to the student of anthropology, not as an authority on any point of the science, but as an interesting illustration of the same, which will well repay reading, and from which many useful hints may be obtained. We cannot say that the author has fulfilled the promises of his title-page; it is quite impossible for any one book to do that; but, as an interesting and amusing work, as a hand-book of manners and customs, and as a series of notes on many subjects connected with anthropology, we can cordially recommend it to our readers.

MYTHOLOGIC LEGENDARY TALES OF SOUTH AFRICA, AND OF THE ESQUIMAUX IN GREENLAND.*

HERE are books, truly and fairly anthropological, which exhibit to us the extent of that new domain thrown open to scientific study by the introduction of our science—books with “a child” for a text, and the infancy of a people for a study. And yet, to an ordinary reader, they are simply gatherings of legendary tales—some in *replica*—of a savage tribe; legends with no poesy of language in them, undistinguished by gorgeousness of imagery like those of Burmese or Brahmanical story, and not in any degree reflecting the glitter of a primitive fount, from which the poet of our day could drink inspiration. On the contrary, the stories are rude, rough, often shapeless, and most of them characterised by the crudities of a barbarian mind. And yet they have to us a special and significant value, one that is not to be expressed lightly, or to be passed over with indifference.

But before remarking upon the legends contained in this collection, we are inclined to examine, we admit somewhat speculatively—for as yet scarce any reliable or recognised data have been laid down—how far the state of individual childhood is in itself a type of national childhood; how similar, in mind, and ways, and action, an untutored nation is to a child groping its way towards mental light and knowledge.

In a broad way, man, “the microcosm”, as the psychical philosophers of the seventeenth century liked to call him, has always a lesser microcosm to learn from, in some primitive people, whose national and social ways typify to him his own individual beginning, and of whom his child-time has been a shadowy reflection. But this correlation of personal with national life has never advanced beyond a certain shadowy and indistinct recognition of the fact in its broadest sense. Difficulties, too, present themselves on the side of the child; and these add seriously to the haziness of an hitherto unrevealed path. How few, and how indistinct, recollections have we retained of our childhood,

* “Reynard the Fox in South Africa”; or Hottentot Fables and Tales, chiefly translated from original MSS. in the library of His Excellency Sir George Grey, K.C.B. By W. H. J. Bleek, Ph.D. Trübner and Co. 1864.

“Kaladlit assialiait”, or Wood-cuts drawn and engraved by Greenlanders. Gothaab, in South Greenland. Printed in the Inspector's printing office, by L. Möller and R. Berthelsen. 1860. 1 vol. 4to, pp. 52, plates.

“Kaladlit okalluktuailliait. Kaládlisut Kablunátudlo. Attuakæt ardlait et Attuakæt pingejue. Nounngme. Nunnap nalgata Nakiteriviane Nakitat; L. Möl-lermit, 1860 et 1861.” 2 vols. 8vo, pp. 136 and 111, plates. With translation into Danish. Godhaab: Möller. 1861.

of the dawn of reason, and the first employment of the intellect ! True, that the poets may be true in singing of our birth as but a death and a forgetting—

“The soul that riseth with us, our life's star,
Hath had elsewhere its setting,
And cometh from afar”;—

and until some larger portion of Infinite Wisdom—from which source alone all true light cometh—is granted us, we shall make but little headway in the determination of the question. But certain it is that the pathway before us is even now widening, and becoming more firm to our mental tread.

The earliest beginnings of a people are indisputably best to be learnt by a search for, and careful examination of when found, their dwelling-spots. We are not inclined to believe strongly in the migratory tendencies of the primæval tribes. We fancy their lives, habits, and customs, were limited within a narrow bound. Where they lived, there they died and were buried. At all events, such a conclusion forces itself upon any one who has carefully investigated the few, as *at present* discovered, dwelling-spots of pre-historic people in Northern Europe. A Puritan preacher of the seventeenth century once preached a sermon, now one of the rarities of bibliography, upon the text “Man is born to travail, as sparks fly upward”, into which text, he chose to tell his hearers, a curious error had crept, the word intended being “travel”; and accordingly, from this remarkable discovery of his ethnological mind, he extracted a conclusion, which certainly was of no particular ethnic importance; but, even if his critical reading of the text had been the correct one, it certainly could not have been in force among those peoples whom, for want of a better title, we designate “pre-historic”. From the examination of their oldest dwelling-spots, it is as yet impossible to say, by correct reasoning, what similarity existed between the ideas of the most primitive people whom geology and anthropology have yet been able to discover, and those of “savage” tribes still existing amongst, or near to, a civilised people. Certain broad anthropological generalisations are possible, but these do not help us far towards what we require.

Yet, returning to the earlier part of our disquisition, no thinking man ever doubts the similitude existing between the *type* primitive tribe and the child newly born into the world. With increasing knowledge, the likeness will be more apparent; for the reason why we cannot now see this likeness clearly is one easily to be comprehended: the subject is too deep and great to admit of being treated exhaustively with our present comprehension of its data. We must not say that the similitude does not exist, because we cannot now see it clearly. Much has to

be learnt on the subject; and we drink the waters of truth from a fount not likely to cloy, or become tainted and unwholesome.

We heartily concur in the wish expressed by Dr. Bleek, that other philologists should take up the subject, and do for other lands what he has done for Kaffraria; collect and correlate the fables of other savage tribes with those already known and published, either current amongst civilised peoples, or orally transmitted through the lifetime of savage tribes, living both near to and distant from them. A remarkable likeness is observable between the household tales of savage peoples as far apart as Patagonia, Namaqua Land, and the Labrador peninsula. By such correlation we may be able to approach—purely viewing the subject from a literary point of view—nearer to a comprehension of what the earliest workings of human fancy really were. Such a work would aid, in no mean degree, the ethnic relationships of peoples, now sundered widely from each other, and we are glad to think that one “antiquary,” at least, Mr. Haliburton, F.S.A., of Nova Scotia, is engaged in the investigation. His elaborate papers, tracing the observance of such festivals as that of *Hallow-e’en* to the Southern hemisphere, are well known to those antiquaries, who, like Mr. Kelly, delight in tracing customs to their primal source. But what Mr. Haliburton and other zealous divers in the ocean of a buried past should do, would be to bring up such pearls of truth to the surface as would illumine the perfectly savage tribes now existing in the midst of civilised people; tribes—even races of men—still, to use an almost slang phrase, standing out in the cold. And to enable this to be done, the legends of such tribes, actually existing, should be gathered together and correlated with those of others, near-lying or distant, or with those orally transmitted of extinct tribes, whose time of dying out has been more or less distant. Oral transmission, as Max Müller has taught us, is a very reliable method of making the future acquainted with the thoughts, fancies, and doings of the past, and a flood of light might be thrown on the domestic lives and ideas of the rude hunters and fishers of the East Scottish seaboard, if their legends and fables could be found. Surely such rude employments of the intellect, which were to them the only home literature they knew, are worth inquiring after and garnering into our anthropological barn. Customs yet lingering, and even practised still in Scotland, show that our primitive settlers, whoever they may have been, personified the elements, and doubtless had their traditions and fables about them. Who will collect these fragments—these indications of what Prof. Max Müller may be inclined to call the metonymy of ideal imaginings—these pseudomorphs of fancy, to borrow a term from mineralogical science? Surely they are as well worth enshrining among the records of anthropology as are the fables of South African savages.

Dr. Bleek's remarks upon the origin of myths and fables, although containing nothing new, are so exceedingly well put, that we extract them in full: "It has been justly remarked by our learned friend, Mr. Justice Watermeyer, that the natural propensities of animals in all parts of the world being so much alike, fables intended to pourtray them must also be expected to resemble each other greatly, even as to their very details.

"But we may well ask why it is that, so far as we know, the Kafir imagination seems not at all inclined to the formation of this class of fictitious tales, though they have otherwise a prolific native literature of a more or less historic and legendary character. This contrast to what we find among the Hottentots appears not to be accidental, but merely a natural consequence of that difference of structure which distinguishes these two classes of languages, embracing respectively the dialects of the Hottentots, on the one hand, and those of the Kafirs and their kindred nations, on the other; in the former (the Hottentot), as in all other really sex-denoting languages, the grammatical divisions of the nouns into genders, which do not tally exactly with any distinction observed in nature, has been brought into a certain reference to the difference of sex; and on that account this distinction of sex seems in some way to extend even to inanimate beings, whereby a tendency to the personification of impersonal objects is produced, which in itself is likely to lead the mind towards ascribing reason and other human attributes to irrational beings. This is the real origin of almost all those poetical conceptions which we call fables and myths. Both are based on the personification of impersonal beings, the former by ascribing speech and reason to the lower animals, whilst the latter substitutes human-like agencies in explanation of celestial and other elementary phenomena in place of their real cause."

Myths, Dr. Bleek regards as "petrified excrescences of a traditional creed"; and fables as the "humbler sisters of myths"—definitions which appear to us singularly happy. As regards the "fables" and "household tales," together amounting to forty-two in number, we prefer directing the attention of our readers to them *en masse*, rather than serving up any one as witness to their general flavour. Regarded psychologically, they appear to be a tolerably good index of the Kafir mind. The qualities of certain animals are presented as a sort of apotheosis of those kinds which characterise the Kafir and Hottentot. The fox outwits other animals by his exceeding cunning; the jackal takes a front place in the council of beasts, by reason of his admirable trickeries, and in one fable by his wisdom. Noble animals, such as the lion, suffer grievously from the company or

through the designs of those acute animals who, when hard pressed, and in danger through the consequences of their wicked "jokes," contrive to make the jackal their scape-goat. In turn the jackal, known in our school-boy days as the "lion's provider," attempts to swindle the lower animals, and gets most signally outwitted by the ram and the cock. In another group of these fables the weak confound the strong; the tortoise, swallowed by the elephant, out of revenge, proves the destruction of the colossus; in other ways this same pigmy causes the death of the ostrich and the giraffe. To the same group of tales belongs one wherein girls confound strong men, and lure them to a pitfall. A separate group is one entitled "Baboon Fables." These are very well worth careful comparison. Indeed one (No. 17), "The Judgment of the Baboon," has a singular similitude to the well-known English nursery tale of the little old woman whose obstinate pig obliged her to seek the aid of some dozen unsympathetic personal and impersonal helpers, an old German version of which is the story of "Huncken und Hencken," the lamentable history of the husband-cock who was obliged to stand on one leg in a tub of weak beer to save himself from drowning.

With these exceptions, we fail to discern in the tales of Southern Africa, any of those popular narratives which are of common diffusion amongst the natives of so-called "Aryan" origin. We see in Kúrdistan the popular ballad of "Lord Lovel"; we encounter in most of the languages of Western Europe the story of Jack and the Beanstalk; but the Equator seems to offer an impenetrable barrier to the circulation of those legends which have spread north and south to the Icy Cape, and to the head waters of the Nile. On comparison of the Hottentot tales with those of Bornou, as described to us by Kölle, we find none which are common to the natives of Southern and of Equatorial Africa. Should a like comparison be applied to the natives of America, we would find there that there are in that continent also no narratives which are common to the Semitic and to the "Aryan" sources of legendary information. The great antiquity which can be inferred for the dissemination of the tales of Europe and India cannot be predicted for the tales of Southern Africa, at least from any information which Dr. Bleek places at our disposal. On the contrary, we find in every tale which bears the marks of a carefully constructed plot, evidences of close contact on the part of the natives with the European settler and colonist. It is from modern European civilisation that many of the allusions are drawn; and it is to the low opinion which the savage possesses of the morals of his conqueror that the satirical descriptions by the Hottentot of European hypocrisy are due.

In thus giving a hearty welcome to this little book, we think it a

pity that a larger selection from the mass of household and legendary tales placed at Dr. Bleek's disposal was not made; no doubt another, and probably still more interesting collection, judging from some titles of tales which Dr. Bleek tantalises us with, will reach us at no distant day, but they would have had a higher general value had they been incorporated with those now given to us. In proportion to our earnest investigation into the workings of the intellect and imagination amongst prehistoric and savage tribes will be the measure of our attained knowledge as to their ethnic and social position. Who knows how many "old lamps," fondly imagined by us to be "new," we may not discover by faintly-shining glimmerings from the dwelling-spot of a primitive or even "savage" people; not, perhaps, from the evidence of the completed work, but from the existence of ideas which, like the separated movements of a watch, needed but the master-hand of a higher human intelligence to unite them, and create the work. Ideas leading to discoveries are subject to certain terms of incubation in the world of mind; and he who "discovers" a principle in this boasted nineteenth century which brings to him wealth, and leads him up to honour, is but the lucky exponent of one which others, working the gold mines of thought years ago—perhaps ages ago—sought to grasp in its fulness of detail, and failed only because the time of its revealing was fixed for the hereafter.

It so seldom happens that a new literature is born into the world, that the appearance of the Esquimaux volumes, to which we have referred above, in civilised Europe, printed by natives, under the direction of the Moravian missionaries, is a phenomenon in the world of letters only comparable with the visit of a comet, or an exhibition of mock suns. They contain the legends which form the only national history of the Esquimaux, profusely illustrated by wood-cuts, some even coloured, in mediæval reds and yellows; so that they remind us more of the rude cuts contained in the block-books, and other early printed works of the fifteenth century. We need scarcely remark upon the high anthropological value of this legendary and real history, thus collected and presented to us.

The first-named volume is the earliest contribution of the Esquimaux to the literature of the world. An explanatory note informs us that—"These wood-cuts are the result of experiments undertaken in 1858-60, to test the natural capabilities of the Greenlanders for this branch of art. The whole have been engraved, and, with the exception of Nos. 1 to 8, composed and drawn without assistance by five or six natives of Greenland, the necessary wood and instruments having been lent them. The best of these wood-cuts are the product of a Greenlander named Aron, living near Godhaab, who has received no better education than the generality of his countrymen."

The *Reine Hortense*, which took Prince Lucien Bonaparte to Got-haab, is, perhaps, the best and most artistic of these. About twenty cuts in this book illustrate the domestic life of the Esquimaux, the remainder being devoted, in the true spirit of a primitive people, to the illustration of incidents in the lives of some olden heroes, whose fame and prowess—either for good, as those who had rid the country of its human or supernatural enemies, or for bad, as they who were dreaded through the land as “fierce man-slayers” (the ogres of Esquimaux tradition)—had descended to them from their forefathers, enveloped in about as many clouds of haze and mystery as such mythologic individuals usually are.

Of these, the most noted are the following:—Akiqssaik, a valiant champion, “descended both from the inhabitants of the coast (Esquimaux proper) and from the inhabitants of the interior (probably the North American Indians).” Of this worthy, a long history is given. Mr. Taylor, Commissioner for the Eastern Coast of Greenland (to whom we are indebted for the whole of these interesting volumes), has prepared a careful translation of this and all the other legends from the original, and kindly placed it in the hands of Mr. Geo. E. Roberts to arrange for the press. Much, therefore, as we should wish to give a general outline of these remarkable mythological tales, we are unwilling to anticipate their appearance. Suffice it to say, that in the history of this man of might, and in those of his compatriots, Kagssuk, “a mighty homicide”; Kunnuk the orphan, who, after escaping from a hostile attack upon himself and comrades, wandered over the country, and performed many valiant deeds; Kenake, who became invulnerable and invisible; and Ungilactake, a fierce man-slayer, “who lived on the coast of America opposite Greenland,” appear the most valuable clues to the ethnic and geographical derivation of the peoples now inhabiting that land. In one legend, current originally among the Esquimaux in Labrador, a passage occurs, evidencing a remembrance of human sacrifices, either for a cannibal purpose, or as a religious rite—“They (the nephews of Sikkoliarviujuitok) had a space enclosed with great stones, and they enticed into it all whom they wished to kill.”

It may naturally be supposed that the Moravian missionaries in Labrador have also been instrumental in procuring many of these curious and anthropologically-valuable legends, together with fragments of folk-lore from their converts. As an example of the method apparently pursued by them, we shall give a literal translation of one contribution to our scanty knowledge of this singular people, supplied by “the old widow Debora” to the Moravian missionaries, and included, as an *addendum*, in one of these curious volumes.

"In obedience to the will of Satan, I also in my youth followed the bad manners and customs of my kindred; but why was it? I was bound in Satan's bonds. When I was in the family way, I was obliged to observe these things, viz., I dared not eat entrails, nor blubber, nor seal's stomachs, nor even the flesh about the ribs, nor the upper part of the shoulder.

"When the child was born, they took the heart, lungs, liver, entrails, and stomach of a seal, mixing them together. Then the child was cleaned by licking it with the tongue, which was only done lengthways, not across. When this was done, the mixture I have mentioned was given me to eat; and all this was to confer health and long life on the child. During the catamenia, I dared not undertake any unclean matter, nor touch any animal matter, not even with a finger.

"When my husband was out hunting seals, it was not considered lucky for me to dress or prepare reindeer skins; and, had I done so, there would not have been any seals or any other animals caught.

"Our forefathers whenever they had one of the Tunnit (Greenlanders) in their power, bored holes in his forehead with boring tools, and so killed him, therefore the Greenlanders fled from our land. We are the descendants of the people who did these things, but we will not kill others, for we know Jesus."

The illustrations are in every case full-page quarto, or octavo woodcuts, exceedingly characteristic of the daily life of the Esquimaux, whether as hunter of the walrus, seal, reindeer, or ptarmigan, or in his domestic capacity, as, for example, instructing his children in the management of the kajak and use of the oars; and also with reference to the more important custom of cutting a circular piece of flesh out of the abdomen, immediately above the navel, which appears to be more for medical purposes than practised as a religious rite, or even as akin to circumcision. Two of the cuts refer distinctly to cannibalism—in one of them a man, with countenance distorted by rage and hunger, is gnawing the arm of a dead woman, while others of his household are seen huddled in a corner of the room, seemingly in an agony of terror and dread. We cannot connect this illustration with either of the legends; but the man-eater appears, from the affrighted looks of the witnesses, to be regarded as a kind of ghoul. The scientific value of these designs is certainly very great; for it may be questioned whether, if they had been drawn and cut by Europeans, the race-characteristics of the people would have been so excellently given. It is much to be desired that fac-similes of these illustrations should be given with the legends, if it is not found practicable to obtain the original blocks from Godhaab.

ON THE THINKING SUBSTANCE IN MAN.

By T. COLLYNS SIMON.

1. THE first principle of materialism is, that mind is something which depends for its existence upon matter—something which results from some of the combinations of which matter is susceptible; one of which combinations we find in the human brain, as some say, or, according to others, in the human blood; but although these and different other portions of the human body have at different periods been supposed to exhibit the requisite combination, I shall here, for the sake of brevity, speak only of the brain. This theory of course involves the supposition that, when the material combination alluded to ceases, the thing called mind ceases; that there is not really, with a distinct existence of its own in nature, any thinking thing whatever except matter so combined; and that what are commonly supposed to be the operations of an immaterial entity merely result temporarily in this way from peculiar forms of matter, just as any other secretion does; and it is held that our facts give us nothing more.

The opposite theory (called immaterialism, or anti-materialism) is that, besides matter, there is a second original entity or primary element in nature, under the name of "mind" or "spirit," and that this does not in any sense result from, or depend for its existence upon, matter; that from its own nature, as well as from the nature of matter, it would be physically impossible for it to do so.

To put the difference between these two doctrines briefly in other words, it may be stated that materialism represents the percipient element of animal natures as extended, whereas immaterialism undertakes to prove, with mathematical precision, that this element is unextended,—as completely unextended, in its nature, as an idea is.

2. And let me here observe what I think will be readily conceded, that no mere opinion, however probable, is on this subject of any value. This holds true of all questions in philosophy, as well as in science, but of none more than of the present one; and this is a point to which I would in an especial manner invite the attention of all thoughtful men. No amount of mere probability, however great, is, on either side, worth anything. We must here attend to facts only—either those facts of which every one of us is himself conscious, or those facts which scientific men have ascertained experimentally beyond all further room for controversy. The fact, the whole fact, and nothing but the fact, is the watchword of this analysis.

3. Every one of us is conscious that nature consists of what perceives and what is perceived. On this point there neither is nor can be the slightest doubt. The only question here possible is, are these two seemingly distinct things really two distinct things, or are they one and the same thing? Is the percipient an extended entity, and therefore material, or is it an unextended entity, and therefore immaterial? Is it the brain, or is it a spirit? That is what we have to determine.

4. The only definitions which I require to place before the reader are these two:—By the term “matter” I here only mean (as everybody means) that which is perceived under the condition of the senses, whatever that, upon analysis, may turn out to be; *i.e.*, whether that is found to be, in its nature, that which consists of phenomena, or that which consists of the causes by which phenomena are produced. And by the term “percipient element,” or “percipient,” I only mean that which perceives things, whatever that may turn out to be; *i.e.*, whether it turn out to be matter or not,—something material (like the blood, brain, etc.), or something immaterial, as a spirit is understood to be.

The main thing here then necessary is to exhibit exactly what we know beyond all room for doubt as to the nature of matter—as to the precise nature of that which we perceive under the condition of the senses. The reader’s own reflections will almost suffice to carry him through the remainder of the argument.

OF THE NATURE OF MATTER.

5. Now on this first point our data are these:—If you prick the optic nerve with a pin you produce no pain, but light and colour. If you prick the auditory nerve you here also produce no pain, but only a sound; and all the irritants applied to these nerves produce the same effects. In this way it is discovered that a flash of light is a sensation, that a colour is a sensation, and that a sound is a sensation; not, be it carefully observed, that we have a sensation of the cause by which the sensation is produced, nor that we have a sensation of any other thing beside the sensation, and which other thing we call “sound,” but that the sound itself is the sensation itself; nor, in the case of colour, that we have the sensation of the pin or other cause by which the sensation is produced, for we have not; nor that we have a sensation of any other thing in addition to the sensation itself, and which other thing we call “colour,” but that the colour itself is the sensation itself and that the sensation is the colour. When we speak of “the sensation of sound,” or “the sensation of colour,” the preposition “of” does not in such phrases

denote that the sensation *belongs* to the sound or to the colour, as so many writers seem to imagine, but that the two terms, "sound" and "sensation," are in apposition, just as when we say "to the number of twenty," "the name of Charles," etc., where we only mean the "number twenty," "the name Charles." The same is true of light. The colour, sound, and light, therefore, which we perceive under the condition of the senses are essentially sensations—things which are effects produced within us, but the cause of which we neither see nor hear—things which depend on conscious life, and which could not possibly exist except under the condition of such life.

Here then is an enormous fact with which very few people, except physiologists, are acquainted. All the light that there is in nature, whether sunlight, gaslight, candlelight, or moonlight, is dependent for its very existence upon conscious life,—upon something capable of perceiving it; a fact quite the opposite of that which any one could have expected. And this is true also of all the colours in nature,—all the colours of trees, and fields, and flowers, of the human body and of the human brain, of the blood and of the organs of sense, of birds and beasts, of streets and rivers,—in short of all material things. All colours are dependent, like sounds, not for their manifestation, as has been mistakenly imagined, but for their very existence, upon being taken cognisance of by something living; that is, they are sensations. And this is true of sounds also. All the sounds that we hear—the song of birds, the voice of man, railway noises of all kinds, and music of all kinds—are all of them pure sensations, effects produced within us, and clearly proved by physiological research to be so.

6. In this way we get by degrees at the nature of the different materials of which the external world is composed. But, as I have already said, it is not only by the prick of a pin that we can make the experiment that gives these facts. Anything which irritates the nerve of sight or of hearing will produce the same effects. In the case of the one nerve this effect will be sound, in the case of the other it will be light and colours. John Müller, M.D., in his admirable work on physiology, explains this vast fact with the utmost clearness and precision (p. 1059, etc.). Narcotics introduced into the blood will produce sounds, and colours, and light, as well as the prick of a pin will. So will also electricity when applied to the nerves I am now speaking of. And what is thus ascertained respecting sounds, and colours, and light is known also, and in the same way, to be true of smells of all kinds and tastes of all kinds. These are known to be sensations, things which can only exist in relation to

percipients ; things which, although themselves unconscious, can exist only under the condition of conscious life.

7. Here the man of opinions encounters his first temptation. "It is evident (he says) that colours, sounds, and light would exist whether there were percipients or not; therefore it is my opinion that science must be in error when she makes out that they are sensations." Is he sure that this is the only alternative? Scientific men have never considered this opinion as evidence against the fact. We cannot, as I have said, afford to listen to mere opinions upon this subject. The facts are as I have stated them. Every one can ascertain this for himself. And it is not by denying them that we shall be able to deal with them. I shall nevertheless here observe, for the sake of the less experienced reader, that the solution of the alleged difficulty lies in the principle that things which can only have their being in relation to a percipient (as any one man's knowledge, for instance, on any one subject) exist, like the percipient itself, even when we are not conscious of their existence.

8. I said above that in this manner we get at the primary elements that enter into the composition of the external world. But it will be asked, how can the external world consist of such materials as sensations, since these are things which exist within our own bodies? This question is unobjectionable if it is asked for the purpose of information ; but it is clearly not to be put forward as an argument to prove that experimental facts are not facts. I answer then, *first*, that whatever may be the consequences of the facts, we cannot avoid these facts. Every one has it in his power to ascertain that the facts are as I have stated them. No amount of supposed absurdity will justify us in abandoning the smallest of them. I answer, *secondly*, that we have no proof whatever, experimental or otherwise, that the sensation which attends the irritation of a nerve is a thing within the body, however large an amount of probability there may have formerly appeared in favour of that supposition. All that facts go to establish on this point is, that the sensation is only a thing *within*, or rather *dependent* on, the percipient element of our nature, whatever that may be. Before we are in a condition to affirm that the sensation is anything within the body, we must prove that the body itself, or some part of it, is the percipient; and this is what no one now pretends to prove, or even to suggest the slightest probability of. I answer, *thirdly*, that, over and above the consideration that the fact is one of consciousness, we have mathematical demonstration, which is the most incontestable proof that we can have of anything, that the green colour of a twenty-acre field, in the midst of which we are standing, is not a thing within the colours of our own

body, for the extent of this green colour is many times greater than the extent of the colours of our own body; and the greater cannot be contained within the less. We have, therefore, in this circumstance alone the clearest evidence that a sensation is not a thing within the body, but must depend upon some other sort of percipient—some percipient which can deal with all amount of extent that may be necessary, and which, therefore, must be itself independent of all extent.

9. I need not remind the reader that some partisans of materialism have endeavoured to get rid of the fact I now advert to, by saying that the twenty acres of green colour are not really outside the colours of the human body at all, but only *seem* to be outside them. On this point, however, I appeal to each person's common sense whether anything can be more obvious to our organs of sight than it is that the green colour of the trees and fields is not a thing within the colours by which our own body is delineated. Is there any man that is not a theorist who will pretend to say that the light which pervades a crowded ball-room, and the colours of the dresses, and the music, and the voices of those conversing, are all things within his own body—within the colours of his own body, and which have no existence in space external to his own body? and (equally preposterous) that the colours by which his own body is externally delineated are in reality things located within his nervous system and *behind* themselves? We have no alternative here in fighting the battle of truth but to appeal to men's ordinary understanding, and to that unsophisticated discernment by which we are able to distinguish between an angle and a line, or between a square and a triangle. Of course, to deny such distinctions is to deny even mathematical demonstration, and with denials of this order no reasoning can contend. According to the fact of consciousness, therefore, as well as those of science, our sensations are *portions* of the external world, that is, of the world that is external to our bodies, and not at all, as has been alleged by the parties alluded to, things existing within the precincts of our own bodies.

10. I have now to speak of the fifth class of sensations, viz., the sensations of touch, or the feels of things, such as a hard feel, a soft feel, a square feel, a round feel, and all that the blind man perceives of the material world, besides odours, tastes, and sounds. When the colour of our hand comes in contact with the colour of the table, a fresh sensation results; which, moreover, does not result when it is the colour of the chair which comes in contact with the colour of the table. This sensation, like all the others, is a thing wholly dependent on the percipient element of nature, whatever that may turn out to be, and is therefore often figuratively spoken of as being *within* it.

The following quotations from Müller's *Physiology*, although mingling the facts with hypotheses of his own, nevertheless fully recognise the experimental fact, that what we perceive under the condition of contact or touch are sensations only, and not, as was formerly imagined, the causes of sensations. When we feel the table, for instance, we do not feel the cause of what we feel, but the very thing itself which we feel; and that, even Müller fully explains, can only be a sensation. We see and feel sensations only; and not under any circumstances the occult stimulus or force which is supposed by Müller himself and by some other writers to give rise to them. Müller writes:—

"The sensation of touch in our hands makes us acquainted, not absolutely (immediately) with the state of the surfaces of the body touched, but with changes produced in the parts of our body affected by the act of touch." (P. 1068, Dr. Baly's translation.)

And again:—

"If we lay our hand upon the table we become conscious on a little reflection that we do not feel the table, but merely that part of our skin which the table touches." (P. 1081.)

This is what is meant by saying that we feel the table. We experience that sensation which attends the junction of two colours, one of which belongs to the table, and the other to our own body, *i.e.*, to the body which we *immediately* control. This sensation is evidently like colour and sound, a thing external to our own bodies. We are conscious that it is so. We are conscious that what we perceive in this way, whatever it is, is external to our own bodies; and from science we learn that what we thus perceive is not, as we used to imagine, the stimulus by which a certain sensation is produced in our nature, but only that sensation itself. No mere opinion that contradicts such facts can, I repeat, be listened to. Müller indeed is one of those writers who think that colours and sounds only *seem to us* to be outside the body, being, as they say, really within it; and, of course, he thinks the same of the tactile sensations. But I appeal to any one whether the feels of the table do not form part and parcel of the table as much as its colour does, and whether they are not at the same distance from the colour of his own body, as the colours of the table are.

11. It is not, however, only on the contact of external colours with the colours of our own body, that the tactile sensations are excited; for in the same way as various irritants acting on the nerves of sight and hearing are attended with the sensations called colour and sound, so if the nerves of touch be irritated we experience various feels. A narcotic introduced into the blood, for instance, produces the feel of ants creeping over the skin, and the gentlest contact of the finger with the electric chain will produce, upon some other portion of the

body, a feel of violent contact with something external, though nothing has been really in contact with the body in that part. In this manner we arrive at the clearest proof that feels, like colours, are things whose existence is only possible in relation to the living percipient element of animal nature (whatever the element may turn out to be) at the same time that they are also, like colours, part and parcel of the external world.

It is thus evident that all those things which we immediately perceive under condition of the senses are portions of the external world. Light and colours, feels, sounds, tastes, and smells are all pure sensations excited in our nature (not stimuli by which sensations are produced), and are all of them, therefore, what is understood by the term "phenomena."

12. There is, however, another class of phenomena of which I must now speak. The colours of a table have certain shapes and sizes so connected with them that when we see the one we see the other. These we call visible shapes and sizes. They are marked out and delineated by the colours; and if all colour were withdrawn from them all these shapes and sizes would instantly vanish, and what we saw would exist no longer. The feels also of a table, as well as its colours, have certain shapes and sizes in them. The blind man who has nothing to deal with that is extended except these feels, finds them to contain for him shapes and sizes as distinct as the colours by themselves do for us. These we call tangible shapes and sizes; and where neither feels nor colours exist, we have no shapes or sizes. It is utterly impossible for us to imagine a shape or size that is undelineated by anything whatever and equally impossible for us to imagine anything else that can delineate shape or size, except those feels and colours by which we find them delineated and marked out in nature.

13. Thus we see that the shapes and sizes of the external world are qualities or modifications inhering in feels and colours, and of course existing *with* these sensations which they modify, wherever and however these sensations exist; existing therefore in complete dependence, like them, upon something that perceives, and that is therefore conscious.

14. There are other qualities which are to be found in feels only, viz., solidity, weight, hardness, strength, etc. Some writers express themselves as if there were some sort of absolute existence for such things, and as if they did not really exist in, *i.e.*, were not really delineated and marked out by, feels. But very little reflection will convince us that this is not the case; nay, that it would be physically impossible for such things to have any such existence as this. A solidity that no one could possibly perceive under condition of the sense

of touch—a weight that is unattended with the slightest feel of any kind—a hardness, a strength, that no one could ever, under the most favourable circumstances, become sensibly cognisant of. What is the object of speaking of it as possible that such things should have a real existence or even an ideal one? They can clearly be nothing more than mere abstractions.

15. Other qualities are found in sounds, such as intermission and permanence, intensity and faintness. Some sounds are high, some low, etc. But there can no more be this intensity without the sensation called sound than there can be solidity without feel, or than there can be size or shape with neither feel nor colour.

16. Thus, then, we see that in material nature there is nothing whatever before us except sensations and their qualities, *i.e.*, qualified sensations, in groups or singly, and the various laws according to which these sensations or groups of sensations, so qualified, succeed or accompany one another. The sensations themselves and their attributes or qualities are now commonly and accurately spoken of as “phenomena” (a Greek term here denoting “sense-things,” or “things sensible”), and material nature as consisting wholly of these phenomena and their laws, as even Comte speaks of it; and this language we see is in strict accordance with the facts of physiology and the facts of consciousness.

17. The principles here explained were summarily stated as follows, by James Mills some thirty years ago, in his *Analysis of the Phenomena of the Human Mind*:—

“The primary importance to men of being able to make known to one another their sensations, made them in all probability begin with inventing marks for that purpose; in other words, making names for their sensations. Two modes presented themselves, one was to give a name to each single sensation. Another was to bestow a name on a cluster of sensations, whenever they were such as occur in a cluster. Of this latter class are all names of what are called *external objects*—rose, water, stone, and so on. Each of these names is the mark of as many sensations as we are said to *derive from* these objects. The name ‘rose’ is the mark of a sensation of colour, a sensation of shape, a sensation of touch, a sensation of smell, all in conjunction. The name ‘water’ is the mark of a sensation of colour, a sensation of touch, a sensation of taste, and other sensations, regarded not separately, but as a compound. . . . The occasions, however, are perpetual on which we need marks for sensations, not in clusters, but taken separately. And language is supplied with names of this description. We have the term red, green, hot, cold, sweet, bitter, hard, soft, noise, etc., composing, in the whole, a numerous class. For many sensations, however, we have not names in one word, but make a name out of two or more words. Thus, for the sensation of hearing, derived from

a trumpet, we have only the name 'sound of a trumpet.' In the same manner we have 'smell of a rose', 'taste of an apple', 'sight of a tree', 'feeling of velvet'. Of those names which denote clusters of sensations, it is obvious (but still very necessary to remark) that some include a greater, some a less, number of sensations. Thus a stone includes only sensations of touch and sight. 'Apple', besides sensations of touch and sight, includes sensations of smell and taste. We not only give names to clusters of sensations, but to clusters of clusters, that is, to a number of minor clusters, united into a greater cluster. Thus we give the name 'wood' to a particular cluster of sensations, the name 'cavass' to another, the name 'rope' to another. To these clusters and many others, joined together in one great cluster, we give the name 'ship'. To a number of these great clusters, united into one, we give the name 'fleet', and so on. How great a number of clusters are united in the term 'house'! and how many more in the term 'city'! (vol. i, p. 91). And again, in using the names tree, horse, man, the names of what I call objects, I am referring, and can be referring, only to my own sensations (and to other people's sensations); in fact, therefore, only naming a certain number of sensations, regarded as in a particular state of combination; that is, in concomitance" (p. 71).

18. I admit that a few metaphysical theorists whose hypotheses, respecting an occult matter, these facts entirely subvert, assert, without any explanation, that phenomena are not real things—that the real things are those occult ones, which they suppose, and from which they say, that phenomena are derived as from their causes, and that the real material world is one utterly inaccessible to the senses. These theorists are they who consider that the noise which we hear in the street is not really in the street at all, but only *seems* to be there, and is really only within the precincts of our own head; and that the colours which we see around us in nature are not really outside those by which our own body is delineated, but only seem to be so; which doctrine they hold to such an extent as to consider that all the colours which we see in a room disappear as soon as we go out of it. But on all these points I appeal from these metaphysicians to the common understanding of mankind. Can anything, I ask, be more real than a violent toothache, although, in its nature, it is purely a phenomenon? Hardness and weight are also, as has been seen, pure phenomena. What is the meaning of saying that these are not real things? As to the alleged occult causes of our sensations, let me ask, When we eat bread are we eating what we feel and see, or only the occult cause of what we feel and see? and as to the theory that the colours leave the objects when we leave the room, are we not as conscious, I ask, that they do not do so, as we are that the colours are there when we are present? All these are facts of which we are conscious; and is it not unreasonable to deny these for the sake of this hypothesis about

occult matter, whose advocates do not even profess to assign any one single ground upon which they can maintain it? As, however, one or two distinguished physicians seem to favour these metaphysics, in some at least of the expressions which they employ, I repeat the following reflections which require to be carefully taken into account in connection with the hypothesis in question:—1. In objects, we *see* only qualified sensations, and never the causes of what we see; and we *feel* nothing except qualified sensations; we never feel the causes of what we feel. 2. When we say that we see the same object which we feel, or that we feel the same object which we see, we only say that we see the colours of a group of which we also perceive the tactile sensations, or that we perceive the tactile sensations of a group in which we likewise see the colours. 3. Whatever the insensible cause of these sensible effects may be, it is something, in its nature, totally unlike any of the effects which we seek to account for by supposing it, since a sensation cannot possibly be like anything that is not a sensation.

OF THE NATURE OF THE PERCIPIENT.

19. I have thus far spoken only of the nature of the material and external world,—of that world, I mean, which we can see and feel; and I have shown, I trust, clearly both from what science teaches and from what we are conscious of, that the brain as well as the rest of the nervous system, and the organs of sense and the blood and the whole human body consist of phenomena and not of the cause of phenomena,—consist entirely of sensations and their qualities grouped together in these various ways, and to no extent whatever of any unseen stimulus, agent, or irritant, by which these effects are produced.

20. The next point is, what is the proof that all the percipients in nature are unextended? That there are percipients in nature, of some kind, needs, as I have said, no proof. We are as sure of that as we are that there is anything for us to perceive. The whole question here, therefore, is only this, what is the proof that the percipient, in each case, is unextended? I answer (as the reader will now himself be able to answer) because the percipient is not any one or more of its own sensations; and size (or extent) is not only *not* known to exist in nature, except as a quality or modification inhering in some of our sensations, but is utterly impossible to conceive as existing in nature in any other way except thus marked out and delineated by some feels, or by some colours,—as impossible as it is to conceive roundness existing in nature without anything round. As the percipient cannot, therefore, be either a sensation or a group of sensations, it would be physically impossible for it to be extended.

21. The same question may be put otherwise, and otherwise

answered. What, it may be asked, is the proof that the brain (or the blood or any other portion of the body) is not the percipient element in animals? This question also, the reader will now be able to answer for himself. The brain, contrary to men's ancient notions, is proved by the facts of physiology to be a phenomenon, or a group of phenomena, or a "cluster of sensations," as James Mill calls it; and it is quite clear that such a thing cannot see anything or feel anything, or in any way perceive anything, being, in its nature, only that which something else—something conscious—can perceive. To consist of sensations, and to experience sensations constitute two very different relations to one and the same thing (*viz.*, to the sensations). One is the relation of the group to its parts; the other is the relation of the percipient to the group. While it was thought that a felt and coloured object like the brain was of a nature that might think and feel and see, it was for many reasons probable and perfectly natural to suppose that the brain did so; but now that this is known from physiological research not to be the case—now that we know the brain to consist of phenomena only—elements which preclude all possibility of its feeling or thinking, we are constrained to admit that the brain cannot be the percipient; and as the same reasoning applies to the blood and to every other portion of extended nature as well as to the brain (*i.e.*, since every portion is a phenomenon), we learn at once that nothing material or extended can in the nature of things be the percipient; in other words, that the percipient, in all animal natures is unextended and immaterial.

22. I may add here as a third argument equally conclusive, upon this point, that to which I have already above alluded; *viz.*, that the twenty acres of green colour (which colour and its size are known to be phenomena) could not possibly subsist within the six feet by two of colour, which appertains to our own bodies, even if our bodies were of such a nature as would enable them to perceive a sensation; which, however, it has been shown that they are not. In other words—over and above the fact that the whole body, as well as every part of the body, is a phenomenon, and therefore incapable of experiencing sensations at all, we thus see, with mathematical precision, that, even if it were not so, the body could not be the percipient of the feels and colours in which size exists, and also that the percipient in nature must of necessity be something wholly independent of and irrespective of size.

23. I do not deny that to persons accustomed to think only of things coloured and things felt; *i.e.*, of things in some way or other extended, it may be at first attended with some difficulty to think of a real thing as being unextended—as unextended as a mathematical

point. But, on reflection, we shall see that there are many such realities in nature. Deep sorrow, for instance, is one of these. It is completely unextended, yet completely real. Our knowledge upon any subject is unextended in this sense (*i.e.*, it occupies no space), and so is an idea of any kind; yet knowledge and an idea are, nevertheless, very positive things and very real things,—as much so as any that have measurement of pint or inch or ounce connected with them.

24. I undertook to prove that animal natures consist as much of unextended percipients as they do of extended perceptions, and that the two classes of things cannot possibly be mistaken for one another. It is for the reader to determine whether this has been done. And, above all things, let us have among all classes of thinking men the thorough discussion of the question which a few influential critics have, to some extent, succeeded in repressing. There can be no doubt that (as they thus unconsciously admit) discussion—full and free discussion—is all that is necessary to the clearing up and recognition, even by themselves, of the vast fact here indicated in the Natural History of Man.

LACUSTRINE HABITATIONS AND PRIMÆVAL ANTIQUITIES.

I.

THE physico-mathematical class of the Imperial Academy of Vienna having resolved to establish a special commission for the investigation of lacustrine habitations (meeting July 21st, 1864), Professor Kner was appointed commissioner for Upper Austria, Professor von Hochstetter for Carinthia and Carniola, and Professor Unger for Hungary. These gentlemen reported the results of their investigations in the academical meetings of October 20th, November 3rd, and December 1st, 1864.

1. *Carinthia and Carniola*.—Notwithstanding the uncommonly high level of the waters, in consequence of the continued rains in the summer of 1864, Professor von Hochstetter succeeded in stating the existence of fragments of pottery, hazel-nuts, bones, and other traces of human settlements on the banks of the lakes of Keutschach, Wörd, Raurshelen, and Ossiach, in Carinthia. Only the first of these four lakes admitted special investigation. Nearly in its centre is a shallow place, generally four to six feet under water, and ten to twelve feet deep after protracted rains, on whose ground a number of stalks are seen, from between whose interstices half-carbonised

shells of hazel-nuts, fragments of half-hardened clay, charcoal and plenty of broken shells of *Anodonta* have been dredged out. M. Uelegitsch, who subsequently investigated this place by diggings, soon found there a considerable quantity of fragments of black pottery, with peculiar zig-zag ornamentation, half-hardened lumps of clay (apparently forced in between two sticks), a whetstone, a round plate of mica schist, and a fragment of stag's horn. Long before these diggings, remains of the stone and bronze ages had been discovered in Carinthia and Carniola. In summer 1864, black pottery and a good number of uncommonly well-preserved Celtic bronzes (cups, scythe, knives, chisels, ornamental clasps, etc.) have been found at Heidach, Carinthia. In 1857, the digging out of a draining-ditch through the swamps near Laibach, Carniola, had brought to light several tools made of stag's horn, a stone with a hole drilled in it, and a trunk of a large tree excavated into a *canoe*, as they are still in use on the lakes of mountainous regions. Other localities have given only negative results. The pretended remains of lacustrine habitations in the White Lake, Carinthia, are in fact of comparatively very new origin, being remains of constructions made for the purpose of trout-fishing, which was extensively practised there before and during the sixteenth century. The stalks in the south-eastern bay of the Lake of Firknitz, Carniola, are (as is proved by historical documents) nothing but remains of a long ago decayed bridge.

2. *Upper Austria*.—The same circumstances which had acted as obstacles to Professor Hochstetter's investigations in Carinthia and Carniola proved likewise unfavourable to those of Professor Kner in Upper Austria. The Lake of Seekirchen or Waller is in its physiognomy strikingly analogous to the Lake Pfefficon, in Helvetia, and the peat-bog connected with it may be supposed to contain remains of lacustrine habitations. The Lake of St. Wolfgang is anything rather than promising in this respect, except perhaps next to Strobl. The Lake of Atter may entitle to better prospects, the configuration of the island Litzelsberg in it being very analogous to the Isle of Roses, in the Lake of Starnberg, Bavaria. Litzelsberg has been inhabited at a very early period, and is surrounded with several hundreds of stalks, among which some may be of very ancient date, at least of the bronze age. Several hundred of seeming stalks, discovered in the Lake of Mondsee, were at first thought to be the remains of lacustrine habitations. A nearer inquiry proved these pretended stakes to be the remains of powerful *oaks*, rooted in a portion of the lake's ground, which must have been once dry land. The lake is proved by documents and traditions to have considerably lost in surface in the course of the last centuries; the submersion of this tract of once dry land

can therefore only be explained by the supposition of a change of level of the present lake bottom having taken place at a very remote (perhaps pre-historical) epoch. The same circumstance has been observed in the neighbouring lake, near Fellam Moos, only the trunks of the oaks are better preserved. Pointed stalks have been found between their roots, but there is no reason for supposing them to be coëval with the oaks, which grew on this spot when it was still dry land.

3. The investigation of the large Hungarian lakes, Balaton and Musidel, have given merely negative results. The first and largest of them is but shallow and very variable in its level; only its south-eastern border, along which a railroad is running at present, may have been in some way fit for lacustrine settlements. Since the draining operations ordered by Emperor Galerius, in the fourth century, the level of the Balaton has been continually lowering, and cultivable grounds have more and more extended on its expanse. Since 1853 a continuance of dry years has lowered the level at the rate of six feet, and the Sis-Sarvez Channel, opened in 1863, has again taken away one and a half to two feet. Notwithstanding this diminution, no traces of lacustrine habitations have been found out at any point of its banks. If such establishments have ever existed there, they must have left vestiges on the dry land, which was once part of the lake's bottom; but even there, although the ground had been necessarily moved by agricultural labours, channel digging, etc., no such vestiges have ever come to daylight. The lake of Neusiedel, now rapidly drying up to a mere swamp, has proved equally unproductive in this respect.

11.

Professor L. H. Jeittles has presented the museum of the Imperial Geological Institute with a series of objects, found by him in an ancient peat-bog, recently laid open by diggings within the precincts of Olmitz (East Moravia). These objects are: 1-5 and 5a. Bones, out of which the marrow had been extracted. 6. Fragment of the lower jaw of *Bos sp.*, with the alveolar cavity broken up. 8 and 9. Fragments of lower jaw of *Sus sp.* (?) (certainly neither from the wild boar nor from the marsh-hog). 9a. Fragment of a bone of marsh-hog (?). 10 and 11. Nuclei of the horns of *Bos sp.* (?). 12. Metatarsal bone of a ruminant, with traces of human workmanship. 13 and 14a. Molars of *Equus sp.* (?) 15 and 16. Fragments of graphite pottery. 17. Stag (15-17, out of the peat-bed). 18. Fragment of peat. 19. Fragment of leather, and 20, carbonised wood out of the peat-bed. 21. Nucleus of a horn of (?) 22. Molar of *Bos primige-*

nus (?). 23. Piece of smelted bronze. 24. A bundle of vegetable fibres, undoubtedly prepared for tissues (fibres of flax and hemp have been found in the lacustrine habitations of Switzerland). 25. Carbonised cereals out of the peat-bed. 26. A whetstone from the same bed. 27. A fragment of pottery. 28. Peat with fragments of charcoal, probably originating from the superficial burning down of the peat-bed. 29. The photograph of a human skull, found out in the peat, together with other portions of the human skeleton.

Subsequently, Professor Jeitteles submitted another series of similar objects to Dr. Keller, President of the Zurich Archæological Society, and the first discoverer of the Swiss lacustrine habitations. Among them must be remarked: 1. A fragment of stone with traces of polishing, probably the fragment of a rather voluminous tool. 2. An earring, as they are found of the same shape in lacustrine habitations and tumuli. 3. An axe made of bone, probably of a very large animal, perhaps the urus (?), differing in nothing from those found in lacustrine habitations. 4. Wheat (two varieties) and corn—this last not yet known to have occurred in Switzerland. (*Imp. Geological Institute—Meetings Aug. 16, and Nov. 8, 1864.*)

III.

Dr. Haupt, keeper of the museum of the Clerical Seminary at Bamberg (Franconia), has lately discovered in the immediate vicinity of this city, a stratum with human remains, lying between ten and fourteen feet beneath the present surface of the soil, and overlaid by a bed of peat covered with alluvial sands. The stratum in question is a black, bituminous earth, filled with bones of bovine and cervine animals. Amidst them lie scattered human skulls and bones; fragments of pottery and glass: some bronze objects; two large idols of Reugier sandstone, of very rude workmanship, one having but four fingers on each hand; and two large trunks of trees excavated into canoes, and still containing part of their ballast, consisting of fragments of rocks known to occur around Bamberg. These canoes are the best proof of an ancient lake-basin, whose banks had been inhabited, having once occupied what is at present the valley of the Mein. Many of the bones in question are sawn asunder lengthwise. Among them have been found a *Strombus** of a recent species, and a perforated *Cardium edule* (probably procured in way of exchange-trade); and, among other vegetable remains, a great number of hazelnuts. Subsequent diggings have proved the stratum in question to be very extensive, and to be everywhere immediately overlaid by peat, and, above this, by alluvial sands. (*Imp. Geological Institute—Meeting Dec. 6, 1864.*)

PROCEEDINGS OF THE ANTHROPOLOGICAL SOCIETY OF PARIS.*

BEFORE the discussion "On the Origin of Indo-Europeans" commenced, M. d'Omalus d'Halloy offered some observations on the reasons which induced him to adopt opinions opposed to those generally received. He professed to belong to that school which ascribed the greatest influence to the action of external agents on all living beings; he believed that these had given rise to all the changes made known to us by the study of palæontology. On the other hand, he thought that, since the last geological revolution, the influence of the external agents is not sufficiently potent to produce the differences now observed in the various races of mankind; in other words, these differences are the results of an order of things different from that now existing.

As regards the questions of the monogenism or polygenism of the genus *Homo*, he considered them, in the present state of our knowledge, altogether beyond the reach of natural science.

M. Chavée : Our honourable colleague wishes to exclude the consideration of monogenism and polygenism; but it is just upon this point that I contest M. d'Omalus' opinion. In declaring that the question of the original unity or plurality of the human race is beyond the reach of natural science, he forgets what linguistics have accomplished in the domain of anthropology, and that philology is a natural science. What has philology done? It has studied the phenomenon of language like any other physiological act, and perhaps by a more rigorous method than is applied to other branches of natural history. It has proved that the languages now spoken present vestiges of phonetic changes which constitute veritable diseases; and, in tracing them back, we have become acquainted with the pathological laws, and the primitive, normal, and perfect form, of which our languages are only the altered products. This primitive form, as regards the peoples of our race, is the Aryan, from which the Sanscrit, the Zend, the Greek, the Latin, the Lithuanian, and the Gothic are only the derived forms. Setting aside the Aryan, Semitic, and Tatar languages, I do not think that philology is sufficiently advanced to affirm anything; but within the limits of these languages we are, thanks to labours of Grimm, Bopp, Benfey, Pott, and other living linguists, enabled to demonstrate, not merely that the assimilation of the Aryan

* [Continued from p. 21, No. VIII.] Séance du 18 Février, 1864. Discussion sur des origines Indo-Européens.

to the Semitic language is impossible, but, as different effects cannot be produced but by different causes, it cannot be that the Semitic forms are the work of a race resembling the Aryan race." After showing by some illustrative examples that the Semitic and Aryan languages are radically distinct, he concludes in the following terms: "Every language is the spontaneous product of the cerebral organism; and whenever I see two radically distinct languages, distinct in their phonetic elements, *i. e.* in their anatomy, distinct in their grammatical construction, *i. e.* in their physiology, I am authorised to infer that the organisms which have produced these languages are also radically distinct. For these reasons, I am opposed to the opinion of our learned colleague M. d'Omalius, who sustains that questions of origin are, in the present state of our knowledge, beyond our reach. These questions have, on the contrary, in my opinion, long been solved by philology."

M. d'Omalius, in reply, said that he used the terms polygenism and monogenism for the express purpose of eliminating them from the present discussion, being of opinion that they had no direct relation to the questions proposed. It did not follow that, because the same language is spoken in different parts of the globe, the peoples employing it are of the same origin. In Bactria were found the remnants of a lost language, which, though reposing upon the same basis as our own languages, is said to be greatly developed and more perfect. Is there more reason to suppose that the European languages are derived from this Aryan source, than to maintain just the contrary, namely, that this Aryan language represents a degree of development of languages imported from Europe? This is the whole question which philology has to solve; it is upon this point that he asked for facts.

M. Broca said, that he had listened with great interest to M. Chavée's exposition of principles which he had himself long adopted, though on different grounds. Still, he shared the opinion of M. d'Omalius, that polygenism and monogenism should be excluded, in order to circumscribe the debate; he would even still more restrict the discussion, by distinguishing in the propositions of M. d'Omalius two very distinct questions: (1) Whence came the races now peopling Europe? and (2) Whence came the languages now spoken in Europe? These two questions should, in his opinion, be examined separately; not merely because those who have studied the first question may not have studied the second, but because they will probably not yield identical solutions, or may even become contradictory. Whence, in fact, came the races now peopling Europe? from Europe. Whence came the languages spoken in Europe? from Asia. He could not, therefore, assent to

a doctrine which, starting from a complete assimilation of languages and races, lays down as a principle that the conformity of a language indicates the unity of stock. . . . It is for philologists to demonstrate in what manner the Asiatic languages propagated in Europe. Excepting the Fins, the Magyars, the Turks, the Basques, and the Laps, all the peoples in Europe speak languages belonging to the same family. There were thus hundreds of millions of men using the same idiom, presenting at the same time considerable anatomical differences. In the South we find the Greeks, the Italians, the Spaniards; in the North, the Scandinavians, Germans, Slavonians, Anglo-Saxons. Among these races we find tall, short, and middle-sized tribes; here with flaxen, there with brown hair. There is great variation in the colour of the iris and of the skin; and these races form innumerable combinations. The craniological characters and the facial proportions also permit the formation of groups sufficiently distinct, not certainly to form *types*, but sufficient to form different *races*. Whence came these distinctive characters? If it be assumed that one people only colonised Europe, we ought to find a certain relation between the media and the differential modifications. But this relation does not exist. In Ireland we see individuals with brown skin, brown hair, brown eyes, short stature, seemingly belonging to the primitive race of Europe, living side by side with individuals with light hair, fair complexion, and of tall stature. In Greece we find the analogues. These facts are so evident and incontestable, that we are authorised to repudiate, as contrary to the anthropological geography of Europe, any interpretation tending to establish the ethnic unity of that part of the world. The peoples which came from Asia belonged to a dolichocephalic race; but on their arrival in Europe they found at least two races, one brachycephalic, and the other dolichocephalic, which is demonstrated by human remains found in the most ancient graves. Who can say that in those remote times the differences now obtaining between contemporaneous races did not exist? M. Broca concluded thus: "For my part, I am of opinion that the Asiatic invaders found themselves face to face with a human Fauna which, though not in its details, yet in its *ensemble*, did not essentially differ from its actual condition. On the whole, I so far agree with my venerable colleague M. d'Omalus, that the inhabitants of Europe are pretty nearly the same now as they were at the period of the Asiatic emigration; but, as regards the Indo-European languages, I believe that there exist good reasons for assuming that they have travelled from the East to the West."

M. Bonté said that he did not deny that the Greek, German, Celtic, and Slavonian languages were derived from the Aryan, that fact being

proved; but he must protest against the principle of basing anthropology solely upon linguistics, and to consider, as M. Chavée has done, language as the most reliable criterion for ascertaining the race. This assertion formed no part of the questions put by M. d'Omalius, who simply asked whether the peoples called Indo-Europeans came from Asia, or whether they did not, on the contrary, proceed from Europe to Asia. He protested against the assertion of M. Chavée, and he assigned to languages a secondary rank. After citing a number of instances of peoples having changed their respective languages, M. Bonté said, all this proves that there exists no sufficient reason for giving to language the preference over physical characters. Is it, moreover, rational, when man is to be classified according to his physical character, to prefer the work of man to man himself? To put this question is at once to answer it.

M. Bertillon remarked, that M. Broca had advanced the theory that, before the Asiatic immigration, the European races differed very little from the living races: and that the unity of the European languages had been the result of this Aryan contact, which was, however, not sufficiently potent to alter the anatomical types. In order to appreciate the probability of such a doctrine, we must study the history of the Aryan migrations in India, where we find two types—the Brahmins, or the conquerors, and the Sudras, or the vanquished; though both races speak the same language, their types have remained distinct. In Europe, on the contrary (excluding the Semitics, who are but few in number), we are struck by the great unity, not only as regards language, but as regards all psychological characters influencing civilisation. Again, M. Broca tells us that the Asiatic invaders were dolichocephalic. Do not the majority of Europeans possess the same character? Now, to realise such a uniformity, the Aryan blood must have been largely infused into Europe. It must be admitted that the languages at present spoken have not all altered in the same degree; thus the Lithuanian is said to be nearly pure Sanscrit. It might be interesting to ascertain whether this phenomenon is not owing to a numerical superiority of the conquerors. The Western languages of Europe are, according to M. Chavée, singularly corrupt. M. Bertillon would, therefore, put the question to philologists, whether languages do not alter by the intermixture of vocables, in the same way as the physical forms alter by the intermixture of blood?

The President here interposed, and requested the speakers to confine their strictures to the questions proposed, touching the hypothesis of the Asiatic origin of the peoples of Europe, and the inflected languages.

M. Gerard de Rialle said that he would only touch upon the second

question, namely, whether the inflected languages had been imported from Asia into Europe, or whether Asia received them from Europe. It may, for the solution of this question, perhaps be sufficient to examine which of the languages derived from the Aryan are least modified; and these must be supposed to be nearest to the spot of origin. Such languages are the Zend and the Sanscrit, the roots of which have been reconstituted partly by the labours of M. Chavée. The old Persian and the old Hindoo are found in Asia; and this fact appeared to him to dispose of the question of origin. The deformation of languages seemed to him to indicate the distance of their origin. Thus the deformations of the Celtic, Germanic, and Slavonian languages, prove that they had for a long time lived amid physical media different from those in which they were originally developed.

M. d'Omalius d'Halloy: In the observations of M. Broca, I find but few, or rather no answers to my theory. He recognises that peoples existed in Europe before the arrival of invaders whom he terms Asiatics; these peoples, which had, in his opinion, black hair and black eyes, were vanquished by the peoples with blue eyes and light hair, who came from Asia. Now, this is precisely my question: What is the foundation for the prevalent opinion concerning the Asiatic origin of the latter? It is pretended that there are in Asia light-haired races; but when they are sought for, they cannot be found. Fair-complexioned peoples, small in number, are stated to exist in a small spot of the Himalaya, the Siaposh, for example, or the Ossetines in the Caucasus, who might well have descended from Europeans. The Chinese historians speak, it is true, of a people with green eyes and red hair; but these populations belong to a reddish type, and should not, in my opinion, be confounded with the light-haired type. On the other hand, we find, as far as history reaches, fair-complexioned peoples in the centre of Europe; and I am inclined to think that they were there from the remotest antiquity. These bellicose and conquering peoples of Germany, called the *officina gentium* by the ancients, have spread their conquests to considerable distances. No facts have been cited except the inferences from linguistic facts. Now, with all respect for that science, I cannot accord to it the privilege to dominate in anthropology above what I call the natural characters; the language of a people may change entirely, and examples of it are common enough. Let me only cite that of the French, who are neither Franks nor Romans, though some small portion of Roman blood may have been infused into the constitution of the French nation. It has also been asserted that, the languages of Bactria being purer than ours, they must be nearer the cradle of our race. I repeat that the fact of the superiority of the Aryan does not

appear to me to lead to that theory. A well developed language does not indicate the vicinity of the birthplace of a race ; it merely indicates the civilisation of the people speaking it. Now, on the hypothesis of the European origin of the Aryans, what is there astonishing in it that India, in the vicinity of Semitic civilisation, should have reached a high degree of perfection, whilst such peoples as remained in Europe conserved an inferior language? Bearing in mind what the Latin historians said of the Germans at the time of Tacitus, how can it be sustained that they had *descended* from the Aryans of India, who possessed so perfect a language. I maintain, therefore, that the argument drawn from the perfection of the Aryan language, so far from supporting the hypothesis of the Asiatic origin of Europeans, is rather in favour of the opposite hypothesis.

M. Chavée replied that he never denied that a conqueror might impose a new language on a country. In citing Herodotus, St. Jerome, and Tacitus, the facts were, so to speak, of yesterday. The formation, and organic development of languages belong to more remote periods. In the Rig-veda we possess a precious philological document belonging to a period at least 14,000 years before our era, setting aside the first code of Manou about 13,900 before our era. With history commences the corruption of languages, nay, they are then already corrupt ; they degenerate according to laws formulated by science, and these laws may be applied to the comparison of the sister languages. . . . His opinion, in short, was, that organisms in a morbid state are derived from healthy organisms ; but the reverse never occurs.

M. Rameau contended that the propositions of M. d'Omalus are not equally applicable to all Aryan peoples. What is the general opinion touching the races of Europe? That there existed at a remote period a primary stock, composed of Basques, Fins, and Iberians ; then arrived the invaders—the Celts from the North, the Pelasgi from the South ; then came the Germans, the Scandinavians, the Getæ ; and finally, the Scythians. From this *ensemble* of ethnic elements should be eliminated such whose origin is incontestable, namely, the Basques, the Iberians, and the Scythians ; the question is then already simplified. We are in possession of historic documents as regards the Goths, the Alani, the Cimbri, and the Teutons, the first invasion of whom was repulsed by Darius. The Asiatic origin of the German stock is not much disputed ; what, then, remains to be discussed? The Celts and the Pelasgi ; but, as the Asiatic origin of the Pelasgi is undoubted, there remained only the Celts, to the origin of which, in M. Rameau's opinion, the discussion should be confined.

M. Broca feared that he had badly expressed himself, as M. d'Omalus understood him to say that he considered the first Asiatic invaders to have been fair complexioned, and that the light haired Europeans were their descendants. He had stated, on the contrary, that before the first invasion the repartition in Europe of fair and brown individuals was in its *ensemble*, though not in detail, probably little different from what it is now.

The discussion was then adjourned.

FAREWELL DINNER TO CAPTAIN BURTON.

ON Tuesday, April 4th, 1865, there was celebrated an event in London of such importance to anthropological science as to deserve an especial record in these pages. On this day the Anthropological Society of London celebrated the election into their society of five hundred Fellows, by giving a public dinner to Captain Richard F. Burton, their senior vice-president. What took place on this occasion should be made known as widely as possible, as we think it cannot fail to have a beneficial influence on the progress of anthropological science in this country. The Right Honourable Lord Stanley, M.P., F.R.S., F.A.S.L., took the chair, and was supported on the right by Captain Burton, Arthur Russell, Esq., M.P., J. A. Hardcastle, Esq., M.P., General Sir Trevor Phillips, W. S. W. Vaux, Esq., R. Bagshawe, Esq.; and on his left by Lord Houghton, Dr. James Hunt (President of the Anthropological Society), Viscount Milton, Sir G. Synge, Bart., and Mr. George B. Mathew, H.M. Minister to Central America.

At the end of the four tables there presided Mr. J. Frederick Collingwood, V.P.A.S.L., Dr. Berthold Seemann, V.P.A.S.L., Dr. R. S. Charnock, Treasurer A.S.L., and Mr. George E. Roberts, Hon. Sec. A.S.L. Amongst the company we noticed present were the

Rev. Henry F. Rivers
 Rev. Harry Tudor
 Rev. Maurice P. Clifford, D.D.
 H. G. Atkinson, Esq., F.S.A., F.A.S.L.
 S. E. Collingwood, Esq., F.G.S., F.A.S.L.
 George North, Esq., F.A.S.L.
 L. O. Pike, Esq., M.A., F.A.S.L.
 J. Reddie, Esq., F.A.S.L.
 H. Brookes, Esq., F.A.S.L.
 E. Hart, Esq., F.R.C.S., F.A.S.L.
 E. Bellamy, Esq., F.A.S.L.

A. Swinburne, Esq., F.A.S.L.
 E. Tinsley, Esq., F.A.S.L.
 Captain J. Hastie, F.A.S.L.
 C. Brett, Esq., F.A.S.L.
 N. Trübner, Esq., F.A.S.L.
 W. Pinkerton, Esq., F.S.A., F.A.S.L.
 H. W. Jackson, Esq., F.A.S.L.
 R. B. N. Walker, Esq., F.A.S.L.
 H. Hotze, Esq., F.A.S.L.
 A. Hector, Esq., F.A.S.L.
 G. Dibley, Esq., F.A.S.L.

F. Braby, Esq., F.G.S.	A. Wilson, Esq.
M. Paris, Esq., F.A.S.L.	Captain O'Kelly
C. Carter Blake, Esq., F.G.S., F.A.S.L.	E. Charlesworth, Esq., F.G.S.
J. Moore, Esq., F.A.S.L.	H. W. Bates, Esq., Assist.-Sec. R.G.S.
R. Arundell, Esq., F.A.S.L.	R. H. W. Dunlop, Esq., C.B.
H. Butler, Esq., F.A.S.L.	H. Wood, Esq.
S. Courtauld, Esq., F.A.S.L.	A. Dick, Esq.
C. Harcourt, Esq., F.A.S.L.	A. C. Finlay, Esq., F.R.G.S.
Lieutenant Arundell, R.N.	W. Mathew, Esq., H.M. Minister to
J. Meyer Harris, Esq., F.A.S.L.	Central America
Dr. Dickson	John Watson, Esq.
W. Fothergill Cooke, Esq., F.A.S.L.	H. Camplin, Esq.
J. Rae, Esq., F.A.S.L.	E. Dicey, Esq.
G. C. Rankin, Esq., F.A.S.L.	H. K. Spark, Esq.
W. Chamberlin, Esq., F.A.S.L.	G. F. Aston, Esq.
Wentworth Scott, Esq., F.A.S.L.	W. H. Mitchell, Esq., M.A., F.A.S.L.
Dr. J. F. Caplin, F.A.S.L.	Hon. E. T. O'Sullivan, F.A.S.L.
C. Stenning, Esq., F.A.S.L.	Colonel Richards
E. Owen Tudor, Esq.	J. McDonald, Esq.
E. Wilson, Esq., F.A.S.L.	Captain Rankin Hutchinson, F.A.S.L.
A. Spowers, Esq.	Samuel Lucas, Esq., M.A.
N. J. Bagshawe, Esq.	J. N. Lockyer, Esq., F.A.S.L.
Dr. Bird	Mr. Ayres, etc.

The following gentlemen we understood had taken tickets, but were unable to attend:—

W. Stirling, Esq., M.P.	Colonel Showers
Sir Andrew Smith, C.B., F.A.S.L.	W. Salmon, Esq., F.G.S.
Sir George Denys, F.G.S.	Sutherland Edwards, Esq.
Dr. W. H. Russell	Dr. J. Kirk
W. G. Smith, Esq., F.A.S.L.	W. Wilson, Esq.
J. W. Conrad Cox, Esq., B.A., F.A.S.L.	C. Blake, Esq.
W. Travers, Esq., F.R.C.S., L.R.C.P.	J. M. Hepworth, Esq., F.A.S.L., J.P.
	H. Gooch, Esq., F.A.S.L.

Apologies for not being able to attend were received from Viscount Palmerston, Earl of Clarendon, Lord Malmesbury, Viscount Strangford, who said that in his opinion Captain Burton was "the most distinguished traveller of modern times;" Lord Egerton, Lord Clifford, Sir Charles Wood, Bart., Mr. Whiteside, M.P., Sir R. Gerard, Bart., Sir Charles Nicholson, Bart., Sir R. I. Murchison, K.C.B., Professor Owen, Mr. Henry Reeve, Major-General A. Scott Waugh, Colonel Stanley, Dr. Livingstone, Rev. Dunbar I. Heath, Mr. Oliphant, Dr. A. Barton, Rev. W. Monk, Mr. C. Robert des Ruffières, Major-General Hodgson, T. King Watts, Esq., F.A.S.L., Rev. Henry Clare, F.A.S.L.

The Noble CHAIRMAN, in proposing "The health of the Queen," remarked that the reign of her Majesty had been memorable, not only as one of peace and prosperity, but of geographical discovery, and if her Majesty lived as long as they all hoped she would do, there would at the close of her happy reign be no portion of the habitable globe the general outlines of which would not be known to the civilised world. There was only one drawback to this, and it was that posterity would be deprived of one of the keenest sources of intellectual pleasures of the present day—that connected with the progress of discovery. That, however, was a matter which they

might fairly leave to posterity, and no doubt they would think themselves very much better fellows than those who had preceded them.

The Noble CHAIRMAN, in proposing "The health of the Prince and Princess of Wales," said that he did not know whether the Prince was a devoted student of anthropological science, but he was quite sure he ought to be, considering the probability that he might at some distant day be called to rule over an empire which included within it types of all classes and races of men.

The Noble CHAIRMAN, in giving the toast of "The Army, Navy, and Volunteers," declined to express any opinion as to the valour and skill of those services, as it would be time enough to do so when anybody disputed it. Man appeared to be a fighting animal. (A laugh.) He took to it kindly, and from all that he could see he believed man would go on fighting to the end. (A laugh.) It was on account of the services which they had rendered to the cause of geographical and other sciences that he proposed the army and navy, and his lordship enumerated the names of a number of distinguished men who, by their conduct and exertions, had done much to promote the progress of discovery in various parts of the world.

The toast was duly honoured, and acknowledged by General Sir TREVOR PHILLIPS for the army, Lieut. ARUNDELL for the navy, and Captain HASTIE for the volunteers.

The Noble CHAIRMAN, in proposing "The health of Captain Burton," said—I rise to propose a toast which will not require that I should bespeak for it a favourable consideration on your part. I intend to give you the health of the gentleman in whose honour we have met to-night. (Loud cheers.) I propose the health of one—your cheers have said it before me—of the most distinguished explorers and geographers of the present day. (Cheers.) I do not know what you feel, but as far as my limited experience in that way extends, for a man to sit and listen to his own eulogy is by no means an unmixed pleasure, and in Captain Burton's presence I shall say a great deal less about what he has done than I should take the liberty of doing if he were not here. (Cheers.) But no one can dispute this, that into a life of less than forty-five years Captain Burton has crowded more of study, more of hardship, and more of successful enterprise and adventure than would have sufficed to fill up the existence of half a dozen ordinary men. (Cheers.) If, instead of continuing his active career—as we hope he will for many years to come—it were to end to-morrow, he would still have done enough to entitle him to a conspicuous and permanent place in the annals of geographical discoverers. (Cheers.) I need not remind you, except in the briefest way, of the long course of his adventures and their results. His first important work, the *History of the Races of Scinde*, will long continue to be useful to those whose studies lie in that direction, and those who, like myself, have travelled through that unhappy valley—through that young Egypt, which is about as like old Egypt as a British barrack is like an Egyptian pyramid—will recognise the fact that if there have been men who have described that country for utilitarian purposes more accurately and minutely, no man has de-

scribed it with a more graphic pen than Captain Burton. (Cheers.) With respect to his pilgrimage to Mecca, that, I believe, was part only of a much larger undertaking which local disturbances in the country prevented being carried out to the fullest extent. (Cheers.) I do not think I am exaggerating when I say that not more than two or three Englishmen would have been able to perform this feat. The only two parallels to it that I recollect in one generation are the exploring journeys of Sir Henry Pottinger into Beloochistan, and the journey of M. Vambéry through the deserts of Central Asia. (Cheers.) I am speaking only by hearsay and report, but I take the fact to be this, that the ways of Europeans and Asiatics are so totally different—I do not mean in those important acts to which we all pay a certain amount of attention while we do them, but in those little trifling details of every-day life that we do instinctively and without paying attention to them—the difference in these respects between the two races is so wide that the Englishman who would attempt to travel in the disguise of an Oriental ought to be almost Oriental in his habits if he hope to carry out that personation successfully. And if that be true of a journey of a few days, it is far more true of a journey extending over weeks and months, where you have to keep your secret, not merely from the casual observer, but from your own servants, your own friends, and your own travelling companions. To carry through an enterprise of that kind may well be a strain on the ingenuity of any man, and though, no doubt, danger does stimulate our faculties, still it does not take from the merit of a feat thus performed under circumstances in which, in the event of detection, death is almost certain. (Cheers.) I shall say nothing in this brief review of the well-known expedition to the Somauli country, which so nearly deprived the Anthropological Society of one of its ablest members. That journey really opened a wide district of country previously unknown to the attention of civilised man. It led the way indirectly to the Nile expeditions, which lasted from 1856 to 1859. With respect to the labours which were gone through in those expeditions, and the controversies which arose out of those labours, I do not require here to say anything except to make one passing remark. With regard to this controversial subject of the Nile, I may be permitted to say—though those who are experienced in geographical matters may treat me as a heretic—(a laugh)—I cannot help it if they do, for I speak by the light only of common sense—(renewed laughter, and cheers)—but it seems to me that there is a little delusion in this notion of searching for what we call the source of a river. Can you say of any river that it has a source? It has a mouth, that is certain—(cheers);—but it has a great many sources, and to my mind you might just as well talk of a hair on a man's head, or a root of a plant as being the source of the others. Every river is fed from many sources, and it does not seem to me that the mere accident of hitting upon that which subsequent investigation may prove to be the largest of many affluents to a river is a matter about which there need be much controversy. The clear tests of the value of this kind of work are, what is the quantity of land previously unknown which the

discoverer has gone through, and which he has opened up to the knowledge of civilised man? (Cheers.) Judged by that test, I do not hesitate to say that the African expedition of 1856 has been the most important of our time; the only rival which I could assign to it being that separate expedition which was undertaken by Dr. Livingstone through the southern part of the continent. (Hear.) Where one man has made his way many will follow, and I do not think it is too sanguine an anticipation, negro chiefs and African people notwithstanding, to expect that within the lifetime of the present generation we may know as much of Africa, at least, of Africa north of the equator and within fifty degrees south of it, as we know now of South America. Well, gentlemen, no man returns from a long African travel with health entirely unimpaired, and our friend was no exception to the rule. But there are men to whom all effort is unpleasant, so there are men to whom all rest, all doing nothing, is about the hardest work to which they could be put, and Captain Burton recruited his health, as you all know, by a journey to the Mormon country, travelling 30,000 miles by sea and land, and bringing back from that community—morally, I think, the most eccentric phenomenon of our days—a most curious and most interesting, and, as far as I could judge, the most accurate description we have yet received. (Cheers.) Now, as to the last phase of the career which I am attempting to sketch—the embassy to Dahome, the discovery of the Cameroon mountains, and the travels along the African coast, I shall only remind you of it, because I am quite sure that the published accounts must be fresh in all your minds. I do not know what other people may think of these volumes, but to me they were a kind of revelation of negro life and character, enabling me to feel, which certainly I never felt before, that I could understand an African and barbarian court. As to any theories arising out of these journeys, as to any speculations which may be deduced from them, I do not comment upon these here. This is not the place nor the occasion to do it. All I will say about them is, that when a man with infinite labour, with infinite research, and at the imminent risk of his life, has gone to work to collect a series of facts, I think the least the public can do is to allow him a fair hearing when he puts his own interpretation upon those facts. (Loud cheers.) I will add this, that in matters which we all feel to be intensely interesting, and upon which we all know that our knowledge is imperfect, any man does us a service who helps us to arrange the facts which we have at our command, who stimulates inquiry and thought by teaching us to doubt instead of dogmatising. I am quite aware that this is not in all places a popular theory. There are a great many people who, if you give them a new idea, receive it almost as if you had offered them personal violence. (Laughter.) It puts them out. They don't understand it—they are not used to it. I think that state of the public mind, which we must all acknowledge, is the very best defence for the existence of scientific societies such as that to which so many of us belong. It is something for a man who has got a word to say to know that there is a society where he will get a fair and considerate hearing; and,

whether the judgment goes against him or not, at least he will be met by argument and not by abuse. I think Captain Burton has done good service to the State in various ways. He has extended our knowledge of the globe on which we live, and if we happen to be men, and Europeans, gifted with curiosity, that is a result which, if it have not any immediate utilitarian result, we ought to value. (Cheers.) He has done his share in opening savage and barbarous countries to the enterprise of civilised man, though I am not quite so sanguine as many good men have been as to the reclaiming of savage races. One has only to read his and all other travellers' accounts of African life in its primitive condition, to see that whether they gain much or not by European intercourse, at any rate they have something to lose. (Laughter.) But there is something more than that in these days of peace and material prosperity, and both of them are exceedingly good things, where such a career as that of our friend is singularly useful. It does as much as a successful campaign to keep up in the minds of the English people that spirit of adventure and of enterprise, that looking to reputation rather than to money, to love of effort rather than to ease—the old native English feeling which has made this country what it has become, and which, we trust, will keep this country what it is to be—a feeling which, no doubt, the tendency of great wealth and material prosperity is to diminish; but a feeling which, if it were to disappear from among us, our wealth and our material prosperity would not be worth one year's purchase. (Cheers.) Gentlemen, I propose the health of Captain Burton, and my best wish for him is that he may do for himself what nobody else is likely to do for him, that by his future performance he may efface the memory of his earlier exploits. (Loud cheers.).

The toast was drunk with three times three.

Captain BURTON, who, on rising, was greeted with loud and protracted cheering, said—My Lord Stanley, my Lords and gentlemen, it falls to the lot of few men to experience a moment so full of gratified feeling as this, when I rise to return thanks for the honour you have done me on this, to me, most memorable occasion. I am proud to see my poor labours in the cause of discovery thus publicly recognised by the representative of England's future greatness. (Cheers.) The terms of praise which have fallen from your lordship's lips are far above my present deserts, yet I treasure them gratefully in my memory as coming from one so highly honoured, not only as a nobleman, but as a man. I am joyed when looking round me to see so many faces of friends who have met to give me godspeed—to see around me so many of England's first men, England's brains, in fact; men who have left their mark upon the age; men whose memories the world will not willingly let die. These are the proudest laurels a man can win, and I shall wear them in my heart of hearts that I may win more of them on my return.

But, however gratifying this theme, I must bear in mind the occasion which thus agreeably brings us together. We meet to commemorate the fact that in March 14, 1865, that uncommonly lusty youth, our young Anthropological Society, attained the

respectable dimensions of five hundred members. My lord and gentlemen, it is with no small pride that I recall to mind how, under the auspices of my distinguished and energetic friend Dr. James Hunt, our present president,—and long may he remain so,—I took the chair on the occasion of its nativity. The date was January 6, 1863. The number of those who met was eleven. Each had his own doubts and hopes, and fears touching the viability of the new-born. Still we knew that our cause was good; we persevered, we succeeded. (Cheers.)

The fact is, we all felt the weight of the great want. As a traveller and a writer of travels during the last fifteen years, I have found it impossible to publish those questions of social economy and those physiological observations, always interesting to our common humanity, and at times so valuable. The *Memoirs of the Anthropological Society* now acts the good Samaritan to facts which the publisher and the drawing-room table proudly pass by. Secondly, there was no arena for the public discussion of opinions now deemed paradoxical, and known to be unpopular. The rooms of the Anthropological Society now offer a refuge to destitute truth. There any man, monogenist or polygenist, eugenestic or dysgenestic, may state the truth as far as is in him. No. 4, St. Martin's Place, we may truly call the room

“Where, girt by friend or foe,
A man may say the thing he will.”

All may always claim equally from us a ready hearing, and what as Englishmen we prize the most, a fair field and plenty of daylight. (Cheers.)

And how well we succeeded—how well our wants have been supplied by the officers of our society, we may judge by this fact:—During the last twenty days not less than thirty members have, I am informed by my friend Mr. Carter Blake, been added to the five hundred of last month. I confidently look forward to the day when, on returning from South America, I shall find a list of 1,500 names of our society. We may say *vires acquirit eundo*, which you will allow me to translate, “We gain strength by our go,” in other words, our progress. This will give us weight to impress our profession and opinions upon the public. Already the learned of foreign nations have forgotten to pity us for inability to work off the grooves of tradition and habit. And we *must* succeed so long as we adhere to our principles of fair play and a hearing to every man. (Cheers.)

I would now request your hearing for a few words of personal explanation, before leaving you for some years. I might confide it to each man separately, but I prefer the greatest possible publicity. It has come to my ears that some have charged me with want of generosity in publishing a book which seems to reflect upon the memory of poor Captain Speke. Without entering into details concerning a long and melancholy misunderstanding, I would here briefly state that my object has ever been, especially on this occasion, to distinguish between personal enmities and scientific differences. I did not consider myself bound to bury my opinions in Speke's grave; to me, living, they are of importance. I adhere to all I have stated respecting the Nile sources; but I must

change the form of their expression. My own statement may, I believe, be considered to be moderate enough. In a hasty moment, I appended one more, which might have been omitted—as it shall from all future editions. I may conclude this painful controversial subject, by stating that Mr. Arthur Kinglake, of Weston-super-Mare, writes to me that a memorial bust of my lamented companion is to be placed this year in the shire-hall, Taunton, with other Somersetshire heroes, Blake and Locke. I have seen the bust in the studio of Mr. Papworth, and it is perfect. If you all approve, it would give me the greatest pleasure to propose a subscription for the purpose before we leave this room. (Cheers.)

And now I have already trespassed long enough upon your patience. I will not excuse myself, because I am so soon to leave you. Nor will I say adieu, because I shall follow in mind all your careers; yours, my Lord Stanley, to that pinnacle of greatness for which nature and fate have destined you; and yours, gentlemen and friends, each of you, to the high and noble missions to which you are called. Accompanied by your good wishes, I go forth on mine with fresh hope, and with a vigour derived from the wholesome stimulus which you have administered to me this evening. My Lord Stanley, my Lords and gentlemen, I thank you from my heart.

Lord HOUGHTON proposed "the Diplomatic and Consular Services", explaining the strict appropriateness of the toast by the circumstance of Captain Burton being consul at Santos, and by the fact that he (Lord Houghton) had obtained the appointment of two committees in the House of Commons, the recommendations of which had led to a deserved increase in the salaries of these most useful classes of public servants.

Mr. MATHEWS, English minister to Central America, acknowledged the toast.

Lord STANLEY then proposed "Success to the Anthropological Society of London." The Society was very young, but it had been very prosperous; it had elected from 500 to 529 members within little more than two years, which was no inconsiderable success. He was not quite certain with whom it originated, for it might perhaps be said in this, as in other cases, that "he is a wise child who knows his own father." But, at all events, they knew that the present President was one of the originators, if he could not claim the sole paternity of the Society; and he would therefore add to the toast the name of Dr. James Hunt.

The toast was drank with loud cheers.

Dr. HUNT, who was received with prolonged cheering, in returning thanks said:—My Lord Stanley, my Lords and gentlemen,—On such an occasion as this, I think I shall best return thanks on behalf of the Society over which I have the honour to preside, by saying very little about its past history, and not one word about what I have myself done. We are met to celebrate a double event: first, to pay homage to a distinguished anthropologist and traveller, before his departure for South America; and secondly, to celebrate what so many of us have looked forward to with very great interest and anxiety

—the augmentation of our numbers to our fifth hundred. There was not one dissentient voice in the Society as to the propriety of celebrating this latter event by paying a public tribute of respect to our honoured guest, who has been so intimately connected with the Society since its formation. The Society have voluntarily given up one of their ordinary meetings in order to give this dinner, and were thus anxious to show that they look upon this auspicious occasion as likely considerably to benefit the cause of anthropological science (cheers). Whilst, however, I shall not dwell on the work effected by the Society, I beg to take this opportunity to return the best thanks of the Anthropological Society of London to the distinguished statesman who has done us the honour to take the chair this evening (cheers). As Fellows of the Anthropological Society, we ought to be especially thankful to Lord Stanley; because I cannot but feel convinced that his presence here to-night will do much to show that the calumny which some of our enemies have heaped upon us, is wholly false and unmerited. It has been our fortune, or misfortune, to debate on subjects which, up to the time of our formation, no scientific body had dared to discuss. Such were, the physical and mental characters of the negro, and the influence of Christian missions amongst savages. We have consequently been told, first of all, that we were established for the advocacy of negro slavery; and now we are stigmatised as an “infidel confederacy”. But, my lords and gentlemen, our object is something far higher and more noble than the mere propagation of infidel opinions; we have to discover what is true (cheers).

Dr. Hunt then mentioned the present excitement amongst the missionary societies, because some of the members of the Society had dared to discuss the benefit of missionary work on savage races, and that most of the missionary societies, with their myriads of supporters, were in arms against the Anthropological Society; but it would soon be seen that this Society only wanted to arrive at the truth. He considered that the present entertainment opened a new era in the history of the scientific societies of Great Britain, and that for the future such gatherings would not, as hitherto, be monopolised by one scientific society; for, however important geographical science may be, the importance of anthropological science was far greater (cheers). It only remained for travellers to follow the example of their guest, and write accounts of what they really did see, and not what they would wish to see, and anthropologists would not be unmindful of them. Captain Burton had dared to speak the truth at the risk of his own political and social position; and he hoped that others would follow his noble example.

In conclusion, Dr. Hunt said: “It would ill become me to say anything in praise of the public career of the statesman who had so kindly presided on this occasion. The name of Lord Stanley was enrolled as a very early Fellow of our Society; and we may perhaps have to thank him for inducing such men as the Earl of Clarendon, the Lord Bishop of St. David’s, and our last elected member, Lord Houghton, to join us (hear, hear). There is one remark, however, which I will

venture to make respecting the noble lord, because I feel sure it will find a hearty response from every true scientific man. Of all the statesmen who have in modern times taken part in the public administration of the affairs of this country, I know not one whose past career is looked upon with so much approval, and of whose future with so much hope by all truly earnest scientific men, as that of our distinguished chairman." (Loud cheers.)

This toast was drunk with the greatest enthusiasm.

LORD STANLEY, in returning thanks for the compliment, said that when a man who had done so much more than he could pretend to have done, returned thanks when his health was drunk without saying one word about himself, he set an example which it was well should be followed. He was very glad to hear of the prosperity of the Anthropological Society, to which he had for some time had the pleasure to belong. He was not, indeed, a very active member, for he had not taken part in their discussions, nor had he contributed one paper; but he had been an indefatigable consumer of their publications; there was not one of them that he had not read. He was very glad that, in conducting their proceedings, they had no sectarian views. He himself had always kept clear of missionary meetings (cheers); and if a meeting were called with any sectarian view, he should forbear from attending. It seemed to be the peculiar characteristic of the time, to give utterance to theories of all kinds; but what they wanted was facts. They did not always get them, it is true; and when they got them, they did not always make the best use of them (laughter). It was a great deal to say in favour of anything, that there were some facts on which it could be based. The Society, in taking the free course it had pursued, could not fail to meet with some opposition; and it was wonderful to see the effect which a little opposition produced. He did not wish that they should not be opposed; but he wished that, as far as possible, they should only be opposed by fair means. At the same time, he hoped that, when asking for fair play for themselves, they would not forget to give fair play to others (cheers).

VISCOUNT MILTON said that, as a young traveller, among others who had accomplished so much more, he rose with considerable diffidence to propose "the health of travellers in foreign lands"; and he associated with the toast the name of Mr. R. B. N. Walker. He hoped there would never be any lack of young men willing and anxious to engage in such enterprises as those in which Captain Burton and other friends had led the way (cheers).

MR. R. B. N. WALKER said: My Lord Stanley, my Lords and Gentlemen,—Having done me the honour to couple my name with this toast, although doubtless there are many Fellows of the Society, as well as others more worthy of the name of travellers present, who are better qualified to reply, I thank you for the very kind manner in which it has been proposed and received. For myself, I can hardly yet lay claim to the title of traveller; but I purpose proceeding very shortly to Gaboon, to undertake an exploration of the interior of Equatorial Africa, in which attempt I hope to succeed, and

so win my spurs. For, notwithstanding that Lord Houghton has just told us that so much has lately been done by Captain Burton, the late Captain Speke, and others, towards laying open what has hitherto been an unknown continent, that, comparatively speaking, little is left for their successors to do, I hope that I shall find some spot that will prove both new and interesting; in fact, as the regions I propose to visit are, I may say, still virgin soil to the explorer, I trust to be enabled to accomplish something of importance to geographical science. My main object is to discover the Great Central Equatorial Lake, in which attempt I trust that I may succeed. I need hardly say that, so far as my abilities and opportunities will allow, I shall not omit to do my utmost to advance the objects of the Anthropological Society.

Mr. J. A. **HARDCASTLE**, M.P., proposed the next toast, "the Scientific Societies of London". He said he was about the worst fitted person that could be selected to propose such a toast, for he was not a member of any scientific society; but if what he had seen of the Anthropological Society could be taken as a specimen of others, there could be no doubt of the great use of these societies in general.

Mr. J. **FRED. COLLINGWOOD** returned thanks.

Mr. **ARTHUR RUSSELL**, M.P., proposed "Success to Scientific Societies abroad." We should especially wish success to the Paris and Madrid Anthropological Societies.

Dr. **SEEMANN**, in returning thanks, said that, on behalf of the various foreign academies and societies with which he was connected, he could conscientiously declare that they fully appreciated the honour done to them by the toast. Abroad, the movements and publications of the Anthropological Society were watched with eager interest; and he had only that day read an able article, in which that distinguished and venerable anthropologist Dr. Carus of Dresden, the President of the Imperial German Academia Naturæ Curiosorum, pointed out how much the Society had done, and what excellent opportunities it enjoyed, in a place like London, to solve some of the most important questions of our science. The Society had been solicited to keep up a regular exchange of its publications with the leading societies abroad; and had become the model for the establishment of anthropological societies at Madrid, St. Petersburg, and other places.

Captain **BURTON**, in proposing "Success to Anthropological Science in the British Association", expressed a hope that the Society's application for a special section would be carried, as it deserved to be.

Mr. **REDDIE** responded to the toast. He said that he most heartily echoed the wish of their distinguished guest, that before long the science of anthropology would have a distinct recognition on the part of the British Association, which we all regretted was not the case at present (murmurs). "My Lord", he proceeded to say, "I am not surprised at this expression of dissatisfaction that such a state of things should be possible in the present day; but this is not a fit occasion for going into disagreeables, even if the lateness of the hour did not also warn me that it is not a time for long speeches. Let us, however, make allowance for those through whose influence anthropology

has been nominally absent, though virtually present, at our great scientific congresses. Of course we are perfectly aware that there is room for great differences of opinion as to what is scientific advancement. Some think (as the late Professor Waitz well observed) that science is advanced when theory is added to theory, however contradictory, if they only all pass through the regular grooves. Others, including not a few anthropologists, think the truest advancement may be made by pulling ill-considered theories to pieces, without caring for their traditional respectability, or whether they are popular from their antiquity, or perhaps merely from their novelty. Even during this present fortnight, the Anthropological Society of London has been attacked by a small portion of the press, as if we were answerable for certain theories we have done not a little to discredit by the perfectly free discussion we allow. In short, my lord, there is no doubt that we are all for the true advancement of science in this Society, and therefore we are preeminently entitled to take our proper place in the British Association (cheers). One thing, more suitable to our present meeting, I should like to say before I sit down, as it relates to what came under my personal observation as a member of the Committee of Section E at Bath. Captain Burton has alluded to the criticism he has been subjected to, on account of some of the remarks he made in his *Nile Basin*, as to the views of the late Capt. Speke. My lord, I think it has not been publicly noticed, or not sufficiently so, that these remarks were written by our gallant guest for the purpose of being read in Captain Speke's presence at Bath; and I well remember the resolute air with which Captain Burton entered the committee room of Section E, with, as it were, his literary sword unsheathed in his hand, awaiting the entrance of his gallant 'rival in renown'. But a fatal accident, we all know, had already forbidden the expected discussion: only the melancholy tidings of Captain Speke's death reached the committee room; and, with the feelings of an officer and a gentleman, Captain Burton refrained altogether from reading his paper. But I venture to think that the cause of scientific truth would be best served, by the paper being published as it would have been read had Captain Speke lived, with a mere note of explanation recounting the unfortunate circumstances which induced its withdrawal. At any rate, it is highly undesirable that the least misunderstanding should be allowed to prevail as to the real facts of the case, and the conduct of Captain Burton." (Loud cheers.)

Lord STANLEY said they had had a very pleasant evening (cheers), but everything must come to an end; and the last toast which he had to propose was—"the Ladies".

Mr. SWINBURNE proposed "the Press," and in a vein of irony, which excited much laughter, protested against having been compelled to propose success to what he most despised and abominated. The "press" unfortunately had a great deal of power, and used it to do us all the injury they possibly could.

Mr. LOCKYER, having had his name associated with the toast, said he felt it a great honour to be called upon to return thanks on behalf of the fourth estate. The press, he said, was always ready to acknow-

ledge the merit of such a man as Captain Burton. It could distinguish between those who were genuine travellers and those who were not so. Some travellers there were who might as well have stayed at home for any information they communicated; but there were others who truly told all that they had observed, and who, like Captain Burton, would boldly express their opinions.

Mr. SAMUEL LUCAS said he belonged to that degraded and despised press which had been so strangely assailed by the gentleman who had proposed the toast; and he stood up for the "blackguard press," which he proceeded to defend at length from the ironical accusations of Mr. Swinburne.

Mr. CHARLESWORTH said they had drunk success to the Anthropological Society, and to the other scientific societies of London, but there was one toast yet remaining connected with the object it was their desire to promote; he therefore begged to propose "Success to the *Anthropological Review*." He need not, he said, remind his Lordship that a society without an organ was like the play of *Hamlet* with the principal character omitted. He attributed a great deal of the success which had attended the society to that most valuable publication the *Anthropological Review*. Without detaining them to speak of its great merits, he would connect with the toast the names of Mr. Trübner and Mr. Carter Blake. Of the latter he would say that the greater part of his energies were exerted in the investigation and distribution of scientific truth; and the great services which Mr. Blake had done to the society as editor of the *Journal of the Anthropological Society*, which was appended to the *Anthropological Review*, and in other important capacities, were well known to all present.

Mr. TRÜBNER: My Lords and Gentlemen,—I thank you sincerely for the honour which you have conferred on me in drinking my health, coupling it with your toast to the prosperity of the *Anthropological Review*. I can assure you that it is most gratifying to me to be the publisher of a periodical, the establishment of which marks an epoch in the development of the science to which it is devoted; but I must remind you that, after all, the part which I have to perform in connection with it is but a humble one, and that your thanks are due, not to me, but to our excellent President, Dr. Hunt, its projector. You will be glad to hear that the *Review* continues to gain ground, and that, in addition to the many subscribers whom we count in this country, we constantly add to the number of our foreign ones. And it is a pleasing fact for me to record, that our near neighbours the Dutch have manifested, from the very first, a lively interest in our *Review*, and that, in proportion to the size of Holland, we count more readers there than in any other part of continental Europe. The sale in Germany is satisfactory, and steadily on the increase. The same cannot however be said of France and Belgium. We have subscribers in Southern Europe, but not as many as the importance of the publication would seem to warrant; this may partly be owing to the somewhat defective organisation of the book trade in those parts of the world. The Indian and colonial sales are not very extensive as yet, but Australia has latterly begun to be a good customer.

I regret to inform you that America has as yet given us but little support; but this is explained by the circumstance that, when the *Review* was started, that country was already in the midst of its disastrous war, and American purchasers could hardly be expected at a time when exchange had nearly trebled the original cost price. But there is every prospect of a wide circulation for our *Review* in that country when the conflict shall have come to an end. In the interim, devoted students are at work in various parts of the great American continent who bid fair to enrich considerably our knowledge of all the departments of science which fall under the cognisance of our society. That indefatigable labourer and intrepid traveller, the Abbé Brasseur de Bourbourg, has sailed not long since—for the fifth time, I believe—for Mexico, on this occasion as a member of the Mexican Scientific Commission, sent out by the Emperor of the French. His many valuable labours in connection with the antiquities and languages of Central America are no doubt familiar to you. Don Francisco Pimentel, a Mexican gentleman, has recently published the first volume of a work *On the Indigenous Nations of Mexico and Central America*, this volume containing an analysis of the twelve idioms spoken from Arizona to Yucatan. An American *savant*, Mr. Alexander S. Taylor, resident at Santa Barbara in California, is engaged on an extensive work *On the Ethnography of California*—portions of it have appeared in the *Voz de Mejico*, a journal published at San Francisco. At New York, Messrs. Shea and Gibbes are engaged on the publication of a series of grammars and dictionaries of American Indian languages, thirteen volumes of which have already been carried through the press. In New Granada, two gentlemen devote themselves with a rare zeal to anthropological studies, the fruits of which are two important works—the one by Colonel Acosta, *On the History of New Granada*, with notices on the indigenous tribes and languages of that country; the other by Dr. Uricoechea, entitled *Monumentum Chibchacum*, containing, among other matter, a treatise on, and a dictionary of, the ancient Muysca or Chibcha language, now nearly extinct. Mr. Squier, well known in connection with American antiquities, has recently returned to New York, after having spent fourteen months in the scientific exploration of the land of the Incas: the account of his discoveries is looked forward to with interest. In Chile, one of the best governed of South American republics, the authorities have, since the pacification in 1837, encouraged a spirit of inquiry into the ancient history, antiquities, languages, etc., of the country; and one of the fruits has been the publication of full indices to the national archives by Claudio Gay, a Chilean ecclesiastic. Father Astraldi has compiled useful grammars and dictionaries of the Araucanian language. Mr. Vicuna Mackenna, of Santiago, is likewise engaged on the work on *Chilian Antiquities*. Names of other equally devoted students might be added to this list, but I have already trespassed on your indulgence, and must bring my remarks to a close. Only permit me, before doing so, briefly to allude to the fortuitous circumstance that our friend Captain Burton, in whose honour we are here assembled, has been appointed to such a rich field for anthropological inquiry as

Brazil—a field where his wide and varied powers will have the fullest play; a field, moreover, where he will have the fine chance of continuing the labours of his eminent predecessors the German Martius and the Frenchman d'Orbigny. And I venture to express a hope—a hope I am sure shared by all present—that, in the midst of his labours, his pleasures, his enjoyments, and his triumphs, he will reserve a place in his thoughts for us, and in his own inimitable way adorn the pages of our *Review*, and please its readers by frequent communications—thus adding something more to the many obligations which the world of science owes to his labours.

Mr. CARTER BLAKE said: I rise with great pleasure to thank you for the very cordial manner in which you have drank the health of so old a servant of the Society as myself. I can say distinctly, that no official duty with which I may have been charged in editing the Society's Journal has been so pleasurable as that which I have enjoyed when being the first to read through the papers of my distinguished friend Captain Burton. He is one of those few men who are manly enough to say the thing they really think, in the language which alone adequately conveys their ideas. We have one traveller, at least, who is not ashamed to describe the state of savage nations in Saxon English, and to apply homely words to those peculiarities which he may observe. As the great destroyer of the scientific mock-modesty of this age, we can say to him, in the words of Alford—

"Speak thou the truth. Let others fence,
And trim their words for pay;
In pleasant sunshine of pretence,
Let others bask their day."

Joining with you all, my lords and gentlemen, most cordially in wishing success to Captain Burton, I thank you sincerely for the kind reception you have accorded so humble a follower in his footsteps as myself. (Cheers.)

Dr. HUNT said he had a host of letters, some of them from noblemen and gentlemen of the highest distinction, containing apologies for not being able to attend the dinner to do honour to Capt. Burton. Many of these letters were most complimentary to their distinguished guest. He would not trespass on the patience of the company by reading those and other letters that had been received, but he would occupy their time very shortly in proposing a toast. He had unfortunately for himself held a position in the Anthropological Society which he had no pretension to occupy; and he was always anxious to acknowledge that the success of the Society was not due to any efforts of his, but to the Council and the officers, and to the harmony with which they had all worked together to promote its interests. He therefore called on them to drink the health of the officers of the Anthropological Society. Among them he begged to name Mr. Bollaert, but as that gentleman was not able to attend, he would associate with the toast the names of Mr. Roberts, one of the Honorary Secretaries, and of Dr. Charnock, the Treasurer. (Cheers.)

Mr. ROBERTS, in acknowledging the toast, adverted to the success that had attended the formation of the Society. An Anthropological Society he had felt to be the want of the age which seemed to call for

it, and he was glad to say that when the President asked him to join, he at once consented; the Society, he was glad to say, continued to prosper in every respect.

Dr. CHARNOCK also briefly returned thanks.

Dr. HUNT said that Lord Milton had asked to be permitted to propose a toast, and he had no doubt it was an important one, to which he solicited their attention.

Lord MILTON, after a few preliminary complimentary remarks, proposed the health of the President of the Anthropological Society.

Dr. HUNT said he had been deceived once or twice in the course of his life, but never had he been so thoroughly as on the present occasion. The noble lord had informed him that he wished to propose a toast, and he concluded of course that it would be an important one, as he had announced, but never had he felt so completely the dupe of circumstances over which he had no control as when he found that his own health was proposed. It was the duty of the President not to talk, but to work. He could conscientiously say, that every day added to the pleasure he felt when he made acquaintance with the members of the Anthropological Society, and with those who were continually joining them. He had not anticipated that their number could have been so greatly extended so soon, nor that there were so many persons who had the courage to discuss social, moral, and religious questions with so much freedom as experience had proved to be the case. Many of those who had joined the Society had declared to him that the information they had acquired had opened quite a new life to them. The principle which regulated their proceedings was simply that every question brought forward should be demonstrated; they accepted nothing that could not be proved. If any opinions were adduced they were analysed and tested by facts and by logic, and if found to be founded in truth they were accepted, but not otherwise. He should be very sorry if they were to separate on that occasion, when they had met to bid farewell to Capt. Burton, without drinking the health of one on whom they all looked with respect and admiration—Mrs. Burton. (Loud cheers.) He felt it, therefore, to be their duty to join most heartily in drinking long health and prosperity to Mrs. Burton, and may she be long spared to take care of her husband when far away in South America. Those who paid homage to her paid homage also to him, whom they had met to honour, and the more they knew of him the more they respected him. (Loud cheers.)

Captain BURTON. I only hope in the name of heaven that Mrs. Burton won't hear of this. (Laughter.)

Dr. HUNT said that as Capt. Burton refused to respond to the toast in a proper manner, he must return thanks for Mrs. Burton. She begged him to say that she had great difficulty in keeping her husband in order, but that she would do what she could to take care of him, and to make him as innocent a man as they believed him to be. (Loud laughter.)

Lord Stanley then left, and the company soon afterwards separated.

Correspondence.

On the Hereditary Transmission through Four Generations of an Abnormity.—Since the publication of Darwin's masterly work *On the Origin of Species*, the hereditary transmission of abnormal peculiarities has attracted a good deal of public attention. As a small contribution to our knowledge of these remarkable cases, I beg to enclose a photograph of an abnormity which has now run through *four* generations. The subject photographed is the second of the family so afflicted, and from what I can learn the following are the facts:—The grandmother of the old lady now portrayed was, during her pregnancy, walking through a farm-yard, when she was attacked by a savage dog and severely lacerated about the hands. On her confinement her child, a boy, presented the following peculiarities: the fingers of both hands were webbed to their extremities; on the outside of the fourth finger of each hand a supplemental one appeared from a little below the ungual phalanx. The thumb of the *right* hand consisted of two distinct metacarpal bones and two first phalanges; the ungual extremity contained three phalanges, the outer and inner ones being terminated by nails. The *left* thumb consisted of one metacarpal bone proper, but there was a separate metacarpus extending from the carpo-metacarpal articulation and passing the metacarpo-phalangeal joint. The ungual extremity contained two phalanges bent at an angle. The child possessing these peculiar hands, on arriving at man's estate, married, and the old lady whose portrait I send was the result of such union. This old lady also married, and has had five children, one son and four daughters; the son and youngest daughter possessed the above peculiarities. The son married, and has had six children, *five* of whom are afflicted in exactly the same manner. The daughter has had two children, both boys, the eldest of which possessed the same abnormal structure of the hands. Thus this strange malformation has, up to the present time, run through *four* generations (three of which I have seen), and possibly may run through many more. To my friend Henry Barber, M.D., I am indebted for the anatomical details, he having made a careful examination of the case.—J. P. MORRIS, F.A.S.L.

Burnt Human (?) Bones.—I beg to call attention to a singular mode of interment, which is thus described in a letter addressed to Professor Owen, which he has kindly placed at my disposal:—"1, Holly Terrace, Sunderland, April 10th, 1865,—Sir,—Hearing that the labourers at Gally's Gill, where I found the humerus of the *Bos primigenius*, had come upon somewhat remarkable remains of antiquity, I went thither this afternoon and found a basin-like excavation formed in the limestone rock, nine feet in diameter, and about the same in depth from the grass surface. The side of the basin has evidently been acted on by fire, as you will see from the specimen (A) which I enclose. The body of the basin is filled with substance, of which I enclose specimen (B). A little beyond the western edge of this excavation, and among the clay thrown out from the drift in which the

relic of the *Bos* was found, I picked up the enclosure (C). If you have leisure, I shall be glad to be informed of what creature it has formed a portion. I am, sir, your obliged and obedient servant, GEO. HARDCASTLE. To Professor Owen." The specimen (A) as the writer states, certainly shows the action of fire. The substance (B), which fills the interior of the basin, is chiefly composed of calcined phosphate of lime, the *débris* of (human?) bones which have been burnt in the cavity. The third specimen (C) is the humerus of a fox, and is apparently very recent. I hope that some of your readers will inform us what, if any, other instances of this peculiar mode of sepulture exist.—C. CARTER BLAKE, F.G.S., F.A.S.L.

Anthropological News.

The formation of the Madrid and St. Petersburg Anthropological Society is now to be followed by the formation of an anthropological society in New York. This society, we learn, will be founded on the plan of the Paris and London societies.

The Anthropological Society have sent in an address to the President and Council of the British Association for the Advancement of Science, asking for the appointment of a special section for Anthropology. Should this request be supported by the council, it will doubtless be carried; and in any case the question will be discussed by the general committee. Should the section not be appointed, it is intended to hold an Anthropological Congress. We understand that arrangements have already commenced, and that papers are being collected by the Anthropological Society for reading either before the section or at the congress, and that if the council of the Association decline to recommend the appointment of a special section the arrangements will be completed for an anthropological congress.

Mr. E. G. Squier has just returned to New York from a two years' exploration of the ancient monuments of South America, and has been collecting materials for a work on the Incas of Peru. We hear that he has brought with him two hundred crania of the people, collected with his own hands.

Dr. Louis Büchner, who translated Sir Charles Lyell's *Antiquity of Man* into German, has recently been delivering some lectures at Darmstadt, on the antiquity of man, which were attended by Prince Louis of Hesse.

Dr. J. Aitken Meigs, of Philadelphia, is engaged on a *Memoir on the Comparative Anthropology of the Polar Races*. He is anxious to obtain the measurements of the skulls of the following peoples:—Samoiedes, Yeniseiens, Yukagiri, Yakuts, Tungus, Koriaks, Kamtchatkans, Tchuktchi, Kurilians, Aleoutians, Kenaiens, Kolushes, etc. We shall be happy to forward any information, and feel sure that Dr. Meigs will gladly give all credit to those who take the trouble to send the information sought for.

Karl Gutzkow, who was one of the most severe critics of Dr. Louis Büchner's *Kraft und Stoff*, is now confined in a lunatic asylum.

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PHILOSOPHY AND PSEUDO-PHILOSOPHY.*

"Does science undermine religious faith?" asks Dr. Doherty. "Not at all," he answers; "but in the name of science atheistic philosophy attacks religion. And why is this? Because natural science deals mainly with the laws of material forces and phenomena, while religion deals mainly with spiritual forces and phenomena. Science deals with the visible universe alone; religion with the unseen world. The cosmic universe is double, natural, and supernatural; and those who study the natural half exclusively cannot discover a true philosophy. Man's destiny is double, natural, and supernatural. His life in this world is a preparation for a future life; and whoever denies this fundamental proposition can have no adequate idea of religion."

The above passage merits the most careful consideration; we do not remember that we ever met with so curious a psychological and anthropological study. We might be tempted to say, that an entirely new phase of the human intellect has here been manifested to us; but as we have never made a special study either of the Irish character or of mental pathology in Ireland, we must content ourselves with the remark that to us Dr. Doherty's views and arguments appear to be thoroughly original. This is not the first time we have met with word-worship, but we cannot remember that we ever saw it carried so far as it has been carried by Dr. Doherty. We cannot remember that we were ever before requested *totidem verbis* to believe in the spiritual *phenomena* of the *unseen* world. The worship of the

* "Philosophy of Religion", by Hugh Doherty, M.D. Trübner: 1865. "Lilly's Astrology", by Zadkiel. Bohn: 1852. "Buddhism in Tibet", by Emil Schlagintweit, LL.D. Trübner: 1863. "First Principles", by Herbert Spencer; Part I, The Unknowable. Williams and Norgate: 1862.

Bull was taught in former times by the Egyptians; it is said that Olympian Jove once transformed himself into a bull, and so won the affections of Europa. If Dr. Doherty has similar designs, we very much fear that he will not be equally successful; Europa has recently been to school, and learned a few things of which she was ignorant in the days of Jupiter; her sisters, too, are all promising damsels, quite capable of recognising a bull's foot when they see it. But if Jupiter's bovine mode of courtship is to be adopted, we should recommend Dr. Doherty to devote himself to Africa, the much-toasted *brunette*.

If it be true, as Dr. Doherty implies, that religion will be subjected to the attacks of that which he is pleased to call "atheistic philosophy," until science studies the phenomena of the unseen together with the phenomena of the seen, it is probable that religion will have a rather unquiet life for some little time to come. But we differ entirely from Dr. Doherty; we cannot admit his premises. If we remember rightly, it has generally been religion which has attacked science, not science which has attacked religion. Science pursues her way calmly and steadily; and if she is sometimes forced to turn and strike her enemies, she does so with reluctance, for to her at least time is precious; and time spent in a battle in which she has nothing to gain, though religion may have much to lose, is to science time utterly wasted. As it has always been, so it is now. As the infallible Church forced itself into Galileo's investigations, so the infallible Dr. Doherty and other dogmatists force themselves into the science of anthropology. "Man's nature is double, natural and supernatural;" if this is meant to be a scientific statement, let us have some of the "phenomena of the supernatural" given in evidence; if it is meant to be a religious dogma, it wants that novelty which is to be found elsewhere in Dr. Doherty's book.

Novelties there are of all kinds. Dr. Doherty's theory of causation is beyond the grasp of ordinary minds. In the passage above quoted, we are told that "atheistic philosophy attacks religion because natural science deals mainly with the laws of material force and phenomena, while religion deals mainly with spiritual forces and phenomena." On the same principle astronomy ought to attack botany, the birds ought to wage war against the fishes, and some star which no telescope has ever yet discovered ought to run a-muck against the solar system. Science and religion are as distinct as any two things can be; and atheism is a much closer ally of religion than of science. Science is just as antagonistic to atheism as she is to religion, and the antagonism is in each case only an antagonism of method. Religion and atheism both depend upon dogmas. Science is founded upon

facts. The theist says "there is a God;" the atheist says "there is not a God;" the man of science, in his capacity of man of science, says "the question does not concern me; I have no evidence." But if religion will mistake her vocation, and force what she holds to be evidence in her favour upon the notice of the man of science, she invariably calls the refutation of that evidence an attack. Let her but keep within her own domain, and science cannot touch her. Let her but take up the high *à priori* ground, and, although she may possibly be starved out, she can never have her position taken by assault.

The consideration of this point leads us to say a few words upon the view taken by Mr. Herbert Spencer, who, while allowing that we cannot know the nature of the reality which underlies appearances, considers that we have some evidence for the positive existence of that reality. It is, in our opinion, unjust to accuse Mr. Spencer of atheism, as Dr. Doherty does by implication. If Mr. Spencer has erred, he has erred in the opposite direction. He has endeavoured to show that there is a foundation for all religious beliefs, that science herself tells us of an incomprehensible something, which religion bids us to worship; and so he reconciles religion and science. We cannot here analyse at length the argument by which this conclusion is arrived at, but, if we are not mistaken, it is arrived at by the aid of a very old fallacy in a somewhat new form. It seems to us that Mr. Spencer has reproduced something very like the old doctrine of the realists, and arrived through it at the positive existence of the incomprehensible.

The most important part of Mr. Spencer's argument is that in which he treats of "the relativity of all knowledge," and which he thus sums up: "We have seen how in the very assertion that all our knowledge, properly so called, is Relative, there is involved the assertion that there exists a Non-relative. We have seen how, in each step of the argument by which this doctrine is established, the same assumption is made. We have seen how, from the very necessity of thinking in relations, it follows that the Relative is itself inconceivable, except as related to a real Non-relative. We have seen that unless a real Non-relative or Absolute be postulated, the Relative itself becomes absolute, and so brings the argument to a contradiction. And on contemplating the process of thought, we have equally seen how impossible it is to get rid of the consciousness of an actuality lying behind appearances; and how, from this impossibility, results our indestructible belief in that actuality."

Throughout the whole of the above summary it will be observed that "the Relative" is spoken of as an entity, as something which actually exists. Nor is this merely a loose or careless mode of ex-

pression; the existence of "the Non-relative" is inferred from the existence of "the Relative." But precisely as Mr. Spencer argues, "destroy the existence of the Non-relative or Absolute, and you destroy the existence of the Relative," we may argue, "destroy the existence of the Relative, and you destroy the existence of the Non-relative or Absolute." It seems almost incredible that Mr. Spencer, who has elsewhere shown himself thoroughly alive to the danger of mistaking words for things, should have argued as though "the Relative" were an apparent something, the existence of which is self-evident. "The Relative" is simply the most general term at which we have arrived—probably the most general at which we can ever arrive; but when we endeavour to interpret—to realise to ourselves the meaning—of the term, we think only of objects which are in relation to one another. We have no idea of "the Relative," except as a symbol. Were "the Relative" more than a symbol, it is true that the fundamental law of the mind would compel us to admit also a non-relative, for without discrimination there is no thought. But when "the relative" is thought of, this law of discrimination operates not by suggesting a non-relative, but by translating the abstract into the concrete. The mind can never grasp the abstract, can never realise the meaning of the abstract, but by the aid of the concrete; as soon as it attempts to realise the meaning of "the Relative," it thinks of two or more objects in relation one to another, and so fulfils the fundamental law.

Mr. Spencer has, we think, carried the scientific sin of word-worship still further in the following passage: "Observe, in the first place, that every one of the arguments by which the relativity of our knowledge is demonstrated, distinctly postulates the positive existence of something beyond the relative. To say that we cannot know the Absolute, is, by implication to affirm that there *is* an Absolute. In the very denial of our power to learn *what* the Absolute is, there lies hidden the assumption *that* it is; and the making of this assumption proves that the Absolute has been present to the mind, not as a nothing but as a something."

Surely if we were to say "it is impossible to discover what are the characteristics of the human beings inhabiting the planet Jupiter, or the extent of the fire which rages beneath the Atlantic," we should not have done much to prove either that Jupiter is inhabited, or that there is a fire beneath the Atlantic.

In short, we think, that with all his ingenuity and subtlety, Mr. Spencer has done no more than even Dr. Doherty to demonstrate the existence of the Absolute. The difference between the two writers is enormous; Dr. Doherty is always dogmatising, Mr. Spencer is always trying to demonstrate; but extremes meet, and the fallacy, which, we

believe, vitiates Mr. Spencer's arguments, bears a very strong resemblance to the fallacies of Dr. Doherty's pamphlet.

In curious contrast to Mr. Spencer's belief in a "something," is the Mahāyāna doctrine. "The fundamental dogma," says Dr. Emil Schlagintweit, "is that of the emptiness or nothingness of things." Dr. Schlagintweit further tells us that there exists "an interesting treatise on nothingness, called the Vajramandā Dhārāṇī, which contains a *resumé* of the ideas connected with this dogma." It seems, however, that nothingness pure and simple did not prove so interesting to the professors of the Mahāyāna faith as to Dr. Schlagintweit, for the most important dogma set up by the Contemplative Mahāyāna school "is decidedly the personification of the voidness, by supposing that a soul, Alaya, is the basis of every thing. This soul exists from time immemorial, and in every object; 'it reflects itself in every thing, like the moon in clear and tranquil water.'"

The personification of nothingness is almost worthy of Dr. Doherty; the simile is quite worthy of him; the confusion of ideas is not to be surpassed. That which is the basis of everything is reflected in everything, and when so reflected is like the moon in clear water,—from which it may be inferred, as it seems to us, that the moon must be the basis of clear water, and that it is like nothingness because only the reflection of the moon is to be discovered in the water, while nothingness itself is to be discovered there and elsewhere.

But the growth of something out of nothing seems to be easy under certain circumstances; dogmas have a vivifying influence to which nothing else can be compared: "the dogma once established that an absolute, pure, nature exists, Buddhism soon proceeded in the mystical school further to endow it with the character of an all-embracing deity. Japanese Buddhism also speaks of a supreme Buddha, who sits throned in the diamond world, and has created all the Buddhas."

We remarked in a previous portion of this review that atheism is a much nearer ally of theism than of science, because the origin of the two is similar. We see from the above passages how the dogmatic assertion that nothingness is the foundation of all things has passed by successive modifications into the assertion that something like a human being presides over all things. This is neither more nor less than the transition from atheism to anthropomorphic theism—no small evidence *a posteriori* that the two are very closely connected.

The direction of transition is, however, usually reversed; the change is usually from theism to atheism rather than from atheism to theism. Atheism, in modern times at least, is usually a revolt from received dogmas; but the dogmatic habit of mind, acquired in early

years, asserts itself in a new form, and we regret that it disfigures the works of a most distinguished foreign anthropologist. Above all things, let anthropology avoid the deadly scientific sin of dogmatism; dogmatism cannot possibly do any good; the amount of harm which it may do is incalculable. When once a dogma has come into existence, it is the most prolific of all things; it is constantly going about, having promiscuous intercourse with all kinds of other dogmas, and begetting a progeny of which it is often impossible to discover the real parentage. A dogma, in short, is the very *bête noire* of scientific morality.

The Mahāyāna doctrine hardly deserves the name of a faith. If we may judge from the forms which Buddhism has assumed, there are two well-marked series of phenomena in changes of faith. On the one hand, belief progresses from Fetichism through anthropomorphic theism up to that purest of all kinds of theism which is preached by Mr. Herbert Spencer—the belief in a something, or, as the Buddhists of the Mahāyāna school called it, a nothing. On the other hand, there seems to be a retrogressive change from the belief in a nothing to the personification of that nothing which then becomes a something, and so downwards to the grossest forms of anthropomorphic theism.

It will be observed that we have called the Mahāyāna faith at one time atheism, at another theism. The line of demarcation between pure theism and atheism is so faint, that it is difficult to determine where one begins and the other ends. That which is, regarded from one point of view, theism, is, regarded from another point of view, atheism. Mr. Spencer, who insists upon the existence of a something, has been called (unjustly, as it seems to us) an atheist; and one section of the Mahāyāna school starting from a belief in nothingness absolute arrived at a *personification* of nothingness. And this necessity for regarding nothingness as a something seems to have been, from the first, inherent in the Mahāyāna doctrine; “emptiness,” they held, “is the abstract essence, existing in everything without causal connexion, and comprising all though containing nothing. . . . voidness is alone self-existent and perfect;” whence it appears that nothingness soon became invested with attributes—became, in short, a something.

The truth seems to be that, as men advance in intellect, they successively abstract something from the doctrines of their predecessors. Their philosophy takes at last the form of scepticism, of atheism, or of pure theism; of scepticism when they do not dogmatise, of atheism or pure theism when they do. But, inasmuch as the whole human race has not yet attained a high degree of philosophical acu-

men, the views of the philosopher are either not accepted, or, if accepted, undergo a kind of metempsychosis; they serve but to vivify less intellectual forms of faith, just as the Pythagoreans believed that the souls of men entered the bodies of dogs and swine. Let us, however, hope that mankind has already advanced so far as to have established a school of philosophy within which the esoteric doctrines of thinking men will always obtain a hearing, and be understood.

It will without doubt be thought strange that we have in this review associated Mr. Herbert Spencer with Dr. Doherty—still more strange that we have associated him with Zadkiel. We, however, mean no disrespect to any one in doing so. We are dealing with a subject which ramifies in widely different directions; and it is by reference to certain astrological doctrines that we can best illustrate a curious and a constantly recurring phase in the history of human thought. We have before us the astrological doctrines taught by the Buddhists, and the astrological doctrines taught by Lilly and Zadkiel; and we regard them as holding a very remarkable intermediate position between science and dogmatism. The phase of thought here illustrated is that in which the mind has arrived at induction, but has stopped short of verification. An induction is made from a small number of instances, and, when made, is accepted as a dogma. Dogmas, as we have already remarked, are prolific; and there is a deadly struggle for existence continually going on between young dogmas and old dogmas—between the young dogmas one with another, and the old dogmas one with another; nor is it easy to discover why one survives and another dies. The chances of success seem to be neither increased nor diminished by a quasi-scientific element in any dogma. Dogmas which can trace back their ancestry to some quasi-scientific progenitor frequently hold their own, side by side with dogmas of purely dogmatic blood. Astrology has existed side by side with religion for ages, sometimes gaining a little ground, sometimes losing a little. But, although it may not destroy vitality, a scientific or even a quasi-scientific element in any dogma seems to have the effect of lessening its power of diffusion. No scientific or quasi-scientific dogma has ever been so widely diffused as the fundamental dogmas of religion. By the side of religion, even astrology, with all its attractions, has been but a dwarf.

But let us examine more closely the position which astrology holds in the history of science and philosophy. This, the most poetical, the most beautiful of all superstitions, is perhaps of all the most rational. It is a superstition which in the infancy of science was inevitable; it is probably almost cœval with human thought; it must have sprung into existence with human institutions. The changes of

the seasons must of necessity have associated themselves with changes in the position of the sun, with changes in the relative length of night and day. It is perhaps difficult for us to realise to ourselves with what eagerness our primitive ancestors must have watched for every sign of spring, with what anxiety they must have striven, the long winter through, to propitiate the God of Heat. To him, without doubt, were attributed the first shootings of the grain from its seed, the greenness of the pastures, the blossoms of the fruit-trees, even the fertility of the cattle. To him, probably, thanks were offered for the garnered harvest, for the fruits that cooled the parched lips of the sweating reaper.

But, though the changes in the sun's position might be observed without taking note of the other heavenly bodies, those other bodies could not fail to attract the attention of an observant savage. His first discovery would probably be that the sun, observed from a given point at different times, rose and set in different places relatively to another given point on the earth. But he could not fail to observe, also, that the heavenly bodies which were last visible before sunrise, or first visible after sunset, differed also in their positions, and that some ceased altogether to be visible. He would thus arrive at the perception of certain relations between the sun and other heavenly bodies. With the existence of some of those relations, he would associate certain mundane conditions; with the existence of other relations, other mundane conditions. Then comes the astrological induction: certain mundane conditions may be inferred from the relative position of certain heavenly bodies; therefore all mundane conditions may be inferred from the relative position of the heavenly bodies. Many a sound scientific generalisation has been made in a precisely similar manner; but the soundness has been established by verification, which in the case of astrology is wanting. And yet not wholly wanting, even in astrology; the discovery of the influence of the moon upon the tides, and the necessity of computing time by the positions of the heavenly bodies, have doubtless had their effect in carrying down the study of astrology to the nineteenth century.

There is always a want of plasticity in every hypothesis; and the earlier the stage of the science, the greater the want of plasticity. When any scientific hypothesis assumes its most rigid form, it is not to be distinguished from a dogma. Even facts may become distorted to suit the hypothesis, while the hypothesis refuses to alter its form in order to suit the facts. This is what has happened in astrology; it is what happens occasionally in various branches of science, even in our own day. We frequently hear the law of gravitation spoken of, not as a high generalisation, not as an excellent explanation and

classification of facts, but as absolutely, positively, finally true. We frequently hear the existence of atoms treated not as a convenient hypothesis, which affords one possible explanation of chemical phenomena, but as a fact which it is heresy to question. So astrology assumed that all terrestrial affairs were regulated by the position of the heavenly bodies, and continued to insist upon that hypothesis, even when it no longer explained facts. It is for this reason that astrology is now held in contempt;—not because there is any *a priori* improbability in the assumption upon which it is based, but because the hypothesis has failed to adapt itself to existing circumstances, because the rigidity of ancient hypotheses appears ludicrous when placed side by side with the still rigid, but comparatively plastic, hypotheses of modern times.

Interesting though the subject is, it is not our province to enter into the details of astrology at length. But there is, if we are not mistaken, a psychological lesson to be learned even from astrology. The Buddhist astrology seems hardly to deserve the name; it is a frivolous attempt to predict the future, with which attempt the stars have little or nothing to do. The English book, on the contrary, is a systematic and elaborate treatise, and is strictly and purely astrological. It is not without wonder that we find men, evidently of some ability, devoting their lives to such a pursuit; the fascination must to some minds be irresistible, and disappointment cannot affect it. We have had the curiosity to test some of the statements contained in the book; they are simply false; and their falsity is intensely ludicrous. Many of those who read these words will be disposed to exclaim "of course," and to smile at the simplicity of any one who could take the trouble to ascertain the fact. But to say "of course" is to dogmatise, to reject a statement in behalf of which an appeal is made to evidence without examining the evidence appealed to.

The following passage in Zadkiel's preface is a perfectly fair challenge to every anthropologist, to every man of science:

"If a proposition of *any nature* be made to any individual, about the result of which he is anxious, and therefore uncertain, whether to accede to it or not, let him but note the hour and minute when it was *first* made, and erect a figure of the heavens, as herein taught, and his doubts will be instantly resolved. He may thus, in five minutes, learn infallibly whether the affair will succeed or not. If he examine the sign on the first house of the figure, the planet therein, or the planet ruling the sign, *will exactly describe the party making the offer*, both in person and character; and this may at once convince the inquirer for truth of the reality of the principles of the science. Moreover, the descending sign, etc., *will describe his own person and character*; a farther proof of the truth of the science, if he require it.

Here, then, is a ready test of the truth of astrology. Will its adversaries dare to make its application?"

We have had the necessary amount of audacity, and have found ourselves described sometimes as fair, sometimes as dark, sometimes as tall, sometimes as short, sometimes as jovial, sometimes as saturnine, sometimes as handsome, sometimes as ugly, sometimes as idiotic, sometimes as possessing genius, sometimes as extremely moral, sometimes as extremely immoral, sometimes as possessing all or nearly all the above attributes at the same time. We have at different times had moles scattered over every part of our person to such an extent that the moly surface has left scarcely any space for the non-moly surface. Our friends have fared no better than ourselves. We can readily allow for differences of opinion on the question of moral or mental qualifications; but we really cannot see that the stars have any right to call a red-haired man black-haired, or a black-haired man fair-haired, or to call a man with yellow hair at one time black-haired, at another red-haired.

So much for the truth of astrology; now for the lesson. It is not to be supposed that any man would make such an appeal as that above quoted, unless he believed in his own doctrines. He would not otherwise rashly put the means of refutation into the hands of the public. He must have gone on believing, for years, against the evidence of his senses. Marvellous, indeed, is the force of prejudice; but though prejudice is always unscientific, it is often perfectly conscientious. No moral excellence, perhaps even no intellectual excellence, is a guarantee against prejudice—against unconscious dogmatism: but there are degrees in prejudice as in moral and mental excellence; and although we cannot say with certainty that prejudice varies inversely with either mental or moral excellence, the statement that prejudice varies inversely with mental excellence is probably a very near approximation to the truth. But as no one can point to an absolutely perfect intellect, so no one can point to an intellect perfectly free from prejudice,—to an intellect which never dogmatises,—which never assumes what it has no right to assume.

And so it happens that in philosophy and in science there are grades. It is difficult to decide where philosophy ends and pseudo-philosophy begins. In all philosophy there seems to be a greater or less admixture of pseudo-philosophy—in all pseudo-philosophy there seems to be a greater or less admixture of philosophy. For example, even Mr. Herbert Spencer, whose method is rigorously philosophical, has, as we believe we have shown, fallen unconsciously into the pseudo-philosophical doctrine that general terms are something more

than general terms. Dr. Doherty, who is at the other end of the scale, recognises the true philosophical method, though he does not practise it. Dr. Doherty's mind appears to have received no more than a scratch or two from the scientific ideas of our time, while Mr. Herbert Spencer's mind has been penetrated through and through. The result is that Mr. Herbert Spencer makes what we believe to be one or two mistakes, while Dr. Doherty writes a book which is a series of mistakes from beginning to end. Dr. Doherty and Zadkiel both recognise verbally the fact that there are laws in nature; one marked difference between them and Mr. Spencer is that he knows what a law is and they do not. Zadkiel seems to have no idea that he who would establish a law must at least leave no obvious facts unexplained which contradict that supposed law. He argues that if a prediction is fulfilled *sometimes* the truth of the principles upon which it was made has been demonstrated. Dr. Doherty, misled throughout by words, looks upon a natural law as one of nature's acts of parliament; any one, he supposes, is at liberty to act in opposition to it, but must be prepared to take the consequences. "Is it not evident," he says, "that suffering must be caused by this process of purification from rebellious wilfulness against the immutable laws of spiritual life and health?" And again: "We obey the law of gravitation and physical dependency with joy." Dr. Doherty seems to have not the slightest suspicion that we obey the law of gravitation because we have no choice about the matter; it never seems to have occurred to him that the man who lies crushed and mangled at the foot of a badly built scaffold has obeyed the law of gravitation with anything rather than joy.

Mr. Spencer, it is hardly necessary to say, is a man of a totally different stamp. He has done very good service to the cause of science, and in his *Principles of Psychology* he almost anticipated the famous generalisation of Mr. Darwin. It is only the existence of that portion of Mr. Spencer's work in which he treats of "The Unknowable" that has enabled us, for the moment, to compare him with others who have professed to know still more about the unknowable.

But it is the lot of all men to make mistakes. Striving as we all are to find our way in the dark, it is no matter for wonder if we sometimes go out of our way, if we sometimes knock ourselves against an impenetrable wall. And it is the duty especially of us as anthropologists, to be charitable towards all who show an earnest desire to arrive at the truth, who make no attempt to dictate. The younger the science, the greater the chances of error; and we therefore should be especially careful how we throw stones. But Mr. Spencer has

somewhere remarked that no one can afford to dispense with the criticisms of his contemporaries. No remark can be truer; and no one can less afford to dispense with such criticisms than the anthropologist. Let us then all work harmoniously together; let each of us be ready to admit his individual fallibility; let each of us take in good part the suggestions of those who see cause to differ from us; so, by unity of action, by mutual corrections of extreme doctrines, may we hope to arrive at the truth. Above all, let us be on our guard against dogmatism, at whatever point it may appear; let us take for our motto the words of St. Paul, "PROVE all things; hold fast that which is good."

DIEFENBACH'S INTRODUCTION TO ETHNOGRAPHY AND THE HISTORY OF CIVILISATION.*

OUR limits prevent us from giving anything like a detailed account of the multifarious contents of this production; we must, therefore, content ourselves by giving a very brief outline of its scope. The work essentially consists of two parts. The first part treats of diversities of race; the second part, constituting by far the greater portion of the volume, is devoted to the history of civilisation.

After a brief introduction, in which the author gives an account of the principles from which he starts, we have an interesting chapter on names and language in general. Under the heading physiology, we are presented with a survey of the leading theories concerning the physical character of the various types of humanity, their origin, and the relations to each other. The influence of climate, soil, etc.

Dr. Diefenbach enjoys in Germany a deservedly high reputation as a philologist, litterateur, and promoter of public education; but he is not a naturalist. We, therefore, did not expect to find anything new in the ethnographical section on the types of mankind, which chiefly concerns us here. Such of our readers as have perused Mr. Collingwood's excellent edition of Waitz's *Anthropology*, which is constantly

* "Vorschule der Völkerkunde und der Bildungsgeschichte" von Dr. Lorenz Diefenbach, Corresponding Member of the Royal Academy of Science of Berlin, etc. Frankfurt: 1864. (Pp. 746.)

referred to in the volume before us, as, indeed, from its completeness, it must be in any forthcoming work bearing on the science of man, have long been familiar with all the theories concerning the types of humanity, etc.

As regards certain vexed and much debated questions, such as the unity of the human species, we shall in justice to the author allow him to speak for himself. We are not surprised that Dr. Diefenbach, writing as a philologist, assigns to language the first place as an indicator of descent, though he does not go so far as other linguists as to say that the classification of languages is the classification of mankind. On this point, the author remarks :

"The most important indication of descent, mode of thought, and civilisation, is LANGUAGE. . . . Its inseparable connection with the whole being of man, renders language not only most important as regards ethnology, but also as regards anthropology, which in point of fact is the basis of ethnology." (P. vii.)

"We here repeat that we place language at the head of all testimonies of descent of peoples. . . . It is significant that many of the present so-called 'nationality questions' are 'language questions,' as in Schleswig and Austria." (P. 38.)

"On the whole, when we have ascertained which words of a language form the majority of its roots, this testimony decides the descent of the language, and of the people speaking it, provided we are convinced that it has not exchanged its language for another."

In speaking of the unity of the human species, the author remarks :

"The historical unity of the human species is at this time still an open question. Observation, no doubt, daily discovers previously unknown transitions in the varieties constituting the three kingdoms of nature, including man. . . . Nevertheless, the continuity of the connection of all beings from one pole to the other would not prove their common descent from one germ, but only the connection of their forms, not unlike the pictures of successive art periods, which are connected and progress as regards style. Such a connection of forms on the earth neither proves the unity of their pedigree nor their genealogy, but only the uniform law of their origin and development, their qualities and forces (*δύναμις*, force); their dynamic unity in plurality and the harmonious gradation in the life of the whole planet. Even the development of species and genera one from another, as assumed by Darwin, so long as it does not with logical sequence lead to a *unif*, is not necessarily applicable to mankind and its species; for just as the first and the lowest MAN may have become developed from the highest ape, so may in different places the first MEN have been developed from their respective progenitors." (P. 18.)

"From our present stand-point (which we are ready to abandon immediately on being furnished with cogent reasons) we say: that so long as the original unity of languages remains unproved, nay is (ac-

according to Pott) incapable of proof, so is it with the unity of the human species. . . . We rest, therefore, satisfied with the assumption of *force affinity*, of the dynamical (virtual, formal) unity of the human family to which the greatest differences in human organisms are subordinate. This unity of HUMAN NATURE is independent of the unity or plurality of the origin of the human genus as to time, number, and space." (P. 20.)

After physiology, follow a series of chapters in which the author treats of what he calls "the external activity of peoples," embracing their mode of life, industry, trade, &c., which concludes the first part of the work.

We have no space for an analysis of the second division of the book, containing an abstract of the history of civilisation. We can only call attention to it as a scholar-like survey of human progress from an early historical period to the present time among the different races. It is, in short, a succinct history of the growth and development of literature, science, and art, evidently the result of patient research.

As regards the style, we are bound to say, that though on the whole clear, it is thoroughly German,—that is to say, alternately involuted, sentimental, and hair-splitting. It is not an entertaining book; there is no light reading in its pages. Of this, the author seems to be himself conscious, for he expresses a wish that his production may find thoughtful readers. We cordially join in that wish, for it is a thoughtful production of a thoughtful man; but we are sadly afraid that "thinking readers" constitute a kind of article which is as scarce in Germany as anywhere else. The book will form a useful addition to the library of the anthropologist; but we cannot conclude without pointing out a serious defect in a work designed for reference, namely, the want of an index.

BUNSEN ON BIBLICAL ETHNOGRAPHY.*

AMONG the various topics which engaged the attention of the late Baron von Bunsen, the earlier stages of the history of mankind had a large place. In his *Outlines of Universal History*, he examined the ethnographical lists in the book of Genesis, treating personal names, such as Shem, Ham, Japhet, Canaan, Aram, etc., as representing the inhabitants of particular districts, or as eponymic ancestors whose family rela-

* "The Hidden Wisdom of Christ and the Key of Knowledge; or History of the Apocrypha", by Ernest de Bunsen, 2 vols. Longman and Co.

tions serve as a record of the descent and migrations of the tribes personified in them. In the same work he studied the relations and the possible affinity of the great families of language, Aryan, Semitic, etc.; partly writing his own views, as on the Egyptian and other African languages compared with Arabic and Hebrew; and also incorporating distinct treatises by other philologists, among which the most remarkable is Max Müller's *Letter on the Turanian Languages*. In his Egyptian researches, also, Baron von Bunsen gave forth opinions on a matter of the highest moment to anthropologists—the age, namely, to which the ancient civilisation of the Valley of the Nile can be traced back, by following the series of dynasties whose kings' names appear in hieroglyphics on tombs, obelisks, and temples, and in writing in the records of Manetho, Eratosthenes, and others. The subject was and is one of the greatest consequence in working out theories of civilisation, for it involves the question of the time to be allowed for the growth of the Old World culture; and time to the historian is as main an element as it is to the geologist. It must not be forgotten, too, that Baron von Bunsen's inference from the Egyptian dynastic series, that human civilisation has been the result of a history running through very many thousand years, was a very startling opinion in the days before the discovery of man's work in the gravel beds of the drift. Such an opinion, well or ill founded, did much to make the theories of advocates of human development more manageable; instead of asking for very sudden and violent changes, they could say, as they do now, "give us time—plenty of time."

Yet, if we are to gauge Baron von Bunsen's work in the world, it will not do to make his reputation stand or fall by the positive results he attained to in his books. He was a man whose mind was in great measure moulded to the virtues and defects of his great master, Niebuhr. In clearing away obstructive theories, in opening out the science of history, in promoting solid investigation, in training younger scholars to do more than their master ever did, how great a change Niebuhr made in the thinking world; but who would appeal to his reconstruction of Roman history as to a sound and settled authority? So it has been with one of the most noted of his followers and friends, Bunsen. He, too, cleared away obstructions, through which smaller men would not have had power to break, and made ready for the student a fair field on which to do his best; but his own constructions seem unlikely to bear the test of time. His mind was too subjective in its training, perhaps in its original cast; and his researches were too much those of a pioneer in hitherto unknown lands, to allow to his work that permanent character which far less able men, who follow him, may give to theirs. To appreciate Bunsen's importance

in the world, it must be borne in mind how great his influence has been as a patron of letters and science, as a champion of free thought and criticism, as a trainer and encourager of younger men. Not the least thing for which Englishmen have to thank him is that through him his countryman, our ablest philologist, is training up a school of sound and steady-going English students, instead of working in the narrower world of a German university.

The author of the book before us is a son of the late Baron von Bunsen, who, we hope, means in writing his name Ernest de Bunsen, to mark an English naturalisation by adopting a Norman-English *de* in place of his German *von*, and not to favour an unpatriotic adoption of modern French manners. The title which Mr. Ernest de Bunsen gives to these volumes partly represents their contents, in which two subjects, familiar to his father's studies, are pursued to somewhat startling conclusions. In great part, the argument lies beyond the range of the *Anthropological Review*, and could only be investigated from the point of view of the student of Jewish and Christian theology, but in the parts which relate to early anthropological record and to the connexion of early religious developments, we will attempt in few words to describe its outline.

The author starts from the time of Abraham's residence in "Ur of the Chaldees," and thus brings the Semitic race into geographical neighbourhood with the Aryan inhabitants of Bactria, within the later Persian province of Iran. Now it was here that Zarathustra, or as he is less properly called, Zoroaster, gave forth the doctrine of the great religious schism from the Brahmanic polytheism founded on pure nature-worship. Having thus brought into near connexion the Semitic race to whom belong the Hebrew sacred books, and the Aryan race to whom belong the books of the Zend-Avesta, Mr. de Bunsen proceeds to compare the Bible and the Zend-Avesta, and to find in this comparison the means of identifying Adam and Zoroaster. "Zoroaster was by tradition thus connected with Haedinesh or Heden, 'the land of charm,' where a 'paradise,' that is, a fenced garden or park, was in primordial times laid out by Divine command, and probably was situated near the sources of the Oxus and Yaxartes." Again, the Zend-Avesta records the Aryan schism between the cultivators of the soil, led by Zoroaster, and the herdsmen, and the consequent emigration of the latter. This is at least the interpretation which Mr. de Bunsen puts on the record in the Yaçna; and, as might be expected, he compares it with the history of Cain and Abel. "Obliged to choose between the new worship of the one and living God and the pursuit of agriculture at home on the one side, or the worship of many gods, and the nomadic life abroad on the other, some

of the brother tribes finally decided to separate from the rest, and taking an easterly course, settled on the banks of the Upper Indus. We are not told whether bloody struggles preceded this separation of the Aryan brothers. The nomadic tribes may well have complained of being thus driven out from the face of that beloved part of the earth where they and their ancestors had dwelled, and of being forced to become fugitives and vagabonds on the earth, where death by violence might await them. Again, the great reformer lawgiver, patronised as he was by the King of the Land, may have felt that the departing tribe were entitled to every kind of protection which could be extended to them previous to their exodus, and during the same. The prophet may well have considered it necessary to declare that sevenfold vengeance should be taken by those who might act in a hostile manner to the brother-tribe that was going out from the presence of the Lord in order to dwell in countries unknown." (Vol. i, p. 8.) "In the biblical record it is the tiller of the ground, and not the shepherd, who leaves the terrestrial paradise for a distant country. . . The Semitic writer, whose allegory might in his time be understood to refer to this event of the past, would naturally enough claim for Abel, the representative of his tribe, the more honoured occupation of a shepherd," etc., etc. (p. 11.)

Mr. de Bunsen then proceeds to compare the doctrines of the Zend-Avesta with the earlier and later phases of the Jewish theology; and, lastly, with Christianity; and finding that opinions given in the Zend-Avesta appear in different places in the ascending series, he elaborates a theory of a secret tradition running by the side of the recognised Jewish books, which he believes kept up these opinions among the initiated class of the Jews. Thus the doctrine of a future life is familiar to the Zend-Avesta, but not to the earlier Jewish books. It really existed in ancient times among the Jews, he thinks, but was not at once written in the canonical books, and while the Sadducees up to Christian times held with a stubborn conservatism to the written canon, and denied the future life, the Pharisees, receiving this doctrine from tradition, held fast to it.

We cannot offer any opinion as to the value of Mr. de Bunsen's attempt to trace the connection between the religion of Zoroaster, and the opinions of the Rabbinical schools, Manichæism, Gnosticism, and Christianity; but we should recommend anyone engaged in special study of these subjects to read his arguments, for the views of a learned and original thinker are seldom unprofitable. But as to the early part of the argument, which brings together into historical unity the Bible and the Zend-Avesta, we cannot but say that our author's imagination seems to us to have run away with his judgment. That

these ancient documents are in some way related we do not doubt. We think that Mr. de Bunsen, in trying to trace this relation, has entered a road which really leads somewhere, but that he quits this road again before he is fairly started. Among other things, we think that the relation between the Semitic and Aryan traditions of the flood and the ark deserves even more careful examination than it has already received from Burnouf, Pictet, and others. But we cannot speak without strong protest against such an argument as that at vol. i, p. 10, where value is ascribed to the resemblance between the name Noah, and an Aryan root found in *naus*, *navis*, etc. We believe we have met with the notion before, but such mere jingling resemblances of sound, so far from being historical evidence, are mere puns which may be made between any two languages, and can only rank with Voltaire's serious identification of Brahma and Abraham, and the celebrated joke about Jupiter and Jew Peter.

We have been surprised, perhaps unreasonably, to find that an author whose canon of Biblical interpretation seems rather elastic and indefinite, should yet venture to use Biblical prophecy as a means of accurately determining the chronology of future events. Putting certain dates together, and starting from 1864, he remarks (vol. ii, p. 469): "During the coming fifty years we therefore have to look forward to the fall of 'Babylon,' to the exodus of God's especial people from the Israel of all nations, to the rebuilding of Jerusalem and of the temple, and to the establishment of the Messianic theocracy in the Holy Land. The future will show in how far these views are correct." There is no denying the soundness and sufficiency of the test by experience to which Mr. de Bunsen thus subjects himself. All that we can say is, that we hope he may live to see his views as to the events of the coming half-century confirmed, or refuted, as the case may prove.

DUTCH ANTHROPOLOGY.

HOLLAND, which has been a learned country for a succession of ages, has also been eminently conspicuous for writers on most of the branches of anthropological science. It numbers amongst its distinguished anatomists Coiter, Bidloo, and the famous Bernard Siegfried Albinus, whose tables of man's skeleton are still highly esteemed for their great fidelity. The celebrated Peter Camper, who occupied the chair of anatomy in different schools, was equally

remarkable as a man of science and a man of taste, and was an accomplished draughtsman. His anatomical drawings are beautifully executed.* Camper's great contributions to anthropology appeared posthumously, edited by his son Adriaan Gilles Camper.† In the opening paragraphs of this volume, Camper dwells on the visible differences of diverse nations. He says, when in a great commercial city, like Amsterdam, people from all parts of the world appear in a public assembly, we are able at a glance to distinguish not only the black from the white, but, amongst the white, Jews from Christians, Spaniards from French and Germans, and these again from Englishmen. A Scotchman may be distinguished from an Englishman, and this latter from an Irishman. In the cities of Holland, we do not perceive the particular national traits, yet the islanders still retain their original features. In Friesland, the inhabitants of Hindelopen, Molkwerum, and Koudum, still have narrow faces and long lower jaws; whilst those of Bildt, by their short and broad set forms, are to be distinguished very obviously from their nearest neighbours who dwell upon the old land.‡ In this work, he constantly employs two lines in the delineation of the leading peculiarities of the human features; the horizontal line, drawn along the lowest part of the nose and through the opening of the ear, and the facial line, which runs obliquely, touching the upper front teeth and the forehead. It is the

* Pen and ink sketches of the bones of the left tarsus of the camelopard and of the sheep, signed "P. C, f., 4 Sept. 1786", from his hand, in the possession of the writer, are marked by much delicacy. A curious letter of Camper's, in English, may also be mentioned. It is dated June 22, 1788, and addressed to Sir Jas. Ed. Smith, immediately after the latter had established the Linnean Society. The founders of this society had proposed to Camper to make him one of their four Honorary Members, and Sir James had communicated such intention to The Hague. Camper, in acknowledging this communication of the President, professes surprise at the proposal, although he should esteem it a great honour to be connected with a London society for the prosecution of natural history. He says: "It would do me little honour, I fancy, to be of any Linnean Society whatsoever. I look upon Linnæus as a mere cataloguist, and the most superficial naturalist I ever knew. . . . As I have given myself great pains on quadrupeds, birds, amphibious animals, and cetaceous fishes, I discovered every day his errors and his unpardonable ignorance." Although Sir Jas. Smith wrote a vigorous and persuasive remonstrance in reply, of which I possess the rough draft in his autograph, Camper remained unmoved, and his name does not appear among the "Foreign Members of the Linnean Society, 1790."

† "On the Natural Diversity of the Traits of the Countenance in Men of Different Countries and of Different Ages"; "On the Beautiful in Antique Statues and Sculptured Stones"; followed by "A Representation of a New Mode of Drawing the Human Head with Accuracy", Utrecht, 1791, 4to. These dissertations, designed rather for artists than ethnographers, were translated into German by the renowned anatomist S. T. Sömmering, Berlin, 1792, with copies of all the plates.

‡ The subject has been considered, in reference to this country, in chapter vii of the *Crania Britannica*, "Sketch of the Present Population of the British Islands, showing its Ethnographical Relations to its Antecessors".

intersection of these lines, at the lower edge of the nose, which forms the famous *facial angle* of Camper.

Edward Sandifort, the professor of anatomy at Leyden, added to the first volume of his magnificent *Museum Anatomicum*, fol., 1798, nine plates of human crania of different races. He thought it necessary to speak somewhat apologetically of this step in his preface; and, with right judgment, selected those skulls of the collection which were in an integral condition. These copper-plates were produced in a most sumptuous manner; each one embracing, in a single folio sheet, a front view and a profile view of the cranium, of the full natural size. The continuation of this grand work by his son Gerard, contains a description of a series of skulls and casts, with the history of some of the individuals to whom they belonged, elucidating the phrenological system of Gall. Gerard Sandifort, the successor of his father in the chair of anatomy at Leyden, conceived the design of figuring and describing, with measurements, in a separate work, the remarkable collection of skulls of different nations in the Leyden Museum; by which, he remarks, "anthropology" is so greatly illustrated. The three fasciculi of his *Tabulæ Craniorum diversarum Nationum*, fol., 1838-1843, embracing eighteen skulls, appeared in the same splendid form as the plates of his father. They were delineated by his own hand; and it is probable that these tables will always remain the most sumptuous plates of human skulls ever produced.

S. J. Brugmans, who had very great fame as professor of medicine at Leyden, formed a considerable collection of skulls of European nations, soldiers who died during the wars of Napoleon, for which he had great opportunities as inspector of medical service. But he was far from stopping at this point. On the contrary, he was accustomed to give courses of lectures at Leyden, on the natural history of man, for more than thirty years, the last of which terminated in July, 1819, the year of his death.

Gerard Vrolik not only collected crania, but extended his observations to other parts of the skeleton, particularly the pelvis, in which he anticipated finding diversities.* He observed an animal form in the pelvis of the lower races of mankind, and regarded the structure of this part to present race-modifications, but drew scarcely any positive deductions from his limited researches.† His son, Willem

* "Considérations sur la Diversité des Bassins de différentes Races Humaines", 8vo, 1826. "Platen behoorende tot de Beschouwing van het Verschil der Bekkens in Onderscheidene Volkstammen", fol.

† Gerard Vrolik's propositions have all been contested by Dr. Joulin ("Mémoire sur le Bassin considéré dans les Races Humaines", 1864), who maintains that it is impossible to speak with any certainty, as he allows may be done from the examination of the cranium, that a given pelvis belongs to any one race

Vrolik, materially enlarged the craniological collection, and prepared a good descriptive catalogue of it. In this, he arranged the objects under the five Blumenbachian types, dividing them into numerous families, and appended a series of measurements to each skull. Unfortunately he did not specify the mode of determining his *facial angle*, which seems always low. It commonly ranges about sixty-five degrees. It is to be lamented that he did not live to see this catalogue printed. It has, however, been extended to the whole of the beautiful anatomical collection formed by the two Vroliks, under the labours of Dr. J. L. Dusseau, and published in a handsome octavo volume.* The Museum itself has been presented by Professor Vrolik's family to the city of Amsterdam, where we may hope it will be preserved and rendered extensively available to science. Professor W. Vrolik, jointly with others or alone, made many contributions to anthropological science.

The present distinguished professor of zoology at Leyden, who is so learned in natural sciences and so esteemed for his excellencies, stands preeminent as a cultivator of anthropology. Besides his large work on the negro race,† and the catalogue of his fine craniological collection,‡ the smaller contributions to the science from his prolific pen are very numerous, and always bear the marks of accuracy and sound judgment. Professor J. Van der Hoeven may with justice be regarded as one of the oldest, and certainly one of the most persevering promoters of pure anthropology. Since 1831, he has been accus-

rather than to another. His general conclusion is that, if by the observation of the skull we can divide the human species into three principal races, the examination of the pelvis furnishes two groups only. But we are unable to attribute the importance that might be desired to researches in which ethnological names have such weight; where, for instance, the races of New Guinea, of Madagascar, of the Mozambique coast, and of the west coast of Africa, are all confounded together under the common term of Negroes; and where Boschismans and Peruvians are amalgamated under the hypothetical denomination of Mongols. In truth, it might at once be asserted that, if all the first named races are one, there are no recognisable differences among mankind.

Dr. Tennis Zaaier has made the description of two pelves of women of the Indian Archipelago the subject of his inaugural dissertation ("Beschrijving van twee vrouwenbekkens uit den Oost-Indischen Archipel", Leiden, 1862). This work is of much more importance than its title might indicate. One of the pelves is from the island of Nias, which is on the western side of Sumatra; the other from Java. Both are carefully described, with measurements; and both lithographed of the natural size, with the ligaments attached. The author then makes an elaborate comparison of these pelves with five other Javanese examples in Dutch museums, and lastly, with the very fine specimen of a European woman's pelvis, in the collection at the Leyden Hospital.

* "Musée Vrolik, Catalogue de la Collection d'Anatomie Humaine, comparée et pathologique de MM. Ger. et W. Vrolik", par J. L. Dusseau, Amsterdam, 1865.

† "Bijdragen tot de Natuurlijke Geschiedenis van den Negerstam". Te Leiden, 1842, 4to.

‡ "Catalogus Craniorum diversarum Gentium quæ collegit J. Van der Hoeven", Lugduni Batavorum, 1860, 8vo.

tomed to give a course of lectures on this branch of knowledge, which he has defined, as the natural history of man.*

Another able cultivator of natural science, Professor P. Harting, of Utrecht, should be mentioned as contributing an ingenious instrument for the use of craniologists.†

And it is impossible to omit in this hasty sketch, although it has no pretension to embrace all the writers on anthropological subjects the Netherlands have produced, the learned expositor of the ethnology of his native country itself, Dr. D. Lubach. His *Grondtrekken eener Ethnologie van Nederland*,‡ which he regards as merely an outline, is chiefly devoted to a careful investigation of the original historical authorities, and is a work of much research. It is to be desired that he will pursue the inquiry.§ A more recent essay from the same pen, prepared at the instance of the Netherlands Society of Medicine, is designed both to excite inquiry and to assist it, so that the ethnology of Holland may receive further cultivation.||

After these preliminary remarks, we may now proceed to the more immediate object we have in view, viz., to give a brief account of some recent Dutch contributions to anthropology.

Dr. C. Swaving, who occupied for many years a very important position in Netherlands India, being first physician to the city of Batavia, may be first enumerated as the most extensive collector of skulls of the Eastern Archipelagic races. There is scarcely a museum in Holland which has not been enriched by specimens of crania collected by this zealous gentleman—and many have been materially so—witness the Catalogues of Van der Hoeven and Vrolik. But he has likewise studied the crania of some of these oriental races very sedulously, and described them accurately, with measurements. A further continuation of his researches, of which the First Part alone has been published, referring to the skulls of the different races of Borneo and Celebes, is greatly to be desired.¶

* He has explained that he used the term anthropology in this limited sense, and by no means in the more extended meaning which embraces physiology and empirical psychology. He adopted the designation after the example of Rudolphi, who employed it in a similar sense to that in which naturalists use the denominations ornithology, ichthyology, etc. "Schets der Natuurlijke Geschiedenis van den Mensch," 1844, Voorberigt.

† "Le Kephalographe, Nouvel Instrument destiné à déterminer la figure et les dimensions du crâne ou de la tête humaine", par P. Harting, Utrecht, 1861, 4to.

‡ This 8vo. volume, which was completed in 1863, forms a portion of the Natural History of the Netherlands, and has many titles. As a division of this series, it bears the title of "De Bewoners van Nederland".

§ The author has himself given an analysis of this important volume, "Bulletin de la Société de l'Anthropologie", iv, 481.

|| "Ethnologisch Onderzoek van Nederland", door D. Lubach.

¶ "Eerste Bijdrage tot de Kennis der Schedels van Volken in den Indischen Archipel", door Dr. C. Swaving, met Platen en Tafels van afmetingen, Batavia,

The pathological condition of the basis of the skull, which occasions its change of form, an *apparent* elevation, *apparent* impression, or in-pressing of the bones, which has engaged the attention of different inquirers, whether morbid anatomists or craniologists, has received much further illustration from Dutch observers. It is of moment that changes of form should be understood in craniology, to prevent error and confusion—to enable investigators to perceive how much natural forms may be interfered with, and to define, as nearly as may be, the causes of deviation from the normal types. Pathological anatomists have at different times touched upon the loss of consistency and accompanying deformities in the textures constituting the walls of the cranial spheroid, but only in a very partial manner. According to Dr. Boogaard, the writers on cretinism were the first to observe it—Ackermann, Fodéré, Malacarne, Iphofen, and Niépce. Rokitsansky briefly but clearly described it. Dr. G. Vrolik jun. met with it in the hyperostotic skull, the subject of his Academical Dissertation, and Professors Berg and Retzius noticed it in crania contained in their *Museum Anatomicum Holmiense*. Professor Lucae gave a careful description of an example in a woman of fifty-three years of age, which forms the subject of the seventh plate of his *Architectur des Menschenschädels*. In this place he dwells on the influence of the muscles of the nape of the neck, and the *sterno-cleido-mastodei*, in contributing to the deformation; an influence not wholly inoperative, though far less potent, in skulls of normal consistency. Dr. Finkelnburg, in a memoir on *Osteomalacia* and Insanity, brought forward two cases of acute *osteomalacia*, or softening of the bones, both of which were followed by insanity.* These were regarded by Dr. Bogtstra as presenting the impression of the *basis cranii*, but the author described them in so imperfect a manner as to leave some doubt, whether the one of these cases which appears the more likely of the two to have been thus deformed, really were so.

The first memoir specially devoted to the subject, in which it was viewed more in an anatomical and anthropological point, than as a disease, was read before the Société d'Anthropologie de Paris, August the 21st, 1862, and appears in the *Mémoires de la Société*, tome i, p. 379, with two plates, containing three figures.† In this essay, the morbid process was designated *plastic*, and the term *plastic deformation* applied to the change of the form of the skull. This change is parti-

1861-2. "Eenige Aanteekeningen over de Sumatrasche Volkstammen", door Dr. C. Swaving, Batavia, 1863.

* "Allgemeine Zeitschrift für Psychiatrie und psychisch-gerichtliche Medicin", band xvii, s. 119, 1860.

† "Sur les Déformations Plastiques du Crâne", par M. le Dr. Joseph Bernard Davis.

cularly to be characterised as one which may occur in adults and even in old age. In this memoir, five instances of plastic deformation of the skull are enumerated, two of which are remarkable, and lithographs of these appear. One of these, the calvarium of an old Guanche woman, from a cave in the island of Teneriffe, exhibits probably the most exaggerated impression of the base of the cranium yet observed. It may be worthy of remark, that the impression of the base of the skull, although it indicates the most striking *apparent* feature of the pathological condition in question, but which as explained in the memoir just mentioned is only *apparent*, because it is the outer portions of the cranial spheroid that are depressed, whilst the more central remain stationary, on a fixed point, the vertebral column—besides this, it should be noted that this impression of the base is only one of the phenomena in the state of the bones—they have all been softened in their texture, and have become like a piece of clay, plastic and ready to be moulded into any shape by the operation of such extrinsic influences as may act upon them. This might be suggested as a reason for preferring to retain the term plastic in the denomination of this particular morbid condition, and which might be added to the one in use by the Dutch writers, thus making it *plastic impression of the base of the skull*. *Osteomalacia* designates this plasticity as a constitutional disease.

The earliest Dutch writer who took up this condition, Dr. Jan Nicolaas Bogtstra, whose name has already been mentioned, was directed to it by Professor H. J. Halbertsma, who recommended as the subject of his academical dissertation the description of five skulls with impressed bases, contained in the Anatomical Museum at Leyden.*

The first chapter of this work is occupied by a full description of these five examples, the previous history of which was almost entirely unknown, except that the last of them was the skull of a Spaniard. They are of persons of different ages, some young and some old, generally aged, and marked by thinness and lightness.† Dr. Bogtstra made a capital addition to his descriptions in giving outline figures of the misshapen *foramen occipitale*, whose normal form is greatly interfered with in this morbid condition, and frequently rendered unsymmetrical. After a chapter devoted to preceding writers who have mentioned impression of the base of the skull, the third is taken up with a description of some hydrocephalic skulls, in reference to this particular impression. The result is, as far as it goes, not confirma-

* “De Schedel met ingedrukte Basis”, Leiden, 1864.

† They exhibit indications of disease in different parts; of periostitis, caries, and atrophy.

tory of the doctrine of Rokitansky, that this peculiar deformation is the consequence of hydrocephalus. Dr. Bogtstra has an ingenious system of measurement, by which he determines the degree of impression; and his essay is illustrated with excellent figures of the skulls themselves, some sawn open, so as to show the impression in the best manner.

Professor J. A. Boogaard has made the latest contribution to the same subject, which retains the figures and plates executed for Dr. Bogtstra's inaugural dissertation.* Professor Boogaard goes very fully into preceding investigations, enumerating some references to the disease which had escaped the notice of previous inquirers. He has also recovered the histories of one or two of the skulls of Dr. Bogtstra's *Memoir*. Schedel ii of this *Memoir*, is that of a man of sixty-two years of age, who for the last twenty suffered gradually increasing paralysis, at length affecting the face and the organs of speech. On the opening of his body after death, there was found an effusion of blood under the *dura mater*, and of serum in the ventricles. For the full description of the symptoms and the appearances on dissection, reference must be made to the *Memoir* itself. The author has added three fresh examples of the morbid condition exhibited by these skulls, which he found in the Anatomical Cabinet at Leyden, after Dr. Bogtstra's dissertation had appeared. These do not show the impression, or change of form in a high degree; and perhaps the most interesting fact connected with them is, that one of them is the skull of a Turk of Belgrade. Dr. Boogaard has also made many other additions to the description of crania with *impressio basis*. One important result of his labours is the perfecting of Dr. Bogtstra's method of measurements, so as to determine as nearly as possible the degree of impression, and to be able to compare it with the condition of the base of the cranium in normal examples. His mode of ascertaining the elements of his calculations is illustrated by figures, but probably may be made somewhat intelligible by means of words. It should be premised that a bisection of the skull is almost essential to Dr. Boogaard's usual proceeding; still he has with great ingenuity succeeded in the invention of an instrument, by which he can measure the angles he desires in skulls which have not been sawn through. This instrument he has named a "clivometer", from the *Clivus Blumenbachii*. He gives a figure of it of one-third the natural size. We shall here attempt a description of his method in bisected skulls. He first draws a line, *n c*, from the root of the nose, *n*, to the lower surface of the basis of the skull behind the *foramen magnum*, *c*. This

* "De Indrukking der Grondvlakte van den Schedel door de Wervelkolom, hare Oorzaken en Gevolgen", door J. A. Boorgaard.

line, to prevent any confusion with the names employed by others, he denominates the *linea innominata*. In normal skulls it is *always* the posterior edge of the foramen with which this line comes in contact; *b c* is the median line of the foramen; *b e*, the line of the *clivus*, which runs from *b*, the free edge of the occipital foramen, to *e*, the *basis dorsi ephippii*; *f g* is the median line of the plane of the *planum sphenoidale*, or the upper surface of the bony plate of the sphenoid covering the sphenoidal sinuses, which is continuous with the upper surface of the horizontal cribriform plate of the ethmoid. For brevity's sake, he distinguishes the line *f g* by the letter Λ , the line *e b* by \mathbf{B} , and the line *b c* by \mathbf{C} . The angles measured by Dr. Boogaard are these: α , that formed at the junction of the line Λ with the line \mathbf{B} , or the ephippium angle; β , the angle formed by the junction of the line \mathbf{B} with the line \mathbf{C} , or the clivus angle; whilst $\gamma \delta \epsilon$ mark the angles formed by the intersection of these lines $\Lambda \mathbf{B} \mathbf{C}$ respectively with the *linea innominata*. Fearing that this abridged account of Professor Boogaard's system of measurement cannot be fully explained without his diagrams, it may be well to add nothing further than the results of his observations on eight impressed skulls. He has found that the ephippium angle α , in the normal skull, is in the mean 117, whilst in the plastically impressed skull it ranges from 101.5 to 156.5; the clivus angle β , in the normal skull, averaged 127, in the impressed examples it ranges from 123.5 to 203. It should not be omitted to be remarked, that Dr. Bogtstra had furnished tables of his measurements, obtained in a manner not very dissimilar from, but yet not so complete as, that of Professor Boogaard. Indeed, the work of the latter must be regarded as the most-comprehensive and satisfactory that has yet been produced upon skulls plastically impressed at their bases. We subjoin the important deductions Dr. Boogaard has arrived at as the result of his researches, at length.

"1. The impression of the base of the skull by the vertebral column does not always arise from one and the same pathological process. All morbid changes, whereby the solidity of the bones which form the *basis cranii* is appreciably diminished, may have as a consequence impression of the base of the skull.*

"2. The impression of the basis of the skull occurs as well in youthful as in old, and even very aged persons. It has not yet been observed in children.

"3. Hydrocephalus, whilst it may be regarded as a predisposing influence, does not necessarily produce impression of the *basis cranii*. This may arise and be considerable in skulls not hydrocephalic.

* This is in exact agreement with the view maintained in the Memoir read before the Société d'Anthropologie de Paris, in which it is said: "Nous pouvons conclure de là que tout ce qui affaiblit la résistance du tissu osseux de la base du crâne peut donner lieu aux déformations plastiques", p. 390.

"4. We ought to distinguish different forms of impression, especially according to whether the impression limits itself to the neighbourhood of the *foramen magnum*, and is marked by a more horizontal state of the *clivus*; or whether it stretches, with relatively less change in the state of the *clivus*, more generally over the fore half of the base of the skull.

"5. In most cases the impression is symmetrical for the two lateral halves of the skull. Yet it may nevertheless be unsymmetrical, and be limited in some cases to one half of the skull.*

"6. Whether it be recognisable during life depends on the *degree*, but especially on the *form*, of the impression. Only that form which is marked by a more horizontal state of the *clivus* can be diagnosed with any certainty.

Probably the most important recent contributions to anthropology from Holland, are *Memoirs* from the hands of the very accomplished and amiable Professor H. J. Halbertsma of Leyden. His numerous observations, upon various special points of anatomy and comparative anatomy, are to be met with scattered over many of the late scientific journals of his country. With these we are not here concerned. The first Memoir to which in this place attention will be called, is the *Description of an East Indian (Nederlands India) Idiot's Skull*.† In the year 1863, the Anatomical Cabinet at Leyden was enriched by receiving from Dr. Swaving forty Malay skulls, the greater number of which were derived from patients who died in the lunatic wards of the so-called Chinese Hospital at Batavia. One of these was the cranium of a Javan woman named Riela, whom Dr. Swaving had observed as an idiot, and who was remarkable for her ape-like appearance. On her reception into the hospital, her foul entangled hair was cut off, which revealed a thick wrinkled skin upon the crown of the head. Her face was strewed with blue spots, caused by the enlargement of small cutaneous vessels. Her left eye showed a slight obliquity outwards; the fissure of the eyelids was less open and more inclined outwards and upwards than that of the right. Her hands and feet were remarkably large, even in proportion to her head, which, by the great development of the face and swollen lips, had a repulsive animal appearance. For a Java woman she was very tall, namely, about 5 feet 7 inches English.

Riela said little or nothing, and that with a scarcely audible voice. She lay constantly on the back in her crib, and took no notice of the

* In two cases in the writer's collection, this asymmetrical form of plastic impression is strikingly seen. No. 101, the skull of an African negro, exhibits this oblique impression, much aggravated on the right side. No. 022, the skull of a Kanaka, presents a still more unsymmetrical example, where the greater depression is on the left side.

† "Beschrijving van een Oost-Indischen Idiotenschedel", door H. J. Halbertsma.

outer world. Eight days before her death, which took place at twenty years of age, a photographic portrait of her was obtained, from which Dr. Halbertsma's curious Plate I is derived.

The great weight of the skull of Riela was at once perceived. With the lower jaw it weighed 1020 grammes, while the mean weight of eight Malay women's skulls was only 712 grammes. It appears that, besides the colossal development of her bones in general, this immoderate weight is to be imputed to the *hyperostosis* of the flat bones of the brain-case. These, as exhibited in pl. III, fig. 1, are considerably thickened.

Dr. Halbertsma affirms that it differs from the typical cranium of the Malay race, first in the brain-case, or calvarium, by the great retrocession of the frontal bone, by the singular height of the calvarium, by its general narrowness, and by the backward position of the *foramen magnum*. Of these diagnostic signs, we believe that of narrowness to be the most valid. The rest do not appear to us from the figures to be striking. In the remainder of the cranium, or the facial portion of the skull, the differences are, the unusual projection of the jaws, the great development of the jugal bones, which, especially with the narrowness of the brain-case, contributes not a little to give an animal expression to the whole head. Yet prognathism is not, we believe, rare in the Javan skull. He next institutes a critical anatomical examination of his two divisions of the cranium, pointing out the peculiarities in each, and especially dwells on those observed on the internal inspection of the skull. However interesting, it is not desirable to follow the author in this very careful investigation. After this follows a table of measurements and proportions, very judiciously conceived. The first column contains the mean of the measures of eight women's skulls of the Malay race, the second those of Riela's cranium, and the third those of the skull of the orang outhan of Borneo. This table shows the unusual dimensions of Riela's skull, and the narrowness of its calvarium.

In his concluding remarks, Professor Halbertsma observes, that, by the comparison with the eight women's skulls of the Malay race and that of the orang outhan, it cannot be denied that the cranium of Riela exhibits in its whole conformation an obvious deviation from the human type, and an approximation to that of the anthropomorphoi. The skull of Riela is longer and narrower, it is more prognathic, the facial portion both in breadth and length is more developed, the hard palate is longer and upon the whole larger than in the other skulls of her race and sex, and in all proportions approaches to the characteristic ape-form. In many other points also, the author asserts he has met with deviations in the same direction. Thus in Riela's skull the internal capacity is less, the *foramen magnum* placed more

backwards, the *planum temporale* enormously large, the alisphenoid feebly, the lower jaw massively developed, the *processus condyloideus* placed on a lower neck.* In conclusion, he remarks, that in whatsoever degree the skull of the idiot Riela affords any support to Darwin's hypothesis he leaves unnoticed. Still, it furnishes a proof how the human form may recede to the animal type; and how the indications of this are not limited to one portion of the skull, but are manifested in the whole structure of the bony head. Finally, it may be suggested, whether rather too much weight has not been given in this very carefully prepared memoir to the tendencies to animal forms in the skull of Riela; and whether too little allowance has not been made for the morbid conditions which have resulted in idiocy and hyperostosis. The three good lithographic plates appended to this memoir are deserving of commendation. Such plates are of much moment in scientific illustrations, and receive from Dutch artists that attention they deserve. They are all printed in a small folio form. Plate I offers a face view of Riela, from the corrugated skin of the scalp to below her breast; plate II, a profile, and also a vertical view of her skull; and plate III, an inside profile view of her bisected skull, and likewise a base view of the same.

The next of Professor Halbertsma's Memoirs to which we propose to direct the attention of the reader is that upon the *Asymmetry of Javan Skulls*.† This phenomenon, principally manifested in the obliquity of the occiput, is not by any means confined to the crania of Javans, but, as the author affirms, in no human race are there so many asymmetrical skulls as in the Malay. Yet, some of the most exaggerated examples in the collection of the writer can scarcely be said to belong to the Malay race, with whatever latitude this indefinite term may be applied. No. 710, the cranium of a Dharma Bhotia, from the sub-Himalayas, has a very extensive parieto-occipital flattening, which is almost symmetrical. Nos. 591, 1191 and 1192, the skulls of Thais, or Siamese (it might be surmised that this deformation is frequent in Siamese skulls, and probably is quite as frequent as in Javans, or other Malays), all exhibit the same appearance strongly marked, the last very considerably so, and is very oblique. No. 1159, the skull of a New Caledonian, is remarkably distorted in this very manner. Inquiries made from the best authorities do not lead to the conclusion that either Bhotias or Siamese employ any artificial means to distort the skull purposely.

* The author has not referred in this spot to the *hyperostosis*, which it seems would influence the internal capacity of this otherwise very large skull. He has no doubt, observed the unusually long serrations of the sagittal suture.

† "De Asymmetrie der Java'sche Schedels", door H. J. Halbertsma.

Dr. Halbertsma has special opportunities for the investigation of the question he has taken up, and has employed them with much judgment. He has access to 125 skulls of the inhabitants of Java and the neighbouring island of Madura. Of these, 51 are the crania of insane patients from the hospital at Batavia, and the remaining 74, crania of sane persons.

The most prominent feature in the obliquity of so many Javan skulls consists, as a rule, in the flattened posterior and lateral portion of the bony head, either on the right or the left side. It is the *ossa parietalia*, the *os occipitis* and the *partes mastoideæ* of the temporal bone, in the course of the *sutura lambdoidea* and *mastoidea*, which take part in this flatness. In the direction of the line of these sutures, the skull is permanently contracted, while, in the opposite direction, enlargement has taken place, either real or apparent. In some cases the flattening has the consequence of narrowing and deforming the occipital foramen. In others the bones of the face participate in the obliquity of the calvarium.

In looking for the cause of this deformation, Dr. Halbertsma says he first directed his attention to premature synostosis of the cranial bones, but soon perceived this to be inapplicable. He was thus induced to look further, and believes he has found it in mechanical pressure upon the skull from without experienced in infantile life. In Java a child sleeps in a *sarong*, the four corners of which are suspended from the ceiling. As soon as it leaves this cradle, commonly in the second year of life, it sleeps upon the flat hard floor, generally without pillow of any kind. It is to this mode of sleeping, which is continued at an older age, that he ascribes the frequency of asymmetry of the skull. In this period, when the cranium is still pliant and susceptible of impression from without, the individual being placed with the back on a hard horizontal surface, it will incline to the right or the left side, or, what is scarcely possible without careful muscular contraction, rest on the ground just in the middle of the occiput. In such cases the skull will acquire a permanent impression and become flattened on the right side of the occipital region, or the left side, or, in the last instance, the occiput will obtain a symmetrical flatness.

The Memoir is well illustrated with two outline woodcuts. The first of these is the very wry skull of a Javan, seen from above. Dr. Halbertsma draws a line from the right *margo supraorbitalis*, at the spot of the zygomatico-frontalis suture, through the left parietal tuber, and *vice versa*, another crossing on the opposite sides. The difference of the length of these lines gives the measure of the obliquity. The second figure exhibits another symmetrical skull of a Javan with considerable occipital flattening. The line of longest dia-

meter of the calvarium, or c, is here seen to pass high up in the parietal region.

It should be remarked that Professor Halbertsma offers his explanation only as an hypothesis. He has added two very carefully prepared tables. Table A contains the skulls of the sane Javans, Table B of the insane. In these he distinguishes the sex, gives the oblique diameters a and b , expresses the absolute difference between the two, whether the excess be on the right or the left side, etc.; and concludes his interesting Memoir with these deductions.

"1. The frequent asymmetry of the Javan skull, asserted by Van der Hoeven and Swaving, is a fact that is placed beyond a doubt.

"2. This asymmetry consists in the flattening of the lateral portion of the occiput.

"3. It is observed more frequently on the left than the right side.

"4. It is not to be ascribed to the premature ossification of the sutures.

"5. It arises by pressure from without, and probably because the Javan, at an early period of life, adopts the custom of sleeping upon a hard horizontal surface without a pillow.

"6. It is met with in a more exaggerated degree in the insane than in the sane.

"7. The asymmetry gives no occasion to diminution of the volume of the brain.

"8. If there be any connection between this asymmetry of the skull and disorders of the mind, this must be sought in the misformation of particular parts of the brain."

Another dissertation from the same able pen has recently appeared, which should be embraced in our notice. This relates to what he calls the third articular process (*condylus tertius*) of the occipital bone.* Professor Halbertsma says the celebrated anatomist J. F. Meckel, the third of the name, was the first to fix attention upon a third articular process of the occipital bone in man, occurring on the lower surface of the *pars basilaris*, between the two condyles and behind the so-named *tuberculum pharyngeum*.† The anomaly was not unimportant, since it admits of comparison with the single occipital condyle of birds and scaly reptiles, placed in the median line. Since the appearance of Meckel's Memoir in 1815, the *condylus tertius* has been so frequently observed as to have obtained a sort of citizenship. Meckel noticed it in 1 out of 400 skulls, which does not express the just proportion of its occurrence. Dr. Halbertsma says that he found in 876 skulls, in the Leyden collections, not less than 7 well developed cases, not including those in which there is merely an articular

* "De derde Gewrichtsknobbel (Condylus Tertius) van het Achterhoofdsbeen", door H. J. Halbertsma, 1865.

† "Meckel's Archiv.", 1815, Band i, s. 644.

groove for the tooth of the *epistropheus*, or *processus dentatus* of the second cervical vertebra. Of these seven cases, six were in crania from the East Indian Archipelago, and only one in a European. As Meckel's observations must have been made almost entirely upon European skulls, and not oriental ones, it seems likely that the existence of this condyloid process is more frequent in some peoples than in others.

It is probable that this supernumerary condyle articulates, in most cases, with the *processus dentatus* of the *epistropheus*. This may be concluded whenever it presents a smooth pit and not a rounded extremity. Dr. Halbertsma adds, that it is doubtful whether it may not also articulate with the fore arch of the atlas. "I should think that this may be the case where the *condylus tertius* is situated far forwards and has no obvious depression." A question difficult to decide so long as the observer has the skull alone for examination without the cervical vertebræ, as is almost universal.

Other questions to which this concise Memoir is chiefly devoted are—How does the third condyle arise, and has it always the same genetic signification? Professor Halbertsma has employed his great opportunities to determine these points, and concludes that it may appear in two forms; first, by the development of a central process; and secondly, in a manner hitherto unknown, by the fusion of two lateral processes, which may run inwards from the anterior ends of the lateral condyles, upon which Gruber bestowed the name of *double middle articular processes*.

First mode of origin. As well upon the lower surface of the *pars basilaris*, as upon the edge of the *foramen magnum*, and upon the *clivus*, processes in the median line may appear. But of these only the first two kinds can be developed into a true *condylus tertius*. Of this first mode of origin the author gives illustrations. Form A, pl. i, "vi," fig. 1, a skull in the Anatomical Cabinet at Leyden, is a case in which there is a conical process with a rounded top and no indication of articulation, in the middle and immediately before the edge of the *foramen magnum*, and behind the *tuberculum pharyngeum*. Form B, pl. i, "vi," fig. 2, occurs in the skull of a Bengalee, where, in the middle of the fore edge of the *foramen magnum*, there is a very small process in the form of a blunt cone. This appears to have been articulated with the point of the tooth of the *epistropheus*. The writer's collection contains a well expressed example of Form B in the calvarium of an Araucanian, No. 768. Form C, pl. ii, "vii," fig. 1, in a skull of the Leyden Anatomical Cabinet. This has a process upon the *clivus*, immediately above the fore part of the circumference of the occipital foramen, directed upwards and backwards. It is

somewhat cylindroidal. The author observes that this Form c could never give rise to a third condyle. Two examples of the Form c have been observed in the writer's collection. No. 282, the skull of "Jedoe," a Dayak of Borneo, and No. 1059, the calvarium of a Lenni Lenape, from Pennsylvania. They both vary slightly from Dr. Halbertsma's figure.

Second mode of origin. This consists in the fusion of the double *middle articular processes* of Gruber, which the author considers had better be designated *processus papillares*. They stand either wholly isolated, or are connected with the anterior ends of the condyloid processes by a bony ridge. Form d, "c," pl. ii, "vii," fig. 2. Free standing *processus papillares*, of which the author possesses only one clear example, but it is a remarkable one, in the skull of a Dutch woman of twenty-two years of age. The points of these papilliform processes do not exhibit any indications of articular cartilages. The writer's collection presents examples of this Form d with distinct free papillæ, but none of them quite so long as the papilla on the left side of the author's fig. 2. They occur in No. 311, a Tahitian, Nos. 412, 455 and 620, Kanakas, No. 1171, skull of a Chinese, and No. 1217, skull of a North American Indian. In No. 620 they are most prominent, and, as in the example figured by the author, the *processus papillares* are of unequal length. In this case both papillæ present articular extremities. Dr. Halbertsma's Form e, "d," pl. iii, "viii," fig. 1. The *processus papillares* in connection with the *processus condyloidei*. He observed three instances of this form in skulls of natives of the East Indian Archipelago. The form is scarcely in some cases to be distinguished from the last, and is common. A sub-section of Form e might here be introduced, in which one only of the *processus papillares* is developed. There are examples of it in the writer's collection, of which six may be mentioned, and it seems remarkable that it is the left process in all which has appeared. Nos. 350, 456, and 614, Kanakas; No. 289, a native of Wick, in Caithness, Sutherlandshire; No. 803, a Veddah of Ceylon; and No. 982, a Cingalese. As the highest development of Form e, the two *processus papillares* may grow together and give rise to a *condylus tertius*, which thus will have genetically quite a different signification than when it is developed out of Forms a and b. Pl. iii, "viii," fig. 2, affords an instance of this Form f, "e," in the skull of Parewa, a Buginese. In this case there is a strongly developed, irregular conical process before the *foramen magnum*, that has probably articulated with the anterior half ring of the atlas. It is connected with the two lateral condyles by prolongations to their anterior extremities. On the lower posterior surface it is smooth and has been covered with cartilage, forming an

articular surface which has continued uninterruptedly on the *left* side with that of the left condyle. The three condyles form a sort of irregular half ring surrounding the fore half of the *foramen occipitale*. By the comparison of the figures, the author has no doubt that it will be seen that this *condylus tertius* has been produced by the fusion of the *processus papillares*. He adds, that this case is singular for the mode of origin of the condyle and also for the connection of the articular surfaces. And had there existed no hiatus on the *right* side, to cut off the articular surface of the third condyle from the lateral one of this side, a form would have been produced like the single articular condyloid process of birds and scaly reptiles. The possibility of such a state of things arising from this form, in man, is proved by the example figured.

Professor Halbertsma gives these as the results of his investigations—

“1. That the *condylus tertius* occurs more frequently in inhabitants of the East Indian Archipelago than in other peoples.

“2. That the *condylus tertius*, in the rule, arises as the further development of a process occurring in the median line; but equally, although more rarely, it may owe its existence to the fusion of the two protuberances by him designated *processus papillares* of the *pars basilaris* of the occipital bone.

“3. That the condyle arising in the last named manner should be viewed as a hypapophysis.”

We have devoted some pains to make the elaborate and important Memoirs of Professor Halbertsma, on the curious question of the *condylus tertius* and on other subjects known, under the impression that the researches of so careful and scientific an observer, who has such ample resources, demand and will well repay the attention of anthropologists.

J. B. D.

MAN AND THE WORLD.*

SUCH is the title of the most ambitious work on man recently published in Germany. The first three volumes were sent into the world anonymously; but at the end of the fourth and last volume, the author condescended to divulge his name by subscribing himself C. Radenhausen. We profess ourselves profoundly ignorant of the antecedents of this writer. There is no handle to his name; he professes to be a nobody, and yet the theme he has chosen is sufficiently great to tax the noblest powers of all the multifarious faculties of which a German university is constituted. This statement will be made evident if we briefly describe the plan and the contents of the works.

And here let us state at once that our author belongs to the thorough-going sensualistic or materialistic school, which we would distinguish from the so-called modern sensational school, of which Locke is considered the father.

In Locke's philosophy sensation plays a great part, but he has also a place for reflection; there are thus two sources of ideas. Locke also speaks of a mind—a *tabula rasa*—but still a something, *per se*, upon which anything might be written. The thorough-going sensualistic school has no place either for reflection or mind, *per se*. Sensation is the only element and the only instrument of knowledge; and what are usually called the faculties of the mind, such as judgment and reasoning, and even the will, are all according to circumstances evolved from sensations, so that the mind may be considered as an aggregate of faculties which are themselves transformed sensations. Man, in short, is as Moleschott has it, simply "a product of the senses."

The first volume of the work before us is divided into the following chapters: Origin of Perceptions and Ideas—God in History—Man and the Supersensual World—the Soul and Immortality—Good and Evil.

Starting from the principle that whatever exists in man's mind can have no other origin than in the physical organisation of man according to the conditions in which he is placed, our author attempts to trace every mental operation to its ultimate root in sensation. He analyses the complex of human conceptions from their elementary constituents, and endeavours to show their germination and growth in their various stages, and their development as we at present find

* "Isis. Der Mensch und die Welt". Hamburg: Meissner, 1863, 4 vols.

them. After thus tracing the genesis of our ideas from sensual perceptions, and showing that they are neither innate nor connate, he proceeds to consider the development of the conception of God through its various phases, until it reached its culminating point, in the establishment of Christianity.

We extract the following passages from the chapter "God in History," in relation to primitive worship.

"In depriving man as we find him at present of everything which is evidently the fruit of thought, and which our ancestors in the course of thousands of years have accumulated for our benefit, we are struck with the utter helplessness of humanity in a primitive state. Man stood there naked and defenceless; he was too big to hide himself; he could neither fly nor swim, was without claws, fangs, or hoofs. He was exposed to every danger; but in his brain lived the creative force which enabled him gradually to make himself master of the earth. This power must have remained dormant for a considerable period, and could only have been developed during a long continued and severe struggle, and thousands of years must have passed before man obtained the mastery. . . . Everything leads to the presumption that the first and most widely spread form of worship was **ANIMAL WORSHIP**. It is still prevalent among barbarous nations, and the traces of it are met with in the history of all civilised peoples. Man found almost everywhere animals superior to him in strength, until after the lapse of many centuries he learned to overcome them. Hence it is explained why the oldest inhabitants of Egypt worshipped the crocodile which inhabited the Nile, and the inhabitants of the valley of the Euphrates worshipped the lion, whilst even now many African tribes adore the serpents of their country, so that even the blacks in the West India islands privately continue their serpent worship. In fact, the only difference existed in the local diversity of the animals man met with in the regions he inhabited. . . . When man had learned to overcome the animals, they no longer inspired him with the same terror, and he now adored superior powers which presented no constant shape like animals, but appeared in various forms to injure or to benefit him."

The second volume, containing chapters on Sin, Duty, Conscience, Punishment and Reward, Science and Religion, is almost entirely devoted to dogmatic theology, in which our author seems to be perfectly at home, so that if not a theologian by profession, we strongly suspect that he was on his way to become a priest when by his very studies he became converted to materialism. Of priests and priestcraft, he entertains a very low opinion indeed, as may be inferred from the following passage in the chapter on Science and Religion.

"The priests of all state-religions present melancholy instances of deceit and hypocrisy. Though well read in science, they feel bound to profess articles of faith contrary to their conviction in order to preserve their places and emoluments. This conflict is as old as the

church, and was acknowledged already by Bishop Synesius (410 after Christ) who wrote: 'The people will be deceived, you cannot otherwise manage them. The old Egyptian priests always acted on these principles; hence they shut themselves up in their temples where they carried on their mysteries. If the people had been initiated in them, they would have felt indignant at the deception. I, on my part, shall always be a philosopher in my private capacity, but a priest for the people.' Gregory of Nazianzus writes to Jerome: 'A flow of words is alone requisite for making an impression upon the people. The less they understand the more they admire. Our fathers and teachers have not always said what they thought, but what the occasion required.' And these men were priests held in high consideration, experienced teachers, and great churchmen. They expressed their opinions openly, and gave vent to principles which almost every educated priest of the present day entertains privately, but takes good care not to divulge openly." (Vol. ii, p. 387.)

The last chapter of this volume treats of God and the immortality of the soul in the form of a dialogue between father and son, which we are bound to say is a most faithful reflex of all that has been and can be urged *pro* and *con.* these momentous questions, and well repays perusal.

The third volume contains only three chapters: Love and Matrimony, Social Contracts, and the Progress of Humanity. We have no space for any extracts.

The fourth volume treats of the origin, development, and condition of the world and of mankind; of happiness and unhappiness; of a comparison of the present period with the past.

The author commences by giving a summary, chronologically arranged, of the theories advanced on the creation of the world and its inhabitants from the earliest known period down to the present time, both by profane and sacred writers, and brings it to a close with the development theory as represented by Darwin, which reduces the probable number of primordial forms of animals to some few, or if the analogy be carried further, to a single one. To this theory our author gives his adhesion both for its scientific value as well for another great advantage which, in his opinion, it possesses over the old theory, namely, that it does not require the interference of a God and miraculous separate creations.

"This is," he observes, "the weak point of the old theory; for it becomes thereby the slave of theology, of blind faith, and imposes upon itself the duty of defending other articles of faith in order to obtain the support of the priests. The new theory does not require such a slavish alliance, for it reduces all life to self-development. The gaps at present existing in the scale of beings will be filled up by the progress of science. Darwin and Kemp, certainly, do not exclude a creator; but this was evidently a compromise, in order not to be

looked upon as atheists by their Bible-believing countrymen. Had they been Germans or Frenchmen, they would not have required thus to guard themselves from danger."

Whilst we consider this last assertion as perfectly gratuitous and uncalled for, we may as well remind the author that he commits a great blunder in ascribing the authorship of the *Vestiges of the Natural History of Creation* to Mr. L. Kemp. We have a strong opinion as to who is the real author of that well known work. The mistake probably arose from the fact that Mr. Lindley Kemp has written *A Natural History of Creation*, but not the "*Vestiges*," etc.

Philosophers of this school, of course, not only reject the theory of the degeneration of man from a higher to a lower state, and contend not merely that man in a primitive state was rude and barbarous, but that he emerged from the animal group standing next to him in the scale of creation. On this point our author makes the following observations :

"The period when the human being first appeared upon the earth will not easily be ascertained, inasmuch as the transition from the ape to man must have been so gradual, that, were there remains of him, skulls for instance, still found, they could not be distinguished from ape skulls, especially as even these skulls present many differences. If such transitional skulls are found at all, they will probably only be found at the equator, where the development of the earth was favoured by light and heat, and where even at present the large apes live, who stand nearest to man. It does not necessarily follow that man descends from the large apes; for the separation must be of a remote date....Man has always been an exterminator of his own race. The stationary peoples of the present time die out under our own eyes. Numerous peoples have become extinct; and we may conclude that by the extermination of the lowest types of humanity the gulf between man and the ape has become widened.

"Neither will it be ascertained when the separation between man and ape became sufficiently distinct to prevent interbreeding. Man may have already existed when the atmosphere had only three-fourths of its present density, as already then there existed animals and plants near the equator, so that man could support himself; and even now he can live in such a rarefied atmosphere (in the Andes). But the existence of such a rarefied atmosphere in the plain of the equator leads further back than the probable age of the strata in which human remains have been found. We may therefore assume that the parent stem of mankind still existed at the time of the $\frac{3}{4}$ density of the air.

"This much is certain, that man commenced his further development from a very low degree; for the most degraded peoples of the earth stand much nearer the ape than to the highest developed European, so that we may conclude that still lower but exterminated races of mankind may have existed. From such a low condition has hu-

manity risen to its present position. . . . In the lowest stage we find man a naked, helpless, omnivorous creature, wandering about, chased and killed by beasts of prey, whom he recognises and worships as superior powers. In a higher stage, men combine in hordes, and to secure their lives war with animals, or other tribes of men. They then become nomadic shepherds, and abandoning animal worship, adore other superior forces (the elements, storms of the desert, sea, sky) which by their imagination they transform into El, Elohim, Moloch, Poseidon, Indra, Theos, Zeus, Deus, Tind, Bog, etc. Then they become settlers, agriculturists; increasing in population and culture, they worship the all-fertilising sun, Horus of the Egyptians, Mithras of the Persians, Adonai of the Chaldeans and Israelites, Apollo and Adonis of the Hellens, Balder of the Northerns, until the sublime starry heavens (El Zebaoth) become the object of worship, from which the supreme beings of the Christians, Mosaites, and Mohammedans, were developed, and man formed his idea of God." (Vol. iv, page 536, etc.)

That the author has not altogether achieved the object he had in view is not surprising, for that would require a combination of faculties few possess. From the extracts given, the reader must have already perceived that there is no novelty in the doctrines themselves, nor has the author, by his manner of stating and defending them, impressed upon his work the stamp of originality. We nevertheless readily admit that Mr. Radenhausen is a man of considerable talent and industry, and that his work must have involved a great outlay of labour, displaying throughout a great amount of varied, though not, perhaps, of very profound and exact knowledge. The author, moreover, evidently possesses a certain power of dealing with phenomena in the mass. His style is on the whole easy and unpretending; rising, however, when the occasion requires it, to a certain eloquence. We must, moreover, do this author the justice to say that his work is free from coarse expressions, from that total disregard of the opinions which the great mass still hold sacred, and which disfigures most works issued from the school to which the author belongs. His infidelity is never obtrusive, nor does he ever forget his character as an unimpassioned expositor. Whatever objections may be taken to his doctrines, there can be none to his mode of stating them. The work does not seem as yet to have attracted much attention in Germany; that it will do so in time, and leave a mark, we have little doubt. We do not complain of the bulk of this work, for its scope is such that it might easily be extended to ten or more volumes; but what we decidedly reprobate is the want of an index in an elaborate work of 2250 pages. If authors knew how, by depriving the critic of such a help, they sour his temper, they would be more chary of provoking his wrath by such an unpardonable omission.

ON THE PROSPECTS OF ANTHROPOLOGICAL SCIENCE AT THE BRITISH ASSOCIATION OF 1865.

THE eyes of the scientific world are beginning to turn with interest towards the coming meeting of the British Association in September. Organised as that Association avowedly is for the "advancement of science," and purporting to be the centre of scientific progress in this country, it may appear anomalous that an article should be written to advocate the cause and explain the position of a science which, like that under consideration, is of the utmost intrinsic value, and which embraces many of the most interesting and important subjects of the day. The necessity of such a course is, however, imperative, from the fact that the science of anthropology, although widely recognised and cultivated in this country at the present time, as it has been for a considerable period amongst our continental neighbours, has hitherto failed to secure a position in our national scientific congress.

So far as the governing powers of the Association are concerned, we conceive that a vast amount of misapprehension still exists with respect to the aim, objects, and claims of anthropological science. On two previous occasions it has been our duty, in reporting the meetings of the British Association, to comment on the efforts which have been made to induce the authorities to give that recognition to anthropological science which we claimed for it on the ground of its extended and increasing cultivation in this country, and of its vital importance to all who aspire to be seekers after truth, and lovers of mankind. This question will be again agitated at the coming meeting, and it may be well to reconsider calmly beforehand the objections which have been already raised to the favourable reception of anthropology; to examine how far those objections have been based on purely scientific grounds; to glance at other conflicting interests, and determine to what extent they have already, and are likely again to influence prejudicially the cause of anthropology with the directors of the Association; and, finally, to consider what will be the line of conduct pursued by the Anthropological Society (who may be considered as the exponents of anthropological science in England), in the event of continued rejection by the British Association.

It may be remembered that at the Newcastle meeting in 1863, the science of anthropology first sought recognition by the Association; on that occasion the anthropologists readily assented to join *pro tem*. Section E—the one devoted to geography and ethnology. We must call to mind, however, that this took place before the question as to

the place to be permanently occupied by anthropology had been discussed by the Association, and before any practical trial had been made as to how far this science was adapted to walk hand in hand with geography and ethnology. The result, however, of the meeting at Newcastle tended to show that this, as a permanent arrangement, would be impracticable; this was proved on more than one occasion at that meeting by the difficulty of assigning a place to papers of admitted value and importance, but which were alike ineligible for Sections C, D, or E. Such, for example, was a paper on a Skull found at Amiens, sent by the author in the first instance to the Geological Section, but rejected on the ground that no cognisance could be taken of remains discovered in the historical period, the committee requiring that the skull should be first proved to Section C to have been found in undisturbed gravel. The paper was next sent to the Ethnological Section, where it was refused on account of the skull having been found in a deposit of too great antiquity. The physiological sub-section to which the unlucky paper was then forwarded having likewise declined to receive it, the president of that section at length attended the committee of Section E in person to advocate the admission of the paper into that section. This is not the only instance of a paper having been passed from section to section to the great annoyance of the author, and to the prejudice of science generally.

In the interval of the meetings of 1863-4, the attention of anthropologists drawn to the necessity of some fresh arrangement, the great increase of students of anthropological science, and the promise of numerous papers for the Bath meeting, on subjects scarcely suitable for any existing section, although of great scientific value and merits, induced the Anthropological Society of London to ask for a separate section to be allotted to anthropology at the ensuing meeting of the British Association.

This proposal, made last year at Bath for the recognition of anthropology in Section E, was negatived on grounds upon which, to say the least, the boasted desire to "advance science" seemed to have but little part. The puerile objections which were urged against the name "anthropology," and the persistence in not drawing any distinction between the sciences of anthropology and ethnology, were duly commented upon in the reports of the last year's proceedings at Bath which appeared in the *Anthropological Review*, and it is not our wish to draw further attention to the subject with any other object than that of securing at the coming meeting a fair and unprejudiced consideration of our claims. With this view, we are compelled to raise the veil which conceals the ungenerous motives of a faction in

the Ethnological Society, desirous of influencing the General Committee against granting a separate section to anthropology. It was chiefly owing to the representations of the president and vice-presidents of the Ethnological Society, and their objection to admit anthropology into Section E, that the proposal in question was negatived.

This idea being now abandoned, and an entirely new section having been asked for the comprehensive and increasing study of anthropology, ethnologists can have no reasonable motive for the rejection of the proposal to be brought forward at Birmingham. We are, nevertheless, credibly informed that we are again to expect a most strenuous opposition to our motion, and this on grounds which will at once show that the real motive for desiring our exclusion from the Association, is simply jealousy of the increasing popularity of our science and number of our adherents. The last year's arguments are, we understand, to be abandoned; the ethnologists are now alarmed that the British Association will be overburdened with sections. They recommend that some of our papers should be handed over to the Physiological Sub-section, and others to any section that may condescend to receive them. As no purely physiological paper is ever allowed to be read before the Anthropological Society, we scarcely see which of our papers would sue for admission to a sub-section devoted solely to physiology; while the fact that, at the Bath meeting last year, papers were read simultaneously in Sections C, D, and E, and Sub-section D, on human skulls and on human works of art found in pre-historic localities, might suggest to the heads of the Association the desirability of centralising these cognate subjects before one common audience.

On no scientific grounds can ethnologists continue their opposition. If the objections of last year were sincere, let them by all means adhere to the arguments which they then used, and again convince the General Committee that anthropology is but another name for ethnology, and that a society numbering six hundred members, and which represents a science largely cultivated throughout the civilised world, is unworthy of a position, or even of recognition, by the Scientific Congress of Great Britain. But let them not, in the name of honesty and the common love of truth which scientific men profess, resort to a fresh series of petty tricks to gain their end—and that end the poor triumph of debarring an allied science (on their own interpretation of the relations between the two sciences) from contributing its quota to the scientific knowledge of the day.

Sadly degenerate must science be in this country, when any so-called scientific body acts in this manner from some vague idea that the recognition of a kindred science, even though embracing a far wider sphere,

would injure them either as a society or as the exponents of ethnological science, and be of some great advantage to the Anthropological Society, which they persist in considering as a rival. We must assert our belief that such a course will only find favour with a party amongst the Fellows of the Ethnological Society. Many amongst them are, like their brethren of the Anthropological Society, in the pursuit of truth, and far above the small meanness of acting like the "dog in the manger"—unable to grasp a vast and ever increasing subject themselves, and yet unwilling to share it. True lovers of science will rejoice at every fresh success achieved by their scientific brethren; and we anticipate that some of the leading members of the Ethnological Society will be averse to the ungenerous opposition, by others of their body, to the admission of the anthropologists as a separate section at the British Association. The "Father of Ethnology", the accomplished Dr. Prichard, first advocated the cause of that science at the British Association, when it held only a subordinate position in Section D, procuring for it admission into Section E. Now, however, the constant advance which has been made by other kindred sciences, calls loudly for an extended field of operation. Two years since, the Rev. Dr. Hincks protested against philology being included under Section E; and similar objections have been raised by others with respect to many important subjects which are connected more or less with the study of mankind, and have been driven to Section E, although neither welcome, nor, indeed, appropriate in that section. Nor would the present popularity of Section E be likely to suffer by the desired new section: on the contrary, it would chiefly withdraw the heavier and more technical papers from Section E, in order that they should be discussed by the newly created section. Such would be the many purely anthropological papers relating to the physical differences in mankind; physiological questions relative to man; and even the science of language, etc. None of these, although of great value and importance to the student of anthropology, can be considered as subjects of general interest, or to have great claims on the attention of a section so universally popular, and commanding such large and varied audiences, as Section E.

Although desirous to bring forward every argument to show the necessity for a new section devoted to the general interests of science, to the advantage of the Association by the avoidance of crowding and confusion, and to relieve the ethnological section in particular from unwelcome and inappropriate papers, anthropologists are prepared to hold their ground against every opposition that may be offered. We understand that the Council of the Anthropological Society have already sent in an address to the President and Council of the British

Association, asking for their support in the application about to be made for a new section. Professor Phillips has repeatedly declared that the rules of the British Association are capable of any modification or extension demanded in the interest of science. Already the non-recognition of anthropology in our National Congress has been the subject of comment and animadversion by illustrious foreign professors of that science; and their views have been endorsed by some of our contemporaries in this country.*

Since its foundation, two and a half years ago, the Anthropological Society of London, under the guidance of its devoted and energetic officers, has achieved a success unexampled in the history of scientific societies. Numbering at the present time nearly 600 Fellows, the Society has already published six volumes of translations from foreign works on Anthropology, one voluminous volume of *Memoirs*, and ten numbers of the *Journal*. It has likewise appointed correspondents in almost every part of the known world, and is forming, as funds, &c., permit, a Library and Museum of Anthropology, which will eventually be of the utmost value to students of mankind. The impetus given to the study of Anthropology in this country has not been without its results elsewhere, if we may judge by the establishment, within the past year, of sister societies at Madrid, New York, Rome, and Melbourne. At Hanover, it is in contemplation to devote a special section to Anthropology at the annual meeting of the German Association of Naturalists. We should indeed feel ashamed of the obstinate *John Bullism*, which alone can continue to exclude this science from a recognised position in our English National Scientific Congress, but now that the authorities are in full possession of our claims to their consideration, and our grounds for desiring an independent position in the association, we cannot anticipate such a result. Should, however, so fatal a mistake be made by the ruling powers of the association as to deny this position to Anthropology, now so temperately urged upon their notice, let it not be thought that the Anthropologists will be silenced, and their science crushed under foot. We are informed that it has been agreed by the Council, and publicly announced by the President of the Anthropological Society, that, in the event of refusal to give the Society a separate section at the British Association, the committee are prepared to form an independent Anthropological Congress, at which we are induced to believe that several illustrious foreign associates will assist.

Such a step is not without a precedent in the history of the British Association;—the medical faculty has withdrawn, and formed a separate

* "Spectator", March 18th, 1865.

and independent association, while the "Social Science Congress" is but another offshoot from the British Association.

We shall not now discuss the advantages which Anthropology would derive from such a course. In scientific as well as other bodies, "union is strength," and Anthropologists have no wish to sever themselves from the British Association unless compelled to do so. On the other hand, should it become inevitable, they have nothing to fear from such a step, and they are prepared, in such an event, to exert their utmost to secure success.

On every Fellow of the Anthropological Society we would urge vigilance and unanimity of action; and we would invite every friend of Anthropological Science to bring his individual influence into operation to vindicate the reality and nobility of the science, and to urge its claims to admission to an honourable position at the British Association.

Miscellanea Anthropologica.

Foundation of the Anthropological Society of Spain. The 5th of June, 1865, witnessed an important event in the history of Anthropology; for on that date the Anthropological Society of Spain was formally inaugurated, under the auspices of Don Matías Nieto Serrano, whose presidential address is before us, as well as the report of a speech delivered by the secretary, Don Francisco de Asís Delgado Jugo. Our space this quarter will only permit us to offer a brief retrospect of the history of this society; and in future numbers we shall devote a portion of our space to the reports of its proceedings. The Anthropological Society of Spain was initiated by two medical men, who communicated their ideas to a few mutual friends, who, receiving them with enthusiasm, united to elevate the society to the position it now holds. "The idea," Don F. Delgado Jugo says, "was in the mind of all; all felt the want of one free and completely unfettered central organisation, wherein should be studied and discussed the natural history of man, and all the branches of human knowledge which have relation to it." The worthy secretary, with great modesty, proceeds to say that the project owed its origin to the labours of Don Pedro Gonzalez Velasco and himself. At a private meeting in his house, on the 6th November, 1864, the project was further discussed, and a committee appointed, of the above named and five other gentlemen, to arrange the details of the society. A second more numerous meeting took place on the 27th November, 1864, when it was determined to petition the Queen of Spain for the

governmental leave to carry out the objects of the society. This leave was accorded by a government order of the 16th March, which recognises in unequivocal and striking terms the advantages of the science of Anthropology. The project having been communicated to the Anthropological Societies of Paris and London, was received with great approbation. The conduct of Don Gonzalez Velasco deserves especial notice. Not content with having initiated the idea of the society, he has presented to it one of the rooms of his own house to be used as the society's museum and library. Amongst the ranks of the Spanish society we perceive persons of the highest rank in the government, and students of nearly every department of human knowledge. The sixteenth rule of the French society has been adopted by them—"The Society interdicts all discussion foreign to the object of its institution"; and the secretary protests, with vigorous and characteristically Castilian objurgation, against any other objects being attributed to it than the advancement of pure science. The addresses of both the president and secretary conclude with a sketch of the objects to be pursued in the investigation of anthropological science.

Visit of a Commission from the Anthropological Society of London to the Shetland Islands. It will gratify all who take an interest in anthropological and archæological science to learn that, by the favour and munificent aid of the Earl of Zetland, a commission, appointed by the Council of the Anthropological Society, is to start from London on the 23rd inst., to explore the Shetland Islands, under the personal direction of the President of the Society. Any information relating to the earlier migrations of men from Norway, Northern Scotland, or elsewhere, to the Shetland Islands, will, we believe, be gladly received and suitably acknowledged in the *Memoirs* of the Society, if addressed to Dr. Jas. Hunt, F.S.A., Pres.A.S.L., care of T. Edmonston, Esq., Bunness, Unst.—*Scotsman*, June 14th. The *John O'Groats's Journal*, of the same date, says: "We are glad to learn that the explorations conducted last season by Thos. Edmonston, Esq., of Bunness, at the Muckle Heog, in the island of Unst, Shetland, have borne such good fruits that an exploring expedition, anthropological and archæological, has been organised under the direction of the President of the Anthropological Society of London, Dr. James Hunt, F.S.A., and with the liberal aid and support of the Earl of Zetland. The expedition will proceed to Shetland immediately, and remain there for some time. We trust that they may be able also to give Caithness a few days in passing. Attached to this exploring committee of the Anthropological Society, there is also a practical geologist, educated at the School of Mines, Mr. R. Tate, F.G.S., who will fill up odd times not devoted to anthropological investigations by observing the as yet unexplored mineral wealth of the islands."

We insert the following extract from a letter recently received from Dr. Broca of Paris:—"I have read with the greatest interest the results of the researches of Dr. Hunt on the words ethnography, ethnology, and anthropology. The contest which your Society has commenced before the British Association is truly very curious. You

will certainly win, if not this year, at least next one; and when all this shall have passed away, no one will ever believe in the historical reality of this resistance.

"I have seen in the last number of the *Anthropological Review*, that two anthropological societies have been founded—at New York, and at St. Petersburg. We shall applaud the good news by acts and words. But my friend Vogt, who was present at our meeting yesterday, appears to think that the news of the foundation of the Russian society has been anticipated. There is already in Germany an important anthropological movement; it is attempted to found an *Anthropological Journal*, and to organise, under the form of a Congress, two or three anthropological meetings annually, in the various principal towns of Germany. The project of the foundation of a German society has, he thinks, some connection with this; and, as Vogt and some other anthropologists have to meet Von Baer at Frankfurt, on the 8th of June, for this purpose, it is probable that a decision can then only be arrived at."

At the annual public sitting of the Paris Anthropological Society, some important papers were read. The President of the Society, M. Pruner-Bey, announced a curious work, which has been published in Spain, by M. de Prado, relating to the much-controverted question of the contemporaneity of man with extinct species. The conclusions of M. de Prado, adopted by M. Pruner-Bey, tend to prove that the presence of man in quaternary strata is henceforth placed beyond dispute. Other papers of great interest, which I regret that I cannot at present notice, were read at this sitting, which was attended by a very select audience. The Paris Anthropological Society has only existed since 1859; nevertheless, it is at the present moment the most flourishing private scientific society to be found in France, and the public utility of its character was last year acknowledged by the government. Anthropology, that vast science whose importance is daily increasing, is held in high honour in France, where it has produced numerous and important works.

An interesting and readable article appears in the third number of our new contemporary, the *Fortnightly Review*, from the pen of Professor Huxley, "On the Methods and Results of Ethnology". Although there is much in this article from which we entirely differ, we must congratulate the author on the improved tone and manner in which this subject is treated. We can only find room at present for the following extract:—

"According to the monogenists all mankind have sprung from a single pair, whose multitudinous progeny spread themselves over the world, such as it now is; and became modified into the forms we meet with in the various regions of the earth, by the effect of the climatal and other conditions to which they were subjected.

"The advocates of this hypothesis are divisible into several schools. There are those who represent the most numerous, respectable, and would-be orthodox of the public, and who may be called 'Adamites', pure and simple. They believe that Adam was made out of earth

somewhere in Asia, about six thousand years ago; that Eve was modelled from one of his ribs; and that the progeny of these two having been reduced to the eight persons who were landed on the summit of Mount Ararat after an universal deluge, all the nations of the earth have proceeded from these last, have migrated to their present localities, and have become converted into Negroes, Australians, Mongolians, etc., within that time. Five-sixths of the public are taught this Adamitic monogenism, as if it were an established truth, and believe it. I do not; and I am not acquainted with any man of science, or duly instructed person, who does.

"A second school of monogenists, not worthy of much attention, attempts to hold a place midway between the Adamites and a third division, who take up a purely scientific position, and require to be dealt with accordingly. This third division, in fact, numbers in its ranks Linnæus, Buffon, Blumenbach, Cuvier, Prichard, and many distinguished living ethnologists.

"These 'rational monogenists', or, at any rate, the more modern among them, hold, firstly, that the present condition of the earth has existed for untold ages; secondly, that, at a remote period, beyond the ken of Archbishop Usher, man was created, somewhere between the Caucasus and the Hindoo Koosh; thirdly, that he might have migrated thence to all parts of the inhabited world, seeing that none of them are unattainable from some other inhabited part, by men provided with only such means of transport as savages are known to possess and must have invented; fourthly, that the operation of the existing diversities of climate and other conditions upon people so migrating, is sufficient to account for all the diversities of mankind.

"Of the truth of the first of these propositions no competent judge now entertains any doubt. The second is more open to discussion, for in these latter days many question the special creation of man: and even if his special creation be granted, there is not a shadow of a reason why he should have been created in Asia rather than anywhere else. Of all the odd myths that have arisen in the scientific world, the 'Caucasian mystery', invented quite innocently by Blumenbach, is the oddest. A Georgian woman's skull was the handsomest in his collection. Hence it became his model exemplar of human skulls, from which all others might be regarded as deviations; and out of this, by some strange intellectual hocus-pocus, grew up the notion that the Caucasian man is the prototypic 'Adamic' man, and his country the primitive centre of our kind. Perhaps the most curious thing of all is, that the said Georgian skull, after all, is not a skull of average form, but distinctly belongs to the brachycephalic group.

"With the third proposition I am quite disposed to agree, though it must be recollected that it is one thing to allow that a given migration is possible, and another to admit that there is good reason to believe it has really taken place."

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RACE IN HISTORY.

ONE of the grandest lessons which we acquire from experience is patience—ability to wait for the ripening of results in due season. Anthropologists must not be in a hurry. They are only laying the foundation, on which another and a later age may rear an appropriate superstructure. Their labours have not yet obtained due recognition even from men of science, and it is no wonder, therefore, that men of letters utterly ignore them. The scholar, as such, is of course a man of books. It is his vocation to study the *written* records of the past, to familiarise himself with the thoughts and the deeds of men, in so far as these have been recorded in literature and embodied in the volumes which constitute his library. With *facts* lying on the outside of books he has but little concern. Only yesterday he learned that archæology is an older leaf in history than the earliest inscribed chronicle. And he has yet to discover that anthropology underlies even archæology. As we have been accustomed to state the truth without reservation, let us say at once, that scholarship hitherto has been special to the point of narrowness. Familiar with the thought-forms of Europe and Western Asia, it has regarded these as an effective expression of the cultured mind of humanity. Only quite recently has it extended its views, by embracing the productions of the eastern Aryans, and in the striking affinity of their mythology and philosophy to those of Greece, has become dimly conscious of a racial element in this unmistakable relationship of peoples, so historically dissevered and so geographically isolated.

Even with this extension, however, the intellectual outlook of the scholar is still solely and essentially Caucasian. Of other modes and phases of mental existence, he was and is practically ignorant. Of the vast and venerable Mongolic civilisation of China and Japan, or the American culture of Peru and Mexico, he knows nothing, but that they differ in *degree* from the more effectually developed civilisation of Greece and Rome, of France and Britain. That they are fundamentally different in *kind* is a truth which has yet to dawn upon him. That they originate in alien elements and rest on another ethnic basis, and tend in their process of internal growth and unfolding to divergence from, rather than assimilation to, the forms of culture appropriate to a Caucasian area, is a discovery, which, however well known to men of science, is yet but very imperfectly appreciated by men of letters. In a sense, it has not yet found its way into *books*. It is a truth still on the outside of the literary arena.

The origin of these literary prejudices is not far to seek. It arises from the fact that the culture of the scholar is still mainly, and we may say essentially, dogmatic, not scientific. He is accustomed to accept assertions rather than seek for proofs, and prefers abiding by "the law and the testimony" to entering on a course of inquiry which may unsettle his established habits of thought, and land him in a region where his old masters would no longer serve as guides for his pilgrimage. He is still, in short, what he was originally, a man of authority and tradition, whose proofs must be written, and whose facts lie on his shelves. In saying this, do not let it be supposed that we undervalue scholarship, even as an instrument for progression. Of its invaluable labours in the sphere of criticism and exegesis it is impossible to speak too highly. Here it has done its work most nobly, and we were worse than ingrates did we fail to acknowledge our indebtedness to it in this department of inquiry. But it is still very imperfectly posted up in *facts*, and, what is of far more importance, very inadequately impressed with their value.

Now, do not let it be supposed that these remarks are dictated by a spirit of hostility to the literary profession. They are simply a statement of things, which every student may verify for himself. And our object in bringing these deficiencies of the scholar so prominently before the public, is not to injure him or diminish the range and force of his legitimate influence, but rather to induce him to supplement his present deficiencies by a more liberal and expansive course of study, calculated to raise him to a level with the foremost minds of the age in those other departments of culture which, though at present foreign, are by no means alien to his own.

Of all the provinces of scientific inquiry, that which should most

interest the scholar is undoubtedly anthropology. It has to do with his especial subject matter, man, not only in reference to his bodily qualities, but also his mental attributes. It endeavours to discover, not only the specialities of his physical structure, but also the characteristics of his intellectual constitution. It dwells not merely on the colour of his skin or the shape of his features, but on his habits and ideas, his manners and morals. It contemplates his religion, it investigates his philosophy, it observes his art and estimates his literature. No amount of culture, no advance in civilisation raises man above its investigations, and no degree of savageness sinks him below them. It is not contented with the present, but surveys the past, and this too with a gaze so piercing, with instruments so powerful, that in the area of time which it covers, the historic age sinks, as regards duration, into utter insignificance. The indifference of men of letters to ethnology, under its olden form, was perhaps not only explicable but justifiable; but we feel assured that the science of man under the grander and more expansive form which it has now assumed has only to realise, even in part, its lofty aspirations, and its universal recognition as one of the noblest of the sciences, cannot be much longer delayed.

We have been led into these remarks by seeing the grave misapprehensions into which even Buckle, under many aspects the most advanced mind yet devoted to the composition of history, has fallen, in consequence of his utter ignorance of anthropological facts. With immeasurably the highest conception yet developed of what the historian should be, he nobly endeavoured to realise this *beau idéal*, and in his own work to reach the lofty standard of perfection existing in his soul. To say that he has even remotely approached to this, in the merely introductory fragments, which are all that remain of his vast attempt, would be a piece of literary flattery that he would have been the first to disown. But with all their errors and shortcomings, and, as we have intimated, they are neither few nor small, these fragments have given a development to the historical idea, have furnished the historian of the future with a conception of his own proper attainments and of the work which he ought to accomplish, such as had never previously dawned on the human mind. It was, indeed, a conception that, in its entirety, could not by any possibility have been formed in a previous age, for it implies the mastery of subjects only now in the process of investigation.

The distinctive feature of Buckle as an historian is, indeed, his clear perception of the necessity for scientific as well as literary attainments on the part of him who would treat worthily the great theme of human progress. He had discovered the great truth that

history cannot be written solely from books, and, as a consequence, he distinctly saw that history is yet unwritten. He endeavoured in part to supply this want. That he failed was due in some measure to his premature and ever to be lamented death, which cut him off, if not in the very blossom of his youth, at least in the pride and strength of his intellectual manhood, with a life of magnificent preparation, apparently just ripening to its appropriate and abundant harvest. But he failed also from the narrowness of his views and the deficiency of his attainments, which would have rendered his success imperfect, even though he had reached to the longevity of Methuselah. This we know is saying much; for in condemning him we necessarily, by implication, pass sentence on all who are inferior to him in breadth of culture and expansiveness of outlook; and this, alas! does it not embrace all who have hitherto devoted themselves to the sublimest province of literary labour?

Buckle, as we have said, admitted the necessity of scientific knowledge to the historian, and nobly endeavoured to qualify himself for the composition of his great work by a considerable amount of discursive if not profound study in this direction. But unfortunately he did not know that anthropology is a science. Nay, falling into the error of John Stuart Mill, he roundly declares, in the second chapter of his first volume, that "original distinctions of race are altogether hypothetical." And then corroborates this random assertion by a quotation from the former's *Principles of Political Economy*, to the effect that "of all the vulgar modes of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences." If this be not an instance of the blind leading the blind, and as an inevitable result, their tumbling into the ditch of error together, we have yet to learn where an apt illustration is to be found. Under such tutelage, at least in ethnic matters, it is no wonder that poor Buckle occasionally lost his way, confounding external influences with inherent capacity and susceptibility, the force of outward circumstances with the aptitude and receptivity of the race subjected to their action. As a result of this grave misconception, indeed, it is not too much to say that his whole work is based on an egregious error, on the stupendous fallacy of organic and intellectual equality, if not identity, among the various races of mankind. These, we admit, are rather bold and sweeping assertions, which should not be uttered without sufficient warrant, or accepted without adequate proof. And at the risk, therefore, of wearying our readers, we will enter somewhat more at length into this important subject, which has a direct bearing, as they cannot fail

to have observed, on the entire question of anthropology, its claims on the public and its position in science.

As of all the departments of literature, that of history would seem to be the one in which a knowledge of anthropology is the most necessary, so of all the provinces of history, that of civilisation would appear to be the one in which an acquaintance with the specialities of race is the most desirable. Without it, indeed, one half the elements of the problem under solution are excluded, namely, those which attach to the subject matter. Circumstances, whether of soil or climate, the aspects of nature or the supply of food, are the conditions of existence, but racial type is the material on which they have to act, and unless you understand the latter as well as the former, your explanations cannot fail to be imperfect and your hypotheses unsatisfactory. But of all this Buckle was so childishly ignorant, that he attributes everything to the circumstances and nothing to the type, and as an unavoidable result often contradicts himself and stultifies his own reasoning, to say nothing of his going directly in the face of well ascertained and universally admitted facts in connection with either the past or present state of the grander divisions of mankind. Thus, in treating of religion, he attributes diversities of faith wholly to the different aspects of nature, which tend to produce sentiments of fear in tropical countries, where she is overwhelmingly powerful, and feelings of love and admiration in the temperate zone, where her phenomena are more manageable and moderate in their character. And he ends by selecting "India and Greece as the terms of the comparison," that is, as the mythologic antitheses of each other. How a man, otherwise so well read, should have been ignorant of the fact that the mythology of the two countries is fundamentally identical, and that it originated in a comparatively northern and temperate region, it is now impossible to say. But independently of this obliviousness, to use the mildest possible phrase, of all that philological research has revealed of the connection between Greece and India, what must we think of an author professing to write the history of civilisation, embracing, of course, the development of the religious idea, while ignorant of the distinction between the pantheism of the Aryan and the monotheism of the Semitic races. To say nothing of the contrast between either of these exalted forms of belief and the Shamanism of the Mongol or the Fetishism of the Negro. The result of this blank ignorance of all the requisite facts for a due illustration of the subject is, as may be supposed, the twaddle of a schoolboy's essay rather than the gravity of an historian's dissertation.

He falls into a similar error in reference to civilisation generally;

that is, attributing it wholly to external circumstances. This, for instance, is the style in which he discourses on Egypt: "The civilisation of Egypt being, like that of India, *caused by the fertility* of the soil": and, from this hopeful commencement, proceeds in a like strain of confident superficiality to the termination of his flowing thesis, utterly ignorant of the almost fathomless depths over which he is so easily gliding. He begins with an assumption which, though based on tradition, is far from indisputable; namely, that civilisation *certainly* commenced within or near the tropics. Now, we know that the Aryan culture of India descended over the Himalayan mountains from the north-west; while there is ample monumental evidence that the civilisation of Egypt was *imported*, the builders even of its pyramids being acquainted, not only with the hewing of stone, but with many of the higher principles of architecture. Of the increasing archæological evidence that the cyclopean architecture of Greece and Italy antedated the most ancient monuments of Egypt, it is obvious that Buckle was entirely ignorant. As we have said, it was a piece of information not yet fully embalmed in books—his books; and of course, as a necessary result of this ignorance, the suspicion had never dawned upon him, that the *beginnings* of Aryan culture are to be sought in Europe, not Asia, the Persian and Indian civilisation of the latter being, on this view, but a prehistoric colonial extension from the former.

But, granting that as a mere scholar he might be pardonably ignorant of such dawning archæologic and ethnic truths, we find him falling into other errors, no less fatal to his pretensions as the competent historian of civilisation. Thus, for example, he speaks without hesitancy of the Egyptian as an *African* civilisation. Now, of course, this is literally true, in a *geographical* sense. But in what other? Then he attributes the superiority of Egyptian over any other form of African civilisation, simply, as we have said, to the greater fertility of its soil. As if, throughout nearly the whole of Nigritia, there was any want of fertility. Why, speaking generally, it is the most barbarous parts of Africa, those south of the Sahara, that are naturally the most productive; just as, in South America, it is in the vast plains bordering on the Amazon and the Orinoco, where the prodigality of nature is almost overwhelming, that the Indian tribes are the lowest. If there had not been men in Egypt of a higher type than in Negro-land, the delta of the Nile would still have been a pestilential and unproductive swamp. Let it be distinctly understood, that it was not her soil, but the men who tilled it, that made Egypt a wonder among the nations. And let it also be fearlessly announced by anthropologists, that a purely Negroid type, though they had

possessed twenty Egypts for twice ten thousand years, would never have raised the magnificent piles of Luxor and Carnac, of Dendera and Edfou. Nor would they in a million of years, even under the most "favourable conditions", have realised the greatness of Memphis, or the grandeur of Thebes. Again, let it not be supposed that these assertions are too bold, or the preceding remarks too severe. The time has now assuredly come, when the accepted fallacies of a learned barbarism should succumb to the clear demonstrations of inductive science, and racial facts be championed to their appropriate place, as among the most important and reliable data upon which history, more especially that of the earlier ages, can be based.

Prejudices are most expensive guests. Their cost to all men is considerable; but to the intellectual labourer it is incalculable. They shut out the very light that he wants; they exclude the very knowledge of which he is in search; they render him blind to the objects of his fondest desire, and often incapacitate him for those very undertakings in which he would otherwise have achieved deserved success. It was thus with Buckle. It was his life's ambition to be an historian; and yet it was his perverse fate to despise and reject a branch of knowledge absolutely essential to the fulfilment of his desires. Thus, in the matter of Egyptian and Indian civilisation, his naturally fine insight, amounting often to the lightning intuition, or, as we say, "inspiration" of genius, enabled him to perceive their profound correlation; yet it never struck him to inquire why the influence of the former has left no perceptible trace on the Negro mind, while that of the latter has moulded and is moulding the religious faith of the Mongol to its profoundest depths, through Buddhism. He was satisfied with the ultimate fact, that Nigritia has retained its Fetishism almost intact to our own day, while Tartary, nearly to its remotest bounds, has almost wholly surrendered its primitive Shamanism in favour of the Aryan faith of its southern neighbours. And why was he, the professed historian of civilisation, so unwisely indifferent to such momentous facts in the progress of humanity? We answer, because he was ignorant of the grander capacity and greater receptivity of the Mongol as compared with the Negro, and by his foolishly nurtured prejudices, shut himself out from the very knowledge which would have furnished him with a key to this, and a thousand other historical phenomena, lying in his very path and waiting for a lucid explanation, had he been only competent to afford it.

In composing a history of civilisation, nominally in England, but really of the world, it assuredly behoved the historian to show why,

even in primitive times, the Caucasian nations and empires were contradistinguished from the Mongolian by a religion, philosophy, literature, art, and social constitution, all of an order so much higher, of a character so essentially superior, that it indicates their being the product of a nobler race. Why have the Mongolian empires of China and Japan accepted Buddhism from India, without producing the shadow of a shade of influence in return? And how is it that, in the prolonged period of their stagnant civilisation, they have never developed a poetic mythology like that of the Aryans, or a sublime monotheism like that of the Semites? And why have they not evolved that subtlety and profundity, that richness and diversity of thought, which characterised the schools of India three thousand years ago? And why is their literature still devoid of that refinement and elegance, that splendour and power, which, from the Ganges to the Thames, has for five thousand years attached to the productions of the Aryan race, whether composed in Sanscrit, Zend, Greek, Latin, Italian, Spanish, French, German, or English? And why is a Chinese pagoda the only response to the Rameseion, the Parthenon, and St. Peter's? Why is chivalry utterly unknown in the farther East, and gallantry perfectly inconceivable? And the reply of the anthropologist is, that the Mongolic type is utterly incapable of producing these things, at the most only susceptible to their modified action, as alien influences received from without. And in confirmation of this inherent inferiority of the race, he points to the fact that when, in the grand tidal movements of humanity, the age of supremacy for the nervous and intellectual nations was drawing to a close, and it became necessary to recruit their physical exhaustion with a material baptism from the muscular types, and, as a consequence, Caucasian Asia and Eastern Europe were subjected to all the horrors and degradation of Mongolic invasion, the conquerors brought with them no new ideas, opened up no well-springs of thought, originated no faith, founded no philosophy, and inaugurated no art. Whether as Tartars or Turks, they came and they have remained as barbarians, gross, coarse, ignorant, and brutal, their only redeeming attributes being their courage as warriors, and their faith as disciples. Now a history of civilisation that ignores such momentous facts, that fails to grapple effectually with such stupendous problems in human destiny, may be very learnedly and very eloquently written, but for all the higher purposes of history is simply an instance of scholarly impertinence and pretentious pedantry, to which men of science are in no way called to submit, and against which, indeed, they are bound to enter their most vigorous protest.

In descending the stream of time Buckle ultimately lands his reader in modern Europe. But what shall we say of a history of civilisation in any modern European nation, that fails to take into account the ethnic results produced by the successive conquests and colonisation of the classic and Teutonic races, and their commingling with the Celtic tribes of the north-west. And what can we think of any history of modern times, whether it relate to Asia or Europe, that does not critically investigate the origin and influence of Christianity and Mohammedanism, and show that the former is a Semitic faith adapted to Europe by a large admixture of Aryan elements, which, in exact proportion as they qualified it for diffusion in the west, disqualified it for permanent action on the Semitic populations of the hither east, who accordingly developed the faith of Islam as a necessity of their higher nature. Again, let us not be afraid to announce that the man who shall attempt to write the history of religions without a reference to race, is, by this very omission, demonstrably disqualified for the task which he has so lightly undertaken. Let us state the fact as it is in nature, that the religion of a people, like their literature and art, must have a certain adaptation to their mental constitution; that when developed from within, it has this necessary congruity in virtue of its origin, and when imported from without, it must be modified into accordance with the racial tastes and tendencies of its converts.

As a further illustration of the truth of these remarks, we may cite the Reformation. Now, to attempt an exposition of this vast movement, either in its causes or its consequences, without a reference to race, is like endeavouring to find your way out of a labyrinth without the clue. In its essential character, it was an uprising of the Teutonic against the ecclesiastical predominance of the classic type. It was thought asserting its superiority to feeling. It was reason refusing obedience to faith. Hence, in its ultimates, as among the Scotch Presbyterians, it deprived worship of all its æsthetic accessories, and while stripping the priest of his vestments, cast the organ out of the church. In strict correspondence with this, it also reduced prayer and praise to the subordinate position of mere accessories to the great event of the day—the sermon—a theological prelection on points of doctrine rather than practice, addressed to the intellect rather than the sentiments. Hence it synchronised with the rise of the inductive philosophy, and has been followed by the inevitable emergence of the north-western nations into industrial wealth and political leadership. Now, to write long dissertations on such movements, without reference to race, is simply learned child's play, a phase of literary amusement to which the eloquent historian was, it

must be confessed, rather prone. To affirm that race had nothing to do with the reformation, and that Protestantism is wholly due to external agencies, and not at all to inherent proclivities, is to assert that the sun has not risen at midday—a fact patent to all men who will take off their spectacles and walk out of their libraries. These, however, were feats of which Buckle was apparently incapable. He could only see facts through books, and had no confidence in any conclusion unless *the premises* were in respectable print. He could not see that in its general geographical outline, Protestantism, after three centuries of conflict, still stands on the Teutonic area, leaving the Slavonic, Celtic, and classic races still for the most part in contented subjection to the traditional faith and ancient ritual. We of course do not mean to say literally that he would have denied the fact, but we do assert that, from his established habits of thought on historical subjects, he could not have applied it.

With such deficiencies as those which we have just indicated, it was of course unavoidable that Buckle, notwithstanding his fine talents, and, in many respects, superior attainments, should nevertheless commit many grave errors, and be guilty of many important and almost fatal omissions. Thus, in contrasting the intellectual development of England and France, he of course notices the predominant tendency to court patronage in the latter country. But he does not see, what every anthropologist knows, that this is a part of the Celtic tendency to clanship and chieftainship, whereby the individuality of the citizen is merged in the collective greatness of the nation, and the nation itself is most befittingly embodied in and represented by the monarch. "I am the state" was a sublime truth from the mouth of Louis XIV, but would have been arrant nonsense if uttered by the greatest of English kings. The two Napoleons are possible as the chieftains of Celtic Gaul, but either would have proved a miserable failure in Saxon England. The difference, both in character and destiny, between the wars of the Fronde and the Commonwealth, is to be traced to the same cause. Now an historian who writes learned twaddle about the surfaces of things,—and he who dwells wholly on circumstances can do little else,—may be very respectable just at present, but he holds his good name only on sufferance, and must be prepared to surrender his hardly earned reputation whenever the public shall have become sufficiently informed to see the inadequacy of his data, and, consequently, the imperfection of his method and the unsoundness of his conclusions.

It is needless to follow Buckle further, for his errors being those of principle, of course pervade his entire work. To do him justice, he is consistent in error. His second volume is but an expansion of his

first, and the remainder, had he lived to complete them, would but have served to yet more affectually embody his misconceptions. He did not see why the great revolution of the eighteenth century was more explosive in France than it could have been in Germany or Britain. Neither, in treating of Spain, had he apparently the smallest apprehension of an underlying Iberian element in the national character. He did not see that this, mingling at the great ethnic epochs with the Celtic, must produce a very different effect from the opposite commingling of the Teutonic element in Gaul. He saw the ferocity, and sternness, and bigotry of the Spanish character, but he never suspected the extent to which these darker features in the mental constitution of an otherwise noble and gallant people, were intensified by their Moorish baptisms, both historic and prehistoric. That Spain, ethnically, is an appanage of Africa as well as Europe, and that in the future, as in the past, she must be prepared occasionally for the tidal onset of Carthaginian and Saracen, with their barbarian hosts, is a fact which never occurred to his bookish mind, as a possible explanation of anything sinister, in the conquest of Peru or the establishment of the Inquisition. He could not be made to understand that an *auto da fé* was in a measure, the far off echo and result of the king of Dahome having encamped a little too long on the mountains of Castile, and so left a rather strong infusion of his sable atrocity in the veins of his otherwise gallant and noble subjects. Alas! these things, as we have said, are not yet in books, and we fear that unless anthropologists learn to write them, it will be a long time before they will find their way into "polite literature."

As compared with his predecessors, Buckle no doubt was distinguished by breadth of view and diversity of culture, yet his radical defects after all arise from his exclusiveness and want of grasp. His generalisations when really large, as in the case of those derived from statistics, have generally been made for him. He shows this narrowness or rather oneness of intellect in so readily accepting John Stuart Mill's absurd rejection of the racial element. But the same defect attaches to his mode of contemplating his favourite subject, namely, external circumstances. Thus, for example, he greatly underestimates the effect of geographical position in its relations to the great tidal movements of humanity. The fact that Europe is in the west, and is thus at present the recipient and embodiment of that mundane force, which for several thousand years has been sweeping from the Euphrates to the Thames, was but very imperfectly appreciated by him, though a cardinal fact from his stand-point and for his especial work. And as a part of this omission, he in his tremendous

philippics against the bigotry of Spain and Scotland, quite forgets the necessary influence of their geographical position as western termini, in virtue of which the one became an especial representative of the ecclesiastical despotism and æsthetic superstition of the Latin nations, while the other in an equal degree, and from correlative circumstances, became an embodiment of the hard, dry, logical doctrine, and unartistic ritual of the predominantly muscular Teutons. Although, as we have observed, the ardent devotee of circumstances, he could no more see this, than he could the corroborating if not corresponding ethnic facts, that the Celtiberian is the most fibrous, and the Caledonian the most osseous of their respective types.

Again, let it not be supposed, from the severity of these remarks, that the gravamen of our charge rests on Buckle individually. We have already said that his ideal of history was the highest yet developed. And if he died too early for the effective realisation of his sublime conceptions, the world will still ever remain his debtor for the thought. His failure, even in design, was perhaps greater than it needed to have been. We have endeavoured, from the ethnic stand-point, to indicate some of his perversities and deficiencies. But in a much larger measure it was inevitable. It is too early yet to write history. We have only a remote conception of what so vast an undertaking involves, and yet even for the fulfilment of this imperfect conception, we still lack some of the most important data. In writing of man, we cannot yet even approximately define his antiquity. We do not know how long he has been a dweller upon the earth. We cannot define the number of his species, or whether so contemplated, he is to be regarded as a unity or a multiplicity. We do not know where or through which of his varieties he began to be civilised. We cannot yet say with certainty whether the existing civilisation of Europe be the cycle or the epicycle, nor consequently whether the early monumental and historic culture of Asia was primal or colonial. We are only beginning to define the respective provinces of Semitic and Aryan thought in our existing systems of religion and philosophy. It is only yesterday we discovered the roots of Greek mythology in Sanscrit literature. To-morrow we may in a similar manner dissolve the present forms of Semitic tradition, in the intenser light of a profounder knowledge.

But why proceed with a list of our insufficiencies? No sane man now ever dreams of writing history otherwise than fragmentarily and tentatively, that is, as preparatory to the labours of his more fortunately situated successors. We know that the time for this great work has not yet quite come. Yet everywhere it seems to be ad-

mitted that the old system of merely inditing chronicles will no longer suffice. The more advanced minds have altogether outgrown this stage of intellectual development, and as a consequence demand wider views and a deeper insight in those who profess to be their literary instructors. It was in response to this demand, that Germany in the last generation produced the speculations of Schlegel, and that even practical England, as we have seen in our own day, brought forth the more elaborate work of Buckle. While as her contribution to this movement, America has sent us Draper's *Intellectual Development of Europe*, already noticed in these pages, and to which, therefore, our present reference must be both brief and partial. We have, indeed, introduced it simply as another illustration of that gradual development of the historical idea, to which we have already alluded. In fact, perhaps, from his medical education, and in part from the original constitution of his mind, Dr. Draper is more predominantly scientific than Buckle. The latter was essentially a literary man; his scientific knowledge, mostly acquired by reading, being simply an accessory. But with Dr. Draper it is the basis of his intellectual attainments, the fundamental principle which tends to shape all else into its own likeness. Hence his clear perception of the presence of law, and his unwavering reliance on the regularity and cyclical repetition of historic phenomena, ideas which generally appear vague and hypothetical, if not absolutely chimerical, to a mind cast in the purely literary mould. Yet, from want of detailed anthropological knowledge, he often applies his theories with a laxity, and therefore a facility, anything but safe and satisfactory.

Dr. Draper, in his first page, thus succinctly announces the principle which pervades his work. "Man is the archetype of society. Individual development is the model of social progress." Very grand ideas, no doubt, and affording especial scope for the analogical application of his anatomical and physiological knowledge, to say nothing of his skill in pathology! But while analogy, under due regulations and in the hands of a competent master, is one of the most powerful instruments yet known for the attainment of probability in reference to far-reaching and distant conclusions, being in very truth a royal road to many magnificent domains of thought and knowledge otherwise all but unapproachable, it is nevertheless a most dangerous path to the careless and incompetent, often landing them in bogs of absurdity and bottomless quagmires of folly, in place of the sublime and delectable mountains of everlasting truth. Analogy to be safe must be complete. Your parallel must be absolutely true, or the farther you pursue it the greater is your divergence. Thus, for example, in the instance before us, we may readily grant the truth of the funda-

mental proposition, that humanity is a collective organism—if the Doctor pleases, a physiological unity; but, if so, then it becomes at once obvious that the great races into which it is divided must discharge its various functions. Thus, if we grant that the Caucasian represents the nervous system in the mundane man, then the Mongol, by a similar process of reasoning, must be regarded as the muscular, and the Negro as the vascular portion of this vast organism. And if so, then, as their duties are diverse, their destiny must be different; and it is perfectly absurd to suppose that the fate of the one can prefigure that of either of the others. Granting the premises, there is no escape from this conclusion. But the premises are, in part at least, the Doctor's, and therefore we are not prepared to say that the conclusion is altogether ours. To express these ideas in the terms, and embody them in the thoughts most familiar to anthropologists, we may say that the Caucasian is the intellectual and *progressive* division of mankind, the only one apparently capable of *invention*, the others being only *receptive*, and that in an imperfect degree, of its grander discoveries and appliances. It is thus, as we have already remarked, that, even within the historical period, an Indian faith has overspread nearly the whole of Mongolia. While there is much in the essential character of Chinese civilisation to indicate that its germs at least were alien, and that it has been carefully transmitted from generation to generation as an educational heirloom rather than as an inherent proclivity, as an accepted gift rather than as a racial tendency. The Negro is below even this educational stand-point. He has *vegetated* on in contented barbarism from immemorial time, despite all that Egyptian, Carthaginian, and Roman civilisation could possibly accomplish for his elevation. Hence then the absurdity of the Doctor's conclusion, that the fate of these material and non-progressive races, can be held to prefigure that of the most progressive, even on its highest, if not its only true ethnic area.

The Chinese, after passing through a certain cycle have become utterly stagnant. Precisely so: this is exactly what might have been expected *a priori*. A naturally non-progressive, yet not wholly ungifted race, receive a certain impulse from without. On this they advance until its original force is exhausted, and then, having no inherent intellectual vitality, they of necessity stand still—waiting for another impulse, which Europe is now about to give them. Dr. Draper seems utterly ignorant of the important ethnic fact, that the Mongol is a *child*, who may be taught much, but from whose feeble immaturity nothing great, commanding, or original can be rationally expected. The organisation of intellect in the Celestial Empire, is simply the arrangement of a great school, where good boys are re-

warded and bad ones are put into the corner. Life is a lesson, and every duty is a task. Every action is prescribed, and every thought is a repetition. Precept and example are the ruling forces. Individuality is ignored, and nothing is left to the spontaneity of the blindly submissive and uninquiring pupil. And this is so because it exactly responds to the ethnic immaturity of the race, of which another accompaniment is the infantile feebleness of the moral sentiment. Hence the very imperfect development of the religious idea, in which there is neither the sublime grandeur of Semitic monotheism, the sombre majesty of Scandinavian mythology, nor the idealistic beauty of Hellenic polytheism. Hence, also, the very imperfect organisation of society, where we find neither the castes of India nor the feudalism of mediæval Europe. Strictly speaking, aristocracy is unknown to the Mongol, as it is to the Negro. Among both there is the tendency, but in each it is germinal. The Chinaman has not a sufficiency of "blood" to effectually develop the idea of hereditary refinement, delicacy, sensibility, or spirit. His peasant may be a gentleman, because even his prince is devoid of the remotest suspicion of chivalry. He knows nothing above the scholar, because he sets no value upon honour, and, by a proclivity of his organisation, esteems astuteness of intellect as immeasurably superior to elevation of sentiment. His vaunted civilisation, when examined from our immeasurably higher stand-point, is a sham and a pretence; it leaves him gross, sensual, grovelling, a liar, a trickster, and a cheat.

Only the most profound ignorance of anthropology could have led Dr. Draper into the grievous error of supposing that, from the experiences of such a race, he could predict the future of the richly endowed and varied nations of modern Europe, where there is more diversity of character and more intellectual resources in a single province, than in the whole empire of China. Let it not be supposed, however, that in this matter we attach any especial blame to him. We have merely cited his work, and that of Buckle, as eminent instances of that vagueness of thought and looseness of phrase, which still permit otherwise well informed men to talk about "Asiatic races" and "Tropical empires", meaning thereby apparently anything from Egypt to Cathay; and whereby, with a facility of generalisation utterly incomprehensible to an F.A.S.L., they manage to group the Mongolic Burmese with the high cast Iranians of Persia, and to confound the Saracenic chivalry of the early caliphs with the troublesome Daimios of our faithful ally the Tycoon of Japan. Now we think it is nearly time that this should cease. Literature, more especially that department of it which pretends to the gravity of history, should

be above existing upon sufferance, and it is only thus that notions so confused and expressions so indefinite can continue to find a place in our libraries. For their other merits, which are neither few nor slight, we may continue to read works like those which we have just noticed, but we do so with a pain and a misgiving, which greatly detract from the pleasure we should otherwise experience. Nor will this dissatisfaction be long confined to the small circle who at present represent anthropological science. It cannot fail eventually to extend thence to the reading public, and whenever this is the case, the doom of such works is sealed; they will be dismissed with other superannuated lumber to that limbo of all the vanities, the shelves of our national museum, there to be preserved with other curiosities for the edification of a more enlightened posterity.

ON THE EARLY HISTORY OF MANKIND.*

A BOOK which contains a curious assemblage of well authenticated facts regarding mankind will always have an interest, from the pleasure which is taken universally in such matter. There is an eager curiosity felt in the description of strange and ancient races contained in the works of travellers and seamen; and to those who take a scientific interest in the human race the evidence is most important, and, in fact, their business is to turn it to account. But it is of greater importance and far more interesting when, besides being an assemblage of curious and interesting facts, it is an attempt to make use of these facts, to bring them under laws upon principles of inductive science, and to deduce from them in this way results of high importance in the history of civilisation.

There is, as Mr. Tylor truly says, a vast mass of material which has as yet been turned to small account; he sees, or thinks he sees, in this mass of matter regarding the various races of the world, ancient and modern, savage and civilised, certain laws which bear upon the movements of the human mind, not, as he takes care to say, shewing themselves in the higher states of civilisation, but almost uniform among the lower types.

* *Researches into the Early History of Mankind, and the Development of Civilisation.* By Edward Burnet Tylor, author of "*Mexico and the Mexicans*". Murray: 1865.

In order to establish such laws the widest induction is necessary, and after they are deduced from observation by what Dr. Whewell calls the "happy conjecture" of induction, they must be sternly compared again and again with the most various phenomena before they can be received as established, for we can never, in subjects of this kind, attain to the exactness of proof which is given by a long intermediate mathematical train of reasoning, the result of which can be compared again with facts, as in astronomy.

Having stated this broadly to gain caution against too ready an acceptance of a specious theory, and recollecting that to us, striving to gain some scientific advance, the facts, however curious, are nothing except so far as they support the theory or law advanced—let us see what the subjects are regarding which these laws are laid down.

Two subjects nearly allied occupy a considerable part of the work—*gesture language* and *picture writing*; and in regard to these the author attempts to show that the human mind, unassisted by the traditional language and writing, acts in very much the same way, wherever we have it inventing a *gesture*, or, as it is in fact, a *picture language*, or committing it to some substance instead of drawing upon the air, when it becomes a *picture writing*, such as we find upon many monuments of the Old and New World.

Another subject is *magic*, and the beliefs regarding it as existing in many widely different parts of the world; these beliefs Mr. Tylor considers to be the "result of one very simple mental law, arising from a condition of mind which we of the more advanced races have almost outgrown."

The third essay is upon "Myths of Observation," arising also, the author thinks, from a mental law by which a tale or story is invented to account for any remarkable appearances or phenomena, as when finding gigantic bones a savage tells a story of their having belonged to a giant race of former days. These, he thinks, are to be distinguished from the great bulk of the folk-lore of the world, "which is now being shown by the new school of comparative mythologists in Germany and England to have come into existence also in virtue of a general law, but a very different one."

Part of the book is occupied with an examination of the similarity of the changes undergone in tribes widely distant from each other in regard to implements of stone and metal, and in the primitive arts of life; while, finally, Mr. Tylor discusses the interesting problem "of the relation which progress has borne to decline in art and knowledge in the history of the world"—a problem, we may add, which is of high importance in regard to the discussions as to whether tribes of

low civilisation have fallen from a higher estate, or have not emerged from a condition of primitive and innate barbarism.

The sketch which we have given of the scope of the work will suffice to show that it will not be possible, within the limits of an article like the present, to discuss fairly the grounds upon which Mr. Tylor has laid down these laws; they will stand or fall, as they hold their place among the established theorems of anthropological science, and in fact as they are received among the greatest number of thinkers competent to have an opinion upon the subject.

We are met on the threshold of these investigations by a difficulty, which, as it is one of the fundamental ones in nearly all anthropological science, and is well expressed by the author, we shall give in his own words:—

“When similar arts, customs, or legends are found in several distant regions, among peoples not known to be of the same stock, how is this similarity to be accounted for? Sometimes it is to be ascribed to the like working of men’s minds under like conditions, and sometimes it is a proof of blood relationship or of intercourse, direct or indirect, between the races among whom it is found. In the one case it has no historical value whatever, while in the other it has this value in a high degree; and the ever recurring problem is how to distinguish between the two.”

As an instance on the one side, we have the beliefs which arise, or may arise, from a savage mistaking a subjective impression for an objective reality, as the appearances in dreams for spiritual beings, and so the sight of deceased relations as an intimation of the existence of a world beyond the grave. And on the other, the class of stories known as “Beast Fables” appearing in places widely separated, and Reynard the Fox and parts of the Arabian Nights appearing in South Africa, where they may be ascribed to Mussulman intercourse. That these stories can stand alone as evidence of common origin, or inoculation with common traditions, is questionable; Mr. Tylor has attempted to show that some of the stories in America which have analogues in Europe are evidence of some historical connection between the races inhabiting the two continents.

The instances of the working of the human mind in *gestures*, which are investigated with a view to comparing the natural results of the mind of man in such expression of thought under widely different circumstances, are—1. The language originated by deaf and dumb children or persons, and extensively developed in Germany and England; 2. The *gestures* used by the Indians of North and South America owing to the diversity of their dialects; 3. The *gestures* elaborated by the Cistercian monks, lists or dictionaries of which exist; 4. The *gestures* of the pantomimists of Greece and Rome; 5.

The few gesture signs in use among ourselves, which are as it were embalmed in our high state of civilisation; 6. Those in use generally in various nations as adjuncts of speech. The deaf-mutes invent signs almost invariably for themselves, and better than it can be done for them. Kruse, a deaf-mute himself, and teacher of deaf-mutes, and author of several works of no small ability, says as follows:—

“Thus, the deaf and dumb must have a language, without which no thought can be brought to pass. But here nature soon comes to his help; what strikes him most, or what makes a distinction to him between one thing and another, such distinctive signs of objects are at once signs by which he knows those objects, and knows them again: they become tokens of things; and whilst he silently elaborates the signs he has found for single objects, that is, whilst he describes their forms for himself in the air or imitates them in thought with hands, fingers, and gestures, he develops for himself suitable signs to represent ideas which serve him as a means of fixing ideas of different kinds in his mind and recalling them to his memory, and thus he makes himself a language, the so-called *gesture language* (*Geberden sprache*), and, with these few scanty and imperfect signs, a way for thought is already broken, and with his thought, as it now opens out, the language cultivates and forms itself further and further.”

Mr. Tylor has brought together a considerable body of evidence regarding this language of deaf-mutes. It is singular that, before its invention, Rabelais should have noticed these natural signs. When Panurge is going to try, by divination from signs, what his fortune will be in married life, Pantagruel thus counsels him:—
“Pourtant vous fault choisir ung mut sourd de nature, affin que ces gestes vous soyent naïvement prophetiques, non fainctz, fardez, ne affectez.”

At Berlin 5000 are in use: a number of these are given; we cannot cite them here, as we can only give some instances in which they coincide with and illustrate the other kinds of gesture language. There is, however, sufficient evidence to show that the phenomena are alike in most cases; and a curious instance is given of a trial regarding the will of a deaf and dumb man, as late as Oct. 1, 1864, in which evidence was given of the signs by which he had indicated his wishes. In Berlin, divine service is performed in the gesture language.

Alexander von Humboldt has left on record his experiences of the gesture language among the Indians of Orinoco, and we have also the descriptions of Major Long and Captain Burton. From these writers it would appear that the “Indian pantomime and the gesture language of the deaf and dumb are but different dialects of the same language of nature.”

“In the Indian pantomime, actions and objects are expressed very much as a deaf-mute would show them. The action of beckoning

towards one's self represents to 'come'; darting the two first fingers from the eyes is to 'see'; describing in the air the form of the pipe and the curling smoke is to 'smoke'; thrusting the hand under the clothing of the left breast is to 'hide, put away, keep secret'; 'enough to eat,' shown by an imitation of eating, and the forefingers and thumb, forming a *c*, with the points towards the body, are raised up as far as the neck; 'fear,' by putting the hands to the lower ribs and showing how the heart flutters and seems to rise to the throat; 'book,' by holding the palms together before the face, opening and reading, quite in deaf and dumb fashion, and as the Moslem often do while they are reciting prayers and chapters from the Koran."

Among the signs which are notably alike, we find "brother" and "sister," according to Burton, putting two finger tips into the mouth, to shew that both fed from one breast; the deaf-mute holds out the forefingers of both hands together: this sign also belongs to the Cistercian monks.

Before following the author further in his comparison of the various forms of gestures, we may remark that it is obvious that much of the similarity of gesture arises out of the nature of things: and we think Mr. Tylor has not sufficiently considered this; that there is an innate power in the human animal of applying itself to the phenomena surrounding it and their relations, and by motions of the body conveying its impressions and wishes; and that this power, which, except in a very limited degree, is not shared by other animals, is independent of speech and the ideas conveyed by it, he seems to have made out pretty clearly. And perhaps his own theorem does not go beyond the assertion that there is a general similarity in the action of the mind in each case.

The signs of the Cistercians, which are to be found in two printed collections, are again very nearly what the deaf and dumb use, and singularly allied in character to the Indian pantomime.

The Roman pantomime appears to have been so perfect, from the accounts which remain, as to have rendered speech unnecessary—indeed, Cicero used to try with Roscius, the actor, which could best express a sentiment; and we gather from the writings of St. Augustine that the signs were taught, and that there existed written lists of them.

A very important branch of the subject consists in the gestures which are used throughout the world as accompaniments or explainers of speech, or independently of it, to express some particular feeling or passion. Some of them are no doubt very ancient, and have come down to us from times when thought was very simple, and generalisations and abstractions unknown, and metaphor was more in use than at present.

A curious instance is snapping the fingers, which the author thinks originally arose from flipping away some light and contemptible object with the thumb; and, as a proof of its antiquity, we have the mention of this gesture by Strabo. "At Anchiale," he writes, "Aristobulus says there is a monument to Sardanapalus, and a stone statue of him as if snapping his fingers, and this inscription in Assyrian letters:—'Sardanapalus, the son of Anacyndaraxes, built in one day Anchiale and Tarsus. Eat, drink, play; the rest is not worth *that*.'"

Shaking hands is not a gesture common to all mankind: the wilder tribes, when they have the custom, seem to have learnt it either from Europeans or Moslem. There seems some ground for supposing that it is an ancient Aryan custom, perhaps arising as a common custom from its ancient use in the marriage ceremony, the idea of binding being contained in the word *peace, paz, Sans. paç*.

The instances brought together of various gestures do not, though they are very interesting, appear to prove more than the universal tendency to a pantomimic expression of thought, as in certain cases the signs in use on the same occasion arise from opposite ideas regarding the subject; as, for instance, in prayer, one set of people hold their hands open to receive benefits, while others crouch down as in fear or humiliation: clearly in the last case the attitude is due to ideas of impurity and sinfulness in the sight of the deity. In fact, the author does not claim more for them, as he says (p. 53)—

"Enough has been said to show that gesture language is a natural mode of expression to mankind in general; moreover, this is true in a different sense to that in which we say that spoken language is common to mankind including under the word language many hundreds of mutually unintelligible tongues, for the gesture language is essentially one and the same in all countries."

Perhaps, as the author says, the best evidence of this unity is the fact that savages, on going to a deaf and dumb institution, have conversed with, and been understood by, the children. "A native of Hawaii was taken to an American institution, and began at once to talk in signs to the children, and to tell about his voyage, and the country he came from." And other similar cases are on record.

In a very interesting chapter on gesture language and word language, the author touches upon that deep mystery, the origin of speech, and he truly says—

"At the root of the problem of the origin of language lies the question why certain words were originally used to represent certain ideas or mental conditions, or whatever we may call them; the word may have been used for the idea because it had an evident fitness to be used rather than another word, or because some association of ideas,

which we cannot now trace, may have led to its choice. That the selection of words to express ideas was ever purely arbitrary, that is to say, such that it could have been consistent with its principle to exchange any two words, as we may exchange algebraic symbols, or to shake up a number of words in a bag and re-distribute them at random among the ideas they represented, is a supposition opposed to such knowledge as we have of the formation of language. And not in language only, but in the study of the whole range of art and belief among mankind, the principle is continually coming more and more clearly into view, that man has not only a definite reason, but very commonly an assignable one, for everything he does or believes."

If we look at the only part of language which is at all intelligible to us in its origin, namely, the class of words which are clearly imitative: they vary, not very differently from the deaf and dumb pantomime, by taking a rather different view of the thing imitated; but outside these words we have no indication of the reason why one word should express one thing, and one another; the explanations given of the origin of derived words have really very little bearing on the words in use.

The author, while he hesitates to touch so difficult a subject, thinks he sees in the two classes of Sanskrit root forms, as they are divided by Professor Max Müller, namely, the *predicative* roots, such as to *shine*, *extend*, and so forth, and the *demonstrative* roots, such as *here*, *there*, *this*, *that*, *thou*, *he*, a similarity to two classes of signs in the language of deaf-mutes. Some of the gestures are not unlike words in the Chinese which do duty in several capacities, as *ta*, meaning great, greatness, to make great, greatly; or they may be compared to the Sanscrit roots, as they would be if used without inflexions: in this particular our own language has become assimilated to the Chinese in using syntax in place of inflection, as when we say to *butter* bread, to *cudgel* a man, to *oil* machinery, where action and instrument are one word, these expressions are "concretisms," "picture words, or "gesture words," as much as the deaf and dumb man's one word for butter and buttering. The reference of substantives to verb roots in the Aryan tongues, is also in harmony with the gesture language, as when the *horse* is the *neigher*, *water* that which *waves*, *undulates*, the serpent the *creeper*; and as Kruse tells us that to the mute the bird is "what flies," the plant "what sprouts out of the earth."

We cannot in the confined space of this notice do more than indicate the course of the author's reflections and conclusions very cursorily; these coincidences between the universal speech of gesture and the ancient tongues are extremely interesting, and may be a clue to our gaining some insight into the formation of language.

There is a great mass of evidence, and one of great interest which

bears upon the existence of tribes whose language is very imperfect, even for the most ordinary requirements, without the use of signs. The Veddah tribes of Ceylon speak a dialect incomprehensible to the Cingalese; and even among themselves, their communications are gestures and guttural sounds, not a distinct or systematised language. The same may be said of the Tasmanians. Dr. Milligan speaks of "their use of signs to eke out the meaning of monosyllabic expressions." Captain Burton gives the same account of a tribe of North American Indians, the Arapapos.

"They possess a very scanty vocabulary, pronounced in a quasi-unintelligible way, can hardly converse with one another in the dark; to make a stranger understand them, they must always repair to the camp fire for pow-wow."

The effect of the evidence on this point is most important, as if it could be considered as proved that there really are people whose language is insufficient for their everyday life, "the fact would either," as the author says, "furnish the strongest case of degeneration known in the history of the human race, or would supply a telling argument in favour of the theory that the gesture language is the original utterance of mankind out of which speech has developed itself more or less fully among different tribes."

The evidence, however, he thinks insufficient; in many cases savages have been wrongly accused, and on nearer acquaintance they have been found to have more complete means of communication than seemed at first to be the case.

If *picture* writing be only a commemoration of *gesture* language, we have in the various monuments covered with such signs an ample field for investigation. Wilhelm Von Humboldt says that: "In fact, *gesture* destitute of sound is a species of writing;" there is certainly, as the author observes, a very close connection; and it is certainly very singular that the natives of America should be as great proficient in one as the other.

These pictures are substantially the same among very different tribes and races, and suggest the meaning by some characteristic strongly marked in each figure or emblem. Those of the American Indians, as far as we can gather from the instances given, are more of the nature of illustrations of poetry than composing anything of the nature of a language; that there would be a family likeness between the paintings or scratchings of savages we should expect, as all rude imitations of the common phenomena of life would be somewhat alike, and would resemble the drawings of children: an instance is, however, given on the authority of Mr. Catlin, of a chief known as the "Shawnee Prophet," who wrote on a stick a prayer in some kind

of hieroglyphic. There is undoubtedly much evidence to show that some kind of picture writing is prevalent in all quarters of the globe among savage tribes.

The likeness to children's drawing is, Mr. Tylor thinks, one of the same kind as the likeness in gesture among savages to the gestures of children who cannot speak; and that it betokens a certain law of the human mind, in fact, an expression of reason and the relation of things by rude representations of surrounding objects, and if his case may be considered as proved, generally it would be, perhaps, the best measure of the difference between the human race, however undeveloped or degraded, whichever we choose to consider it, and the inferior animals; we know of no race of animals, however intelligent, who have it in their power to deal with surrounding phenomena and their relations in this way; nor is there any instance of any creature not human having drawn a map, and yet this is one of the most universal powers among savage tribes.

The highest development of picture writing was among the Mexicans, and their drawings are well known from Alexander Von Humboldt's works, and the great collections by Lord Kingsborough.

The great bulk of them are pictorial representations of "migrations, wars, sacrifices, deities, arts, tributes," etc., but still not differing from the picture writing of mere savages; they have, however, the peculiarity of having a system of dates, which were pictures representing the remarkable dates upon a kind of hieroglyphic wheel: thus the year of the first arrival of Europeans was represented by a white swan spouting fire and smoke from its mouth. It is a remarkable fact that the Indians have been the best interpreters of the Mexican picture writings; and without their aid, we should have found their deciphering very difficult.

There does appear, however, to be a kind of system of phonetic characters, the discovery of which is due to M. Aubin. Humboldt and Clavigero have given painted symbols of names, as "knife snake" (the name of a king), a serpent with knives issuing from his back, but this is ordinary picture writing; there is, however, evidence of the existence of real phonetic signs. We give an instance given in regard to the writing of the name of the same king.

The name in Aztec is *Itz-co-atl*. In the Vergara codex the *Itz* is represented by a knife with blades of obsidian; but the *coatl*, which elsewhere is a snake, is here represented not by that animal, but by a compound sign, namely an earthen pot, *co*, with above it the sign for water, *a*, (*tl*): the name is not to be read "knife, kettle, water", but *Itz-co-atle* by sound—in fact, it is of the nature of a rebus. M. Aubin has worked out many of these phonetic symbols.

These phonetic symbols appear to have been of native origin, but were used by the Spanish missionaries, and they continued in use long after the Spanish possession, in legal documents regarding genealogy, inheritance of land, etc. Some of the instances the author gives are most curious, but we cannot dwell on them, though they may in the sequel prove to be most important aids in tracing the connection between speech and writing.

The mixture of pure pictures with phonetic picture symbols is observable in the Egyptian hieroglyphics; the former are not distinguishable from gesture or picture writings, while the latter are in fact an approach to the writings in use among us. Thus, the figure of a *strap*, the name of which is *m—s*, becomes a phonetic sign to write the sound *m—s* with (the *—* stands for some vowel which in the Coptic form is *ou*).

Some forms are held by Champollion to be pure consonants, which is plainly seen in the spelling of Ptolemy, Cleopatra, and other foreign names. Champollion, however, is held by some later Egyptologists to have gone too far in reducing phonetic characters to mere letters. Mr. Birch reads as *ka* and *pu* letters which Champollion gives as *k* and *p*, but the distinction is of small importance, as the vowels are apparently very indefinite and might be dropped out altogether.

The interest to us of the syllabic theory (which is not a new one) is that it gives us the course of development by which, for instance, a picture of a mouth at first meant *ro*, the name of mouth, and afterwards dropped the vowel, and became in fact a pictorial letter *r*. The Chinese appear also to have proceeded from picture writing to phonetic characters, their old pictures are still known as *ku-wān* (ancient pictures); these are rude representations not unlike the Mexican, of various objects in outline, *sun*, *moon*, *tortoise*, *fish*, etc., combined with pictorial symbols as *water* and *eye* for *tears*; but at present they have two kinds of signs, "one for *sound* and one for *sense*, called *hingshing* (pictures and sounds); in one of the two the transition from the picture of the object to the sound of its name has taken place, in the other it has not, but it is simply a picture, and its use (like the *determinative* in Egyptian hieroglyphics) is to define which of the meanings of the spoken word is to be taken. Thus, *chow* means ship, so a picture of a ship stands for the sound *chow*, but *chow* means several things, and to shew which is intended in any particular instance, a determinative key or sign is attached to it; thus the ship with the sign of water stands for *chow* 'ripple', with that of speech for *chow* 'loquacity'; that of fire for *chow* 'flickering of flame', and so on for 'waggon-pole', 'fluff', and several other things which have little in common but the name *chow*."

The necessity for this arises from the poverty in sounds of the Chinese language. Our own alphabet is believed to be directly derived from the Egyptian picture-writing turned into phonetic symbol, and we can trace it from the stage of pure pictures to that of pure letters. "The Coptic Christians still keep up," says the author, "in their churches, their sacred language, and the Coptic alphabet was formed by adding to the Greek alphabet certain new characters to express articulations not properly belonging to the Greek, four at least of them seem clearly to have been taken from the old hieroglyphics, and thus preserve an unbroken tradition from the period of picture-writing to that of the alphabet, and from times earlier than the building of the pyramids to the present day."

We have stated enough to shew the scope of this part of the author's work which, if it does not reach to the extent of demonstration, goes certainly a long way beyond conjecture and hypothesis.

According to Mr. Tylor the practices of sorcery in most savage nations and tribes may be nearly all explained by a child-like peculiarity of mind which confusing the subjective with the objective imagines that what affects an image called after a person, must affect that person, and that there is some connection given by the name, this confusion of the subjective with the objective is not confined to images, but we find the actual parts of the person, as the hair and nails, still supposed to form an integral part of their original possessor, with a sympathetic if not an actual connexion by means of which he may be assailed.

The savage is like a grown up child and uses images as a child does a doll to assist the operations of his mind. The tendency to idolatry in low races, may thus be interpreted, as the means by which the savage enables himself to grasp at vague ideas of higher beings—the making of idols belongs to a transition state, in which man is striving to grasp higher views of the Deity. The savage sees in the idol something which—

"His imagination can clothe with all the attributes of a being which he has never seen, but of whose existence and nature he judges by what he supposes to be its works; he can lodge it in the place of honour, cover it up in the most precious garments, propitiate it with offerings such as would be acceptable to himself. The Christian missionary goes among the heathen to teach the doctrines of a higher religion and to substitute for the crude superstition of the savage a belief in a God so far beyond human comprehension, that no definition of the Deity is possible to man beyond vague predications, as of infinite power, duration, knowledge, and goodness. It is, perhaps, not to be wondered at that the Missionary should see nothing in idol worship but hideous folly and wickedness, and should look upon an

idol as a special invention of the devil. He is strengthened moreover in such a view by the fact that by the operation of a certain law of the human mind, the idol which once served a definite and important purpose in the education of the human race has come to be confounded with the idea of which it is a symbol, and has thus become the parent of the grossest superstition and delusion. But the student who occupies himself in tracing the early stages of human civilisation can see in the rude image of the savage an important aid to early religious development, while it often happens that the missionary is as unable to appreciate the use and value of an idol as the grown up man is to realise the use of a doll to a child."

We have quoted this passage at length because we think that it expresses very well a source of difficulty which is much forgotten and overlooked in dealings with heathens. It explains why nations in a low state of civilisation cannot receive the abstractions which with us can be conveyed to the minds of children—and it does away much that is inexplicable in the early history of the world.

The confusion of the subjective with the objective, that is the transference of relations which exist between certain ideas or images in the mind of the person to the objects themselves, leads to gross superstition, the most notable examples of which are the attempts of wizards or witches to attack a person by means of something or other which has a subjective connexion with him. These practices are very widely spread, and existed among ourselves two centuries ago, indeed perhaps may be still believed in by part of our population. The practice of hanging in effigy no doubt had its rise in some belief of the kind, though now only a way of shewing indignation.

Another form which this tendency of the mind takes is the putting the symbol for the reality, supposing there is efficacy in swallowing the prescription as in China—or as among the Moslems drinking a verse of the Korân—the virtue of the idea being communicated to the inscription. Mr. Tylor has brought together a host of interesting examples proving in the most different ways this law of the human mind putting the letter for the spirit.

The superstitions about names are as curious as those which regard images or things in any way connected with a person, the law being that what affects the idea of a person or is in any way concerned in the mind of the savage with that person, is in fact absolutely part of him, and if you hurt that you will affect him—this refers to his hair, nails, dress—as Mr. Tylor shews even in England in the seventeenth century the glove of a certain Lord Henry was buried, that as it rotted his liver might waste away; it was held that through something connected with a person even remotely it would be possible to injure him, it is easy to deduce the fact that the name would be supposed essential to him and any dishonour to it would affect him.

Among the Algonquils the name is given in secret and the true one not divulged—the person going by some nickname; a Hindoo wife may never mention the name of her husband; this is also the case in Africa among the Barea. Among the most distant and varied races it is held wrong to mention the names of the dead.

The effect of using a name is shewn in the belief held by the Moslems that by using the "great name" of God (not Allah) supernatural power could be obtained; they believed that this great name was known only to prophets who could transport themselves from place to place and do miracles by it.

A similar belief was current at Rome, which led them to conceal the name of the tutelary deity, for divulging which Valerius Soranus suffered death; giving one's name to a person among the Mohawks and other tribes in America, was supposed to convey the qualities of the person; akin to this was perhaps the belief that certain names went with certain qualities. Possibly the giving of names implying qualities of mind or body, arose out of the belief that there was some essential oneness between the person and his name.

There is no doubt that cannibalism has arisen in some places from a belief that eating a man will give his qualities to the mind, perhaps by accumulation give a man the accumulated mental qualities of all those he has eaten. This is shewn in a different way with regard to animals, parts of animals of courage and ferocity being worn by the Red Indians to give those qualities; of the same nature were the mixtures made by magicians—thus too the Dyaks avoid eating the deer lest they should become timid. In South America, timid and slow animals are avoided as food, and they love the meat of tigers, stags, and boars. "An English merchant in Shanghai, at the time of the Taeping attack, met his Chinese servant carrying home a heart, and asked him what he had got there. He said it was the heart of a rebel, and that he was going to take it home and eat it to make him brave."

The feeling above-mentioned about names has led to all euphemisms; something which connects the name with the ideas contained in it and with the object of terror itself, bids the savage avoid mention of it, as ill omened or rather as connecting him with the sickness or evil spirit or malicious animal. We cannot do more than indicate in this notice the line of argument Mr. Tylor has pursued, and we must refer our readers to his book for the great body of interesting and forcible illustration which he has adduced from authentic sources to prove his case.

We shall now turn to a subject which is of very high interest to an anthropologist indeed, which touches the very essence or quick of the problem of civilisation. *Growth and decline of culture.* Have the

tribes of low civilisation sunk from a higher estate almost to the level of the beasts ; or are they only at different stages upon one general road from primitive barbarity and destitution to the furthest point yet reached.

What evidence have we that is reliable of the early culture of the world, of inventions, and the gain to men of this or that product of nature. In the Mosaic account of man's origin, he appears after the fall in a state which we should call savage, clothed with skins and without any help in appropriating the gifts of earth, and we find allusions to this or that man as adding something in primeval times to the knowledge of nature and art ; in other directions we find the history of invention in the form of a mythical tale ascribing to some god or demigod the invention of the first fire, the first boat or net. A curious instance in comparatively modern times of this tendency to deify superior knowledge, was the belief by Montezuma that Cortes was Quetzalcohuatl come back to earth, the sun god, the founder of history, the lawgiver, the inventor of days and years, he who after giving them in days of old all these glorious truths was driven away as a fugitive, sailed away in his ship to carry his doctrines to other lands.

It is safer to doubt the direct histories of early civilisation, unless corroborated by other evidence ; a curious instance of an assertion which is rendered probable by evidence bearing upon it from other quarters is the assertion by the Chinese that in the time of Yung-ching-che people used strings with knots instead of writing : this has been the case in other countries, the quipu of Peru being an elaborate apparatus by means of knots and strings for preserving facts and numbers, which is also akin to the tallies so lately used among ourselves. The quipus of Peru were most elaborate, their strings being of different colours ; they were used as public registers, and by farmers for registering the numbers of their stock.

This mode of reckoning is found in the Eastern Archipelago and in Polynesia proper, and the quipus were very elaborate ; they have been very generally superseded by the use of writing.

Some evidence of the early state of civilisation and its relation to later times may be derived from language—thus *calculation* plainly points to reckoning by *pebbles*, and is still applied to the science in its higher developments. Then, among the Mexicans *tell*, “stone”, remains as an integral part of their numerals: *centell*, “one stone”; *ontell*, “two stone”; *etelle*, “three stone”; meaning simply *one*, *two*, *three*. The Malays also say *sa watu*, “one stone”, for one; and the Javans on the same principle, *sawiji*, “one corn or seed”.

Ancient practices are often preserved by the ceremonies prescribed on solemn occasions, just as the stateliest dress is generally the oldest

fashioned; thus tallies were long kept up in the English Exchequer, their principle is still retained in the tearing of bankers' cheque books. So allied are we to rude times by hidden links. To detect those links is a great part of the inquiry into the true state of early civilisation, and the steps by which our present advance has been obtained.

The keeping in stone architecture designs belonging to wooden buildings shews the progress of the building art from wood to stone.

A curious instance of evidence of the derivation of an art is the use of a bellows of peculiar construction in Madagascar, the mode of smelting iron being the same as in Sumatra and unlike that of the Africans, from whom we might at first be led to suppose they would have learned the art.

Mr. Tylor justly remarks, however (p. 172):—

“Such coincidences” (he has been speaking of floating islands) “when found in distant regions, between whose inhabitants no intercourse is known to have taken place, are not to be lightly used as historical evidence of connexion. It is safest to ascribe them to independent invention, unless the coincidence passes the limits of ordinary probability. Ancient as the art of putting in false teeth is in the old world, it would scarcely be thought to affect the originality of the same practice in Quito, where a skeleton has been found with false teeth secured to the cheek bone with a gold wire; nor does the discovery in Egypt of mummies with teeth stopped with gold appear to have any historical connexion with the same contrivance among ourselves. Thus, too, the Australians were in the habit of cooking fish and pieces of meat in hot sand, each tied up in a piece of bark, and this is called *yudaru dookoon*, or ‘tying up cookery,’ but it does not follow that they had learnt from Europe the art of dressing fish *en papillotte*.”

Some inventions have gone everywhere with the name derived from their place of origin, as the *hamac*; but the evidence generally points to the invention in different places of similar instruments; or, as a late author has put it, man similarly placed appears to have used nearly the same means everywhere to overcome the difficulties of his situation. If a tribe are living among circumstances and with means at command utilised elsewhere by simple arts, we may decide the state in which they came there; thus the ignorance of metals and of boiling food by the South Sea Islanders, determines the low state of the Malay and Polynesian civilisation spread over the southern islands of the Pacific.

As an instance of decline in an art, Mr. Tylor gives irrigation, some of the great works having gone to utter ruin; he, perhaps, may not be aware that in some districts irrigation works, by the sediments they deposit, have ruined in time the lands they have for a time fertilised; this has been the case with the works of irrigation which the Mogul sovereigns erected in India. The cases where the higher races

have been overcome by more active and powerful ones are mostly known to us through history, but what is required is

“To find out how far a low race can lose its comparatively simple arts and knowledge, without these being superseded by something higher; in fact, how far such a race can suffer from decline in culture; this information is, however, very hard to get.”

Dr. Livingstone speaks of the decline of some of the Bechuanas, the Bakalahari, but these have in fact been fighting to maintain their old habits under external hardships; there is some difficulty in proving that where there is an evident decline of culture, as in South America, the people there are the descendants of the people who worked at the remains we find. There is still want of evidence to show how far decline in civilisation has brought the lower tribes to the state in which we find them. Perhaps, in many cases, the weakest and least instructed have migrated, and coming upon infertile and inhospitable regions, have been forced into a fresh form of life; in times when writing was unknown, and when tradition by word of mouth was all in all, the death of a single man would alter the whole civilisation of a tribe; just as Professor Müller has observed, the mode of pronouncing of a patriarch might direct the course of a dialect, and in process of time of a language.

If we look at the backwoodsman, even when he has come of good descent, his whole being is influenced, and still more that of his children and grandchildren, by the circumstances of his life; this would be still more violently the case with a tribe small in number, and coming from a low civilisation, as the period of stone or bronze. Mr. Tylor thinks that the evidence on the subject points to a gradual advance on the part of all mankind, some tribes or nations advancing far beyond others, but no course of degeneration; the lowest races, as, for instance, the Australians, still having in a rude form the civilisation of the Malay and Polynesian Archipelago—that of the stone period; though, in certain places this has been improved upon, possibly through the special qualities or genius of some one or more of their inhabitants.

We cannot, having devoted so much space to what we consider the most important part of the work, discuss as we should like the chapters on the stone age, fire cooking, and vessels; these are, in fact, a discussion more in the concrete of the growth of culture.

After remarking upon the striking uniformity found to exist between the stone implements of different ages, even to the present time, Mr. Tylor says:

“How, then, is this remarkable uniformity to be explained? The principle that man does the same thing under the same circumstances

will account for much, but it is very doubtful whether it can be stretched far enough to account for even the greater proportion of the facts in question. The other side of the argument is, of course, that resemblance is due to connexion; and the truth is made up of the two, though in 'what proportion' we do not know. It may be that the problem is too obscure to be worked out alone; the uniformity of development in different regions of the stone age may some day be successfully brought in with other lines of argument, based on deep lying agreements of culture, which tend to centralise the early history of races of very unlike appearance, and living in widely distant ages and countries."

The object of Mr. Tylor's evidence is to prove the universality and ubiquity of the stone age, proofs of its existence being found in every great district of the world. This evidence is most curious and interesting, but we cannot dwell upon it. Instances of coincidences between widely different races in their modes of lighting fires and cooking are also interesting, and will be of use in future investigations, as also the remarkable customs which the author has collected, the most curious, perhaps, of which is the *couvade*, or substitution of the father for the mother, as the patient after the birth of a child; this *couvade*, or "hatching," exists or has existed among the Caribs in the West Indies, among the tribes in the east of South America, among the Arawaks of Surinam, the Abipones, the Dyaks of Borneo, Californians, and Chinese, and strangely enough, in Navarre and among the French Pyrenees; Legrand giving an old French fabliau, in which the king of Torelore is "au lit et en couche," when Aucassin arrives, and takes a stick from him, and makes him promise to abolish the custom in his realms; and the same author goes on to say that the same practice is said still to exist in some cantons of Béarn, where it is called *faire la couvade*.

The effect upon the author's mind of the body of evidence he has collected, appears to lead him to remark on the oneness of mental type in the races who in very different parts of the world have apparently invented independently very similar contrivances, rather than to deduce from similarity of work a distinct historical connection. "The state of things which is found is not, indeed, that one race does or knows exactly what another race does or knows, but that similar stages of development recur in different times and places."

There is one point which the author does not touch, and it is one which is likely to be puzzling in any theory formed upon the assumption that the differences between men in regard to cultivation depend upon or may have been caused by their different positions in relation to heat and cold, it is the existence of a uniform course of civilisation or rise from stone to metal in the most opposite climates—in Jutland,

and Italy, and the Indian seas. It is possible that in some places where we find traces of early works of man, the climate may have been very different to what it is now, but the present stone period does not allow the use of that evasion. It leads us to look upon improvements in civilisation as something arbitrary, due to some accident of genius or inspiration in some man or race of men, from whom, when once lit, the torch has been sped from hand to hand; this torchlight representing what we are apt to consider the world's real history, those who have it not groping their way on feebly to better things, while those who have it have leapt on exultingly by mightier and ever mightier leaps to unforeseen and unhopd for victories over the mysteries of nature.

RATIONALISM.*

MR. LECKY'S book on the *History of Rationalism* has very unfairly been compared to that of Buckle on the *History of Civilisation*. Unfairly to both parties. For in the latter we have the elaborate result of many years spent in digesting the most ample materials, and the enunciation of a leading principle, which, though by no means new, has never been applied before to the history of mankind with such industry or such convincing arguments for its substantial correctness. Our present subject is the performance of a comparatively young man, a series of detached essays, the aim and object of which it is almost impossible to discover, or perhaps we ought rather to say is so much overlaid with digressions, and so continually lost sight of by the author, that the reader may frequently well doubt whether his mind was really made up on the chief point in question, or whether he was only trying to find sufficient grounds for its enunciation.

The spirit of Rationalism is clearly enough defined in the introduction as—

“Not being any class of definite doctrines or criticisms, but rather a certain cast of thought, or bias of reasoning, which has during the last three centuries gained a marked ascendancy in Europe. It leads men on all occasions to subordinate dogmatic theology to the dictates of reason and of conscience, and as a necessary consequence, greatly to restrict its influence upon life. It predisposes men, in history, to attribute all kinds of phenomena to natural rather than miraculous causes; in theology, to esteem succeeding systems the expressions of

* *History of the Rise and Influence of the Spirit of Rationalism in Europe.* By W. E. H. Lecky, M.A. 2 vols. Longmans: 1865.

the wants and aspirations of that religious sentiment which is planted in all men ; and in ethics, to regard as duties only those which conscience reveals to be such."

The design of giving the history of this spirit is a grand one, but as we have hinted, cannot be said to be more than attempted by Mr. Lecky.

Its effects in theology and in ethics are scarcely touched on ; though the supplementary verifications of the doctrine afforded by an analysis of the results of modern political and industrial theories are carried out at some length. The religious theories of the author will satisfy neither those who look upon Christianity as of natural origin, and of imperfect ethics ; nor those who consider some portion at all events of its dogmas as not less important than its precepts of universal benevolence.

That succeeding systems of religion have been developed from each other, and that the first system was fetishism is seen very clearly. The sign of the cross is a decided fetish.

"It was adopted not simply as a form of recognition or as a holy recollection, or even as a mark of reverence, but as a weapon of miraculous power ; and the writings of the fathers are crowded with the prodigies it performed, and also with the many types and images that adumbrated its glory. So also with water ; and it may be questioned whether that form of fetishism which rejoices in the use of amulets was ever more prominent in paganism than in mediæval Christianity."

The anthropomorphic phase of Christianity is then noted, but the chain of reasoning is completely broken by a learned dissertation on Christian and religious art, which at last gives place to what is the best and most interesting portion of the book, viz., an account of the antagonism of theology to science, the rise and fall of persecution, and the permanent establishment of the great principles of toleration.

Some notice has been taken in the *Memoirs of the Anthropological Society* of the anthropological views of the early Christians. The opinions there expressed of their extreme hostility to scientific truth receive here fresh confirmation. We read of an old monk named Cosmas, who lived in the reign of Justinian, and who from the time he had embraced a religious life devoted himself zealously to the relations between scripture and science. Though suffering from "a certain dryness both of the eyes and of the stomach," he resolved to employ the remainder of his life in the composition of a great work, which was not only to refute the 'anile fable' of the Antipodes, but was to form a complete system of the universe, based upon the teaching of revelation.

This precious composition was entitled *Topographia Christiana*,

and was defined as "a Christian topography of the universe, established by demonstrations from Divine Scripture, concerning which *it is not lawful for a Christian to doubt*. It is easy to imagine how, starting with this excellent axiom, the world is represented as a flat plane, of which the measurements are tolerably well known. Day and night are accounted for with equal sagacity. The sacred writers cannot, of course, be mistaken even in a word or letter, so that we need not be surprised to find, at last, that 'a Christian should not even speak of the Antipodes.'

"It is indeed marvellous that science should ever have revived amid the fearful obstacles theologians cast in her way. Together with a system of biblical interpretation so stringent, and at the same time so capricious, that it infallibly came into collision with every discovery that was not in accordance with the unaided judgment of the senses, and therefore with the familiar expressions of the Jewish writers, everything was done to cultivate a habit of thought the direct opposite of the habits of science. The constant exaltation of blind faith, the countless miracles, the childish legends, all produced a condition of besotted ignorance, of grovelling and trembling credulity that can scarcely be paralleled except among the most degraded barbarians. Innovation of every kind was regarded as a crime: superior knowledge excited only terror and suspicion. If it was shown in speculation, it was called heresy. If it was shown in the study of nature, it was called magic. The dignity of the Popedom was unable to save Gerbert from the reputation of a magician, and the magnificent labours of Roger Bacon were repaid by fourteen years imprisonment, and many others of less severe but unremitting persecution. A theological system lay like an incubus upon Christendom, and to its influence, more than to any other single cause, the universal paralysis is to be ascribed."

How the discovery of the New World and the labours of Copernicus and Galileo proved at last too strong for such deep-rooted superstition is an oft-told story, which will however bear to be read as here set forth even once more; but with all these merits we cannot think that Rationalism has altogether been properly represented. A history of Rationalism should comprise not only the verifications to be deduced from the irresistible logic of facts which have really taken place, but also a clear conception of the rules of evidence, which are always followed by mankind in matters as to which they have no prejudice, and which force themselves into notice occasionally even under the most disadvantageous circumstances. Isolated passages of considerable ability tantalise the reader, or shall we say give us hope that the writer may one day produce something worthy of his industry and his powers. To remind us what persecution has been is sometimes a good thing, but no one can expect to rival the wit or invectives of Voltaire. Still, when the Church would have us believe that it has

lost not only the power but the wish to coerce, it will bear reminding that if—

“ ‘See how these Christians love one another,’ was the just and striking exclamation of the heathen in the first century, ‘There are no wild beasts so ferocious as Christians who differ concerning their faith,’ was the equally striking and probably equally just exclamation of the heathen in the fourth century. And the reason of this difference is manifest. In the first century there was, properly speaking, scarcely any theology, no system of elaborate dogmas authoritatively imposed upon the conscience. But in the fourth century men were mainly occupied with innumerable subtle and minute questions of theology, to which they attributed a transcendent importance, and which in a great measure diverted their minds from moral considerations.

“ That the Church of Rome has shed more innocent blood than any other institution that has ever existed among mankind, will be questioned by no Protestant who has a competent knowledge of history. . . . When we add together all these various forms of suffering, and estimate all their aggravations; when we think that the victims of these persecutions were usually men who were not only entirely guiltless, but who proved themselves by their very deaths to be endowed with most transcendent and heroic virtues, and when we still further consider that all this was but part of one vast conspiracy to check the development of the human mind, and to destroy that spirit of impartial and unrestricted inquiry which all modern researches prove to be the very first condition of progress as of truth; when we consider all these things, it can surely be no exaggeration to say that the Church of Rome has inflicted a greater amount of unmerited suffering than any other religion that has ever existed among mankind.

“ Nor is this true only of the Roman Catholics. For when Descartes went to Holland, the reformed clergy directed against him all the force of their animosity, and the accusation by which they endeavoured to stir up the civil power against the author of the most sublime of all modern proofs of the existence of the Deity, was atheism. And some good people in Sweden desired to have Linnæus’s system of botany suppressed, because it was based upon the discovery of the sexes of the plants, and was therefore calculated to inflame the minds of youth.”

Persecution, however, was only one method by which Christian principles opposed themselves to the spirit of rationalism. Whether we read of the secularisation of politics, or of sound reasoning as applied to every form of industrialism, it is the clergy who stand forth as the inveterate enemies of either. The action of the church meets us at every page in these suggestive volumes; now as the judge, if not the creator, of magic and witchcraft; now the opponent of astronomy, of geology, and finally of anthropology; now, again, the director of every species of torture and persecution, its chief organs asserting that to see the tortures of the damned will be one of

the greatest pleasures of the elect, so that, according to an Anglican divine, "the hell described in the Gospel is not with the same particularity to be met with in any other religion that is or hath been in the whole world." And the same benevolent person, whose science appears to have been on a par with his religion, strenuously contended that the locality of this same hell was in the sun. The Christian doctrine of usury was not less hostile against enabling a man to do what he would with his own; and the orthodox doctrine that it was not necessary, or even proper, to keep faith with heretics, has perhaps been the most efficacious barrier to what is asserted to be one of the objects of Christianity, namely, peace and goodwill to all mankind.

It is customary now with a certain class of writers, who occupy towards morality much the same position that the "reconcilers" do towards science, to assert that all these exhibitions of hostility to the progress of mankind are quite alien to true Christianity, and should all be put down to the inevitable action of that powerful corporation which is called the Church. That the Church is an institution quite different from Christianity we are ready to admit; for it was in existence, in some shape or other, wherever a body of priests or intellectual rulers had at any time in the career of man come to a common understanding. Other men had laboured, and the Christians came into their labours. The temples and the temple lands were always, and not unjustly, the property of the dominant religion, whatever that might be. In every case it was the Church. But when the Church became Christian, it is idle to say that it did not represent the doctrines of that religion. To say that everything that it did that was right was Christian, and everything that was wrong was not Christian, is clearly absurd; for a similar process of reasoning, or rather assertion, can be made use of in defence of any superstition. To say that in essentials it has always been the same is only in a degree, not in kind, less offensive to facts; for still the question arises, what are its essentials? a question which has been very far from being answered always in the same way.

No doctrine can be more emphatically Christian than that of everlasting damnation. But even this has been recently pronounced as no longer legally the necessary teaching of English Christianity. The same authority would have full power to banish all the distinctive dogmas of our religion from the national church. And the national church it would still remain, even though it should cease to be Christian. But when the church ceases to be Christian, who can suppose that Christianity can survive that separation? When the revenues now applied to the service of dogma are handed over to those en-

gaged in the service and search of truth, wherever it is to be found, and whatever it may turn out to be, who imagines that the parting genius which will give place with sighing can long survive? or that the altar will be left standing when the priest ceases to live by it?

To assert that the church is of divine origin, and is destined to stand for ever, and yet to point out with most elaborate detail that it has always been the foremost enemy in opposition to truth, and has caused more bloodshed and injustice than any other power ever known, is only on a par with the reasoning which professes to believe that the Bible is inspired, and yet is invariably wrong whenever it attempts to explain or describe the operations of nature or the history of mankind. But to look upon the church as a great engine of education, the possession of which has always hitherto fallen into the hands of men who have never sought truth for its own sake, but only as the means of obtaining power, or at the very best of securing what is called salvation in another world, is compatible with looking upon it as a most powerful machine which has hitherto been always in the keeping of unworthy hands, and with a hope that the days are fast approaching when the secularisation of the church will form the last and most important chapter in the history of rationalism.

Not that such a result can be expected without a struggle. But up to the present moment, no one can tell on what point the final contest will take place. Could, indeed, the upholders of dogmatic Christianity be but compelled to join issue on some, or even one, definite question, the spirit of rationalism and of truth would know well how to arm its votaries for the battle. And as the science of mankind advances, such an issue must one day present itself. It was not till 400 years after his birth that the solemn question was put to the Roman senate, *Shall Christ or Jupiter be the god of the empire?* We all know what was then the verdict, assisted as it was by the presence of the emperor. A still more solemn question will shortly be brought before a still more august tribunal—Shall we be governed by the love of truth for its own sake, or by the doctrines of a failing superstition?

No one can doubt for a moment what answer that question, when once fairly put, will receive. But the important thing to bear in mind is, that it will not be a church which will support the cause of superstition, but a system of theology. A church is susceptible of every variation and of all possible development, but a theology which cannot stand the analysis of rationalism will endeavour to involve everything in its death-throes. We doubt not, however, that such egotistical efforts will be all in vain. The gradual abolition, not only of all religious tests, but of all inquiry into the religious opinions of others: the removal of every qualification, except those of willingness

and capacity from all offices now held by either the teacher or the priest up to that of the highest spiritual office in the land; the opening of our temples to the preaching of natural religion and the principles of morality as tested by experience; and the conversion of our museums and galleries into real temples of nature and of truth, will all precede the final decree which must for ever shut the mouth of self-seeking and exclusive superstition.

"Sooner or later the spirit of truth will be regarded in Christendom, as it was regarded by the philosophers of ancient Greece, as the loftiest form of virtue. A love of truth that seriously resolves to spare no prejudice and accord no favour, that prides itself on basing every conclusion on reason or conscience, and in rejecting every illegitimate influence, is not common in one sex, is almost unknown in the other, and is very far indeed from being the actuating spirit of all who boast most loudly of their freedom from prejudice. But there probably never before was a period, since the triumph of Christianity, when men were judged so little according to their belief, and when history, and even ecclesiastical history, was written with such earnest, such scrupulous impartiality. In the social sphere, although the amalgamation of different religious communities is still very imperfect, and although a change of religion by one member of a family not unfrequently produces a rupture, and causes a vast amount of the more petty forms of persecution, the improvement has been rapid and profound. . . . Already under the same influences, education at the universities has in a great measure lost its old exclusive character; and members of different creeds having been admitted within their pale, men are brought in contact with representatives of more than one class of opinions at a time when they are finally deciding what class of opinions they will embrace."

This is rather theory than what actually happens at college; but the next paragraphs are well worth meditation.

"There cannot, I think, be much doubt that the same movement must eventually modify profoundly the earlier stages of education. If our private-judgment is the sole rule by which we should form our opinions, it is obviously the duty of the educator to render that judgment as powerful, and at the same time to preserve it as unbiased as possible. To impose an elaborate system of prejudices on the yet undeveloped mind, and to entwine those prejudices with all the most hallowed associations of childhood, is most certainly contrary to the spirit of the doctrine of private judgment.

"Of the few who have obtained a glimpse of higher things, a large proportion cannot endure a conflict to which old associations, and, above all, the old doctrine of the guilt of error, lends such a peculiar bitterness; they stifle the voice of reason, they turn away from the path of knowledge, they purchase peace at the expense of truth. This is, indeed, in our day, the most fatal of all the obstacles to inquiry. Dissolution must precede formation. There is a period in the history of the inquirer when old opinions have been shaken or

destroyed, and new opinions have not yet been formed, a period of doubt, of terror, and of darkness, when the voice of the dogmatist has not lost its power, and the phantoms of the past still hover over the mind. It is in this season of transition that the temptations to stifle reason possess a fearful power. It is when contrasting the tranquillity of past assurance with the feverish paroxysms that accompany inquiry, that the mind is most likely to abandon the path of truth. It is so much easier to assume than to prove; it is so much less painful to believe than to doubt; there is such a charm in the repose of prejudice, when no discordant voice jars upon the harmony of belief; there is such a thrilling pang when cherished dreams are scattered, and old creeds abandoned, that it is not surprising that men should close their eyes to the unwelcome light. Hence the tenacity exhibited by systems that have long since been disproved. Hence the oscillation and timidity that characterise the research of most, and the indifference to truth and the worship of expediency that cloud the fair promise of not a few. . . . He who, believing that the search for truth can never be offensive to the God of truth, pursues his way with an unswerving energy, may not unreasonably hope that he may assist others in their struggle towards the light, and may in some small degree contribute to that consummation when the professed belief shall have been adjusted to the requirements of the age, when the old tyranny shall have been broken, and the anarchy of transition shall have passed away."

PREHISTORIC ANNALS OF SCOTLAND.*

THE annals of a country are the facts which successive generations have left on record of their origin, growth, and progress. Setting aside all that is legendary and fabulous, we may state that the facts are strictly of two kinds; those which are written on perishable materials, and those which are engraved, as it were, on the more durable monuments of stone and metal, hidden it may be within the bosom of the earth. The former are easily decyphered, and the writers being contemporary with the events they record, their statements are accepted on authority, and justly assume the name of history; whilst the latter, obscure in language, dark in symbolism, and without an interpreter, stand outside the sacred pale, and are condemned to the regions of the unknown. But the advance of science, continually enlarging the bounds of knowledge, reclaims from time to time portions of this *terra incognita*, and raises thereupon structures which history

* Prehistoric Annals of Scotland. By Daniel Wilson, LL.D. 2 vols. 2nd edition. Plates and Woodcuts. Macmillan: 1865.

may consecrate for her uses. Thus by the labours of a Young, a Champollion, a Rawlinson, have the monuments of Egypt and Persia been made to speak an intelligible language, and give evidence of facts that had lain for ages shrouded in mystery; the geologist has unsealed the pages of the great book of nature, and interpreted those mysterious symbols which tell of mighty wonders undreamed of by a former age; and the archæologist, although his pursuits have often met with discouragement and contempt, strives to penetrate the obscurity of time, and discover the secret links that connect the present with the past. Imbued with this spirit, Professor Wilson approaches the "Prehistoric Annals of Scotland," endeavouring to effect for her what the researches of Eschricht, Nilsson, Retzius, and others, have done for Scandinavia; by a patient and rigorous investigation of the traces of her primitive inhabitants, to establish her anthropology on a basis of pure induction. The result is fatal to some of the theories and opinions that had held orthodox sway in the archæological world; for it is shown that the Celtæ were not the sole primitive colonists of Britain, but were preceded by two or three human stratifications, whose existence, truly prehistoric in relation to contemporary evidence, may yet be attested by the memorials that are hoarded in her faithful soil. In the classification of his subjects, the author adopts the system of Thomsen in dividing the primæval æra into the stone, bronze, and iron periods; more applicable, perhaps, to Northern than British antiquities, still with a due regard to cautious application and necessary modification, affording the best clue to chronological arrangement of any yet proposed.

The earliest indications of the existence of man are found in connexion with fossil remains of animals whose forms belong to an extinct fauna; like them, he appears to belong to a palæozoic era, the date of which is at present conjectural, but is vastly beyond that which is currently assigned to the human genesis. Geologists refer us to postpliocene strata, and the author candidly confesses that "estimations formed as to the succession of races, the progress of arts, and the duration of time, since man's presence in Scotland, which were advanced as deductions from imperfect evidence, in the former edition of this work, have already become obsolete in the view of interpretations based on geological calculations of the apparent lapse of time." The picture drawn by him of the condition of the country at the era of its primeval occupation is as follows:

"A continuous range of enormous forests covered nearly the whole face of the country. Vast herds of wild cattle, of gigantic proportions and fierce aspect, roamed through the chase; while its thickets and caves were occupied by carnivora preying on the herbivorous animals,

and little likely to hold in dread the armed savage who intruded on their lair. . . Upon this singular arena archæology informs us that the primeval Briton entered, unprovided with any of those appliances with which the arts of civilisation arm man against such obstacles. *Intellectually*, he appears to have been in nearly the lowest stage to which an intelligent being can sink. *Morally*, he was the slave of superstitions. . . . *Physically*, he differed little in stature from the modern inheritors of the same soil. . . . His cerebral development was poor," etc.

Very remote traces of the aboriginal inhabitant of Scotland are seen in the canoes and boats hollowed out of the trunk of an oak, many of which have been brought to light in various lochs; in the Carse of Falkirk; and particularly during the process of reclaiming the Blair-Drummond moss, where cetacean remains with rude harpoons of deer's horn, an oaken quern, and flint arrow heads, were found at a level of fully twenty feet above the highest tide level of the Forth; manifestly showing that great geological changes must have taken place, and an immense interval of time elapsed, since those deposits were made. There was "the slow silting up of the estuary preceding or accompanying the upheaval of the original bed of the sea, with the imbedded skeletons of Balænae, and the evidence of the contemporaneous presence of man; nor was it till the bed of the ancient estuary had been spread out as carse land, channelled by the winding Forth, that the Roman legionaries left their footprints on its soil."

Scotland is rich in tumuli, some of which differ from those met with in England; the most numerous are the stone cairns which often enclose megalithic cists and galleries, similar to those of the chambered barrows, which are the most primitive, it would seem, of all the modes of sepulture. Then there is the cromlech with its Druid altar, fancifully so called; and simple inhumation without a superimposed mound. The practice of cremation and urn-burial was probably not introduced until the end of the stone period, but this is a point for further elucidation. With regard to cromlechs, the author observes, "We have no evidence that these are Celtic monuments; the tendency of present researches rather leads to the conclusion that they are not, but that they are the work of an elder race, of whose language we have little reason to believe any relic has survived to our day." Changes in sepulchral rites are most probably connected with changes of population. The dwelling places of this primitive people afford further evidence of the remoteness of the period in which they lived. Some of these, now consisting merely of rough oval pavings of stone, are found beneath eight or ten feet of moss resting on alluvium of gravel and sand, and seemingly "point to an era greatly more remote than that of the Sicilian historian or the Roman Cæsar." The most

singular and interesting class of objects of this kind is the "Wheems," subterranean dwellings or earth houses, from the Gaelic *uamha*, a cave, which are found in various parts of the Highlands, and are almost as numerous as the cairns. They are vaulted chambers constructed of large unhewn blocks of stone, which are made to overlap in an arched fashion to form the roof, like the cyclopean structures of Greece and temples of Mexico. They agree with the description Tacitus gives of the winter dwellings of the Germanic people. Within them are found ashes, bones, shells, querns, and sometimes stone celts and bronze weapons. In one remarkable instance in Orkney, implements of stone, horn, bone, bronze, and iron, were found associated with a large drinking cup made of a whale's vertebra! A singular fact connected with these cave dwellings is, that in general there is no indication whatever on the surface of the ground of what is underneath. In this particular they differ from what are termed Picts' houses, which are also chambered stone dwellings, but constructed on the level of the soil, yet so covered as to appear like a tumulus. There is a considerable resemblance between these curious structures and the chambered tumuli, yet sufficient differences between them to prove that they were intended for distinct purposes. These tumuli may be denominated catacombs. A remarkable one of the kind, discovered in the island of Barra, was found to consist of a central compartment and seven other distinct chambers, each separated by a large flagstone, and containing skeletons of men and dogs. The crania were described as presenting the Esquimaux type, short and broad.

Monoliths are seen in nearly every parish of Scotland, the original purpose of which is not very clear, but may have been stones of memorial or hoar stones. The *cat stones*, as they are called from the Gaelic *cath*, battle, probably mark the site of ancient battle fields. The *bauta stein* of Norway and Denmark corresponds to them. Perforated monoliths are curious examples of this class. The stone of Odlin near the Loch of Stennis was one to which a superstitious reverence clung even to comparatively modern times, for it was the custom for parties to ratify an agreement or contract by joining their hands through the perforation, and a contract so ratified was deemed inviolable, as made with Odin himself.

Second only to the temple of Avebury, in Wiltshire, are the stones of Stennis; circles of rude unhewn monoliths, popularly known as Druidical circles, a convenient phrase to cloak our ignorance of their real significance. But the groups of stones in Scotland are not all circular; there are also ovals, ellipses, semicircles, concentric and even cruciform groups. This variety of arrangement might imply

differences of creed, of age, or of purpose, on the part of their primitive builders. The cruciform group of Callernish in the Lewis seems to have been planned on astronomical principles, and it must have been at a very remote period, for late researches have determined that the stones had been founded on the boulder clay which is here covered by five or six feet of peat moss.*

The essential characteristics of the stone period, as the author observes, are embodied in its weapons and implements marking alike in material and workmanship the primitive state of man, whether existing in the Pacific Islands, or in the pre-historic era. Hoards of flint flakes are found deposited with skeletons and cinerary urns, the material of arrow-heads, lances, and knives. But the flint instruments of barrows may be distinguished from those of the drift. The latter are larger and ruder, "and suggest the idea of their fabrication by a race endowed with great physical strength, but of inferior and indeed infantine skill". The most peculiar stone instrument occasionally found in Scotland is what is termed a "flail-stone", a cylindrical stone, eight or nine inches in length and four inches in diameter, perforated at one end, by which it is supposed to have been fastened to a haft by means of a thong, like a flail. Some of the North American tribes used weapons somewhat similar. Gradations in skill may be traced in the fabrication of these rude instruments; the labour and ingenuity displayed in polishing and perforating some of them impress us greatly. But there are some spherical stones found that are not only polished but ornamented with various patterns. These may have possessed a talismanic virtue; such, indeed, was the reputed property of the Ardvoirlich stone in its silver setting, resorted to for the cure of disease in very recent years. Weapons of horn and bone are likewise found in cairns and barrows of this period.

Of domestic utensils: pateræ of stone and lamps, such as are still in use in the Feroe Islands are often found in the so-called Druidical circles in Scotland. Querns abound. Of personal ornaments: beads of jet and bituminous shale or cannel coal, of glass and pebble are common. From the previous data the author infers that "the first appearance of man as a colonist of the British Islands dates back to a period compared with which the earliest authentic data belong to recent times. History, indeed, only deals with the mysterious obscurities of Britain's dawn as the ante-Christian period draws to its close; and even then with such partial and uncertain glimpses, that far more is left to conjecture than all which it reveals. . . . We have an inter-

* It is a noteworthy fact, that many kinds of monuments of the Stone period found in Scotland, are common throughout the south of India on mountain ranges, and in wild and sequestered districts.

val . . . at the lowest computation exceeding by thousands of years Britain's chronicled era." But how and by whom was this vast interval peopled? We must interrogate the tomb, and there seek what information may be obtained in respect to its primitive and successive occupants. Will the fragile mouldering skull tell us of the warrior's race? What do we find? The most ancient type of skull disinterred from the sepulchral chambers of British tumuli is the elongated, kumbecephalic or boat-shaped skull. To this longheaded race succeeded apparently one of the short or brachycephalic form of skull. The former have been obtained from the megalithic chambered barrows and cairns of Scotland and long barrows of the southern counties of England to the borders of Scotland, indicating the extensive prevalence of a primitive indigenous race. In a few long barrows skulls of the latter have been found in association with those of the former type, as in Peru, and under circumstances suggestive of the idea of slaves or captives slain in funeral rites. The brachycephalic type becomes predominant in earthbarrows of the centuries immediately preceding the Romano-British era, in the northern and southern parts of England. This was an Allophylian, perhaps a Turanian race. But crania of the extant Celtic race in Wales, Ireland, and Scotland, differ from this the brachycephalic type of the ancient British. The true Celtic type is still a matter of doubt. The author is led to the conclusion that "the Celtæ of Britain intruded on the second Allophylian or brachycephalic race, long prior to the dawn of definite history, introducing among them the higher arts of the Aryan races." And so we arrive at the Archaic or bronze period. In the present state of our knowledge of the subject, it is an open question as to whether the use of metals and the art of metallurgy originated with the ancient British people, or whether they were of foreign introduction. There can be no doubt that Phœnicians and Greek colonists were attracted to this country by its mineral wealth at a very early period, and if they did not teach the ancient Briton the art of smelting and alloying his metals, at all events they taught him their value as articles of traffic. It seems probable that unaided reason may have directed the Briton to the use of gold and copper, which are found in a native state pure; but that the art of alloying copper with tin, and of smelting the iron ore were most probably learned from intercourse with a race more advanced in civilisation than himself. Ornaments and weapons of pure copper have been found in Scotland; a large copper axe of unusual form was found in 1822 at a depth of twenty-two feet in Ratho-bog, near Edinburgh. "It lay embedded at a depth of four feet in the blue clay, over which were deposited seven feet of sand and an accumulation of nine feet of moss." This seems to carry its anti-

quity back into a very remote era. Gold, which was formerly found more abundantly in Britain than it is now, may have also attracted the notice of the barbarian and yielded to his rude manipulation; nevertheless, the ring-money, armillæ, and torcs, being articles of skilled workmanship, point to a foreign source of supply, though this may apply with greater force to the early than the later period of the bronze era. A pair of armillæ of pure gold found in a rude urn in Banffshire, had been evidently made by simply hammering and bending into form, as they retain the rough marks of the tool upon them.

The transition from the stone to the bronze era was in all probability slow and gradual; but when the art of metallurgy was fully established, it would undoubtedly have the effect of producing a great social revolution, and change in the aspect of the country; but we believe that the primitive implements of the stone period were never entirely superseded and abandoned. The proofs of native working in metal are afforded by the numerous discoveries of celt, dagger, and sword moulds of stone, in which those weapons were cast. The moulds, as well as the casts, evince a notable progression in art. "The rude chip-axe improves into the highly polished wedge and celt; this in its turn gives way to the sand-cast axe of copper, or to the hammered weapon moulded in the indented stone. The more useful bronze next displaces the too ductile copper, and the celt and spear-head follow, gracefully moulded into form in the double matrix of stone or metal." We omit to particularise the various kinds of weapons and implements which receive their appropriate illustration in this excellent work, with the exception of the leaf-shaped sword, which bears a general resemblance to that of Denmark, Gaul, Germany, Italy, and Greece, suggestive of the idea of an extensive international intercourse; and we must remark on the smallness of its grip indicating the smallness of the hand that wielded it, which is characteristic of primitive races, but not of the Teuton. In the tumulus it has been found lying beside the urn, broken in two, as if the last honours paid to the defunct warrior had been to break his well-proved weapon, and lay it by his side, in proof that his work was done—his warfare accomplished.

The early influence of artistic and æsthetic taste, such as it was, may be recognised in the fictile vessels of domestic and sepulchral use, many of them displaying a shape and ornamentation in which we may trace a notable advancement in art from the more primitive vases of coarse material, unartistic form, and undecorated exterior; from the hand-made, sun-dried urn to the mechanically moulded and kiln-dried vessel; all full of interest as examples of native-skill, and indications

of the development of an art, that had its origin in the necessities of nature, but received its improvement under the influence of the inventive and imitative faculties. There is often a great contrast seen between the rude cinerary urn and the character of its accompaniments, consisting of personal ornaments of gold, jet, or shale, in the shape of beads, armlets, or necklaces. These are often so highly wrought and manifest so much ingenuity, that the author is induced to think that the Ancient British were not ignorant of the use of the turning lathe, or of some equivalent to it, as well as the potters' wheel, although these appliances are generally referred to Roman influence. The author observes, "while works of the Anglo-Roman period executed in shale, and with obvious traces of Roman art, are abundant, rings and armlets of polished shale occur even more frequently than the beads and necklaces of the same material among the contents of Scottish cairns and barrows, lying beyond the confines of Roman influence, and where no traces of their arts and arms have been found." But may we not err in restricting those confines within too definite limits, and may not these very articles be the evidence required? The "Druidical Adder-stones", which are beautifully formed and variegated glass beads, are unquestionable objects of extraneous manufacture, and the symbols possibly of a wide-spread and common superstition.

But it is time to ask who were this ancient people who, whether they originated amongst themselves, at all events practised the arts of metallurgy; who were devoted to the practice of cremation in the disposal of their dead; who enjoyed the distinction of a regular priesthood, who finally settled down from a nomade to an agricultural condition of life? Surely they were not the painted savages whom history depicts. They were an offset from the great Celtic tree that had a European range, planted on this British soil a thousand years at least, it may be, before the Christian era, and which Cæsar on his arrival found a hardy flourishing sapling, and withal more easy to bend than to break. They were in fact a people awaking, as it were, from a restless dream and emerging from the night of barbarism into the dawn of civilisation. As anthropologists we inquire, do their physical characteristics bear out the idea of their mental superiority to the races that preceded them? What was the conformation of their crania? This is a question still *sub judice*. Has the practice of cremation rendered the data necessary for its solution more difficult of access than otherwise might be? We invite the assistance of our brother antiquaries to the determination of this curious and important inquiry.

We have now arrived at the iron portal that opens on the historic

era; and are prepared to enter upon the consideration of the second volume of this valuable work, which treats of the iron and early Christian periods.

No invention has done so much to revolutionise the world in its social and political aspects, as the discovery of the method of utilising iron and applying it to the various requirements of civilisation. Though anterior to historical records, the period of its introduction marks an era that stands out in bold relief from the periods that preceded it. It was the birth-time of those Arts which have required the lapse of two thousand years and more for their full development and maturity; a space of time that carries the mental vision a long way back into the vista of the past, and yet is but a portion of that unmeasured space that separates us from the age of stone, when art itself had hardly wakened into life. If the introduction of bronze marks a new era of human progress, still more does that of iron; it was an innovation on established customs, though the changes consequent on its presence were probably not much recognised at first, its introduction being of a gradual and transitional character; but as the knowledge of its value and uses extended, an impulse would be given to barter and traffic, for we presume that Britain was indebted to foreign intercourse for the knowledge of the uses of this metal. Its rarity in a metallic form, and in that respect differing from gold and copper, would necessarily keep the people in ignorance of its use, nor can we readily imagine that the method of smelting its ores was a result of unaided native ingenuity. It is probable that Britain was colonised at long intervals by three distinct families of the Celtic stock, the Gael, Cymri, and Belgæ, each of whom would introduce improved arts into his adopted country. It is well-known that the Teutons and Cimbri were familiar with the use of iron weapons long before the time of Cæsar's invasion of Britain, and as there was in Cæsar's time free intercourse between Gaul and Britain; and, as classical writers inform us that the bronze leaf-shaped sword had been long superseded in Gaul for the iron weapon, we may infer that similar changes had also taken place here. Tacitus describes the Caledonians as "a strong warlike nation, using large swords without a point, and targets, wherewith they artfully defended themselves against the Roman missiles". It is not so easy to say how the Teutons and Cimbri became possessed of their great secret, but we know that one at least of the earliest European sources of iron, as well as gold, was the country of the Norici, lying to the south of the Danube, the people who are said to have invented steel. Noric swords were as celebrated at Rome in the reign of Augustus, as Damascus blades or Andrea Ferraras in modern times. Another

source may have been Scandinavia, for it is remarkable that the stone period in Norway was apparently succeeded by that of iron without the intervention of the archaic or bronze period; whence we may infer, perhaps, that her population possessed an earlier knowledge of the use of iron than did some other countries. Still all the legends of the country, and they are legion, point to an Asiatic origin for it, and Teutonic traditions place the forge of Wayland Smith somewhere in the Caucasus. Nevertheless Britain long preceded the Scandinavian regions in civilisation, "nor was it till she had been enervated alike by Roman luxury and by the intestine jealousies and rivalries of her later colonists, that Scandinavia, fresh in young barbarian vigour, made of her a spoil and prey."

Whether iron was manufactured in Britain before the Roman invasion it is impossible to determine, though there seems to be probability in the supposition that the Roman on his arrival found iron and lead works, as well as copper and tin. Tacitus refers to the metallic wealth of Britain; Pliny alludes to the smelting of iron; Solinus speaks of its use; Cæsar found iron ring money in Britain. The Romans unquestionably gave an impulse to its manufacture. That they smelted the British iron ore there can be no possible doubt, for in Sussex and in Yorkshire the sites of their furnaces are known; even in Scotland, so far north as in Sutherland have the marks of ancient iron works been noticed. Islay was celebrated for its "Islay blades"; and Blair Atholl has its "Dail-na-Cardoch", the dale of the smith's shop; and "Dail-na-mein" the dale of the mineral. But these Highland traditions and memorials point to a knowledge of the art independent of Roman influence; for Scotland, unlike her sister England, did not receive the Roman as a civilising conqueror; her native tribes always resisted his occupation as an intrusion on her soil, and what he effected was chiefly of a military character and was comparatively of short duration and limited extent. The vallum and forts extending between the Forth and the Clyde, the work of Agricola and Antonine, were constructed for the defence of the newly-conquered territory which extended from the frontiers of England; beyond this, the Romans obtained no permanent footing in Caledonia. This territory they held for about seventy years only, yet during this brief period the rude Caledonian barbarians must have felt the silent influence of that superior civilisation which forsooth they would have driven from their soil. It is not necessary to dwell on the memorials of Roman occupation, as these have been fully treated on in works devoted to the subject.

The museums of Glasgow and Edinburgh contain many altars and sepulchral tablets found chiefly in the line of Antonine's wall, mute

but faithful witnesses of facts and occurrences respecting which contemporary writers are silent; such records are, therefore, truly "prehistoric", and demonstrate the value attached to such ancient monuments, and argue the necessity of their preservation; the information thus supplied is often more trustworthy than that which is derived from the pages of the annalist.

The construction of strongholds for purposes of defence and protection mark the progress of civilisation. From the scarped hill and small hill-forts of earth and loose stones, to the skilfully planned stronghold with its deep fossæ and lofty encircling valla, is an advance in military strategy that may mark the progress of a nation from the stone to the bronze and iron periods. It is very difficult, however, to assign a date to these, as well as to other cognate structures, the vitrified forts, the Pictish burghs, and the crannoges of the Scottish lakes, from some of which weapons of iron, as well as of bronze, horn and stone have been recovered. With regard to fictile ware, Roman influence seems to have had but little modifying effects on the productions of native Scottish arts, which retained their rude and primitive style until the Anglo-Saxon æra: not so with objects of a metallic nature, in which we may trace a notable improvement in workmanship and artistic design. The snake-like forms of many bronze armillæ and torcs may undoubtedly have caught the inspiration of Scandinavian art, but it has been too common an error to attribute all elegance or originality of design in ornaments of a personal kind to Norway and Denmark. Such has been remarkably the case with the interlaced pattern, or "runic knot-work", which figures on metallic ornaments and on stone monuments, and which has been frequently referred to a Scandinavian origin without the slightest evidence. There is one class of relics consisting of fibulæ, armillæ, torcs and chains of silver which distinctly belongs to the period we are now considering. Valuable examples of such are to be seen in the Scottish Museum.

There is nothing, perhaps, sufficiently characteristic to distinguish the sepulchres of this late Pagan æra previous to the introduction of Christianity from those of the periods that preceded it: but it is only in the last that remains of the war chariot and horse have been found. "It is only in this last period, when we have reason to believe that a new race of colonists had brought with them to the British Isles many novel arts and customs, that we clearly trace the evidence of the horse having been subdued to the service of the northern Briton, or find the relics of the war chariot among the contents of the tomb or beside the urn." The war chariot is of itself an evidence of skill and of progress in civilisation. The admixture of the Teutonic race

with the British Celtic and the inroads of the Roman legions conspired, no doubt, to produce a great diversity in the later heathen sepulchral rites before they experienced a great and final revolution by the subversion of the ancient superstitions through the influence of a new and nobler faith. And this brings us to the Christian period, not strictly pre-historic, it is true, but dependent very much for its illustration on the monuments and works of art which belong to the traditional stage of its history.

After the retreat of the Romans, North Britain was divided into the kingdoms of the Picts, and Dalriads or Scoti. Of the Irish derivation of the latter there can be no doubt: the migration took place about the beginning of the sixth century. With regard to the former people, after all the learning and controversy displayed on the question of their origin, the ignorance of monkish fable and extravagance of bardic legend, the result seems to be that the Picts were simply the original native population common in part to Scotland and Ireland, and also to Wales. They composed the tribes that united under Galgacus to repel the Roman invasion, and occupied the country, perhaps, to the third century. The Dalriads or Scoti, supposed, not without reason, to have been of Iberian descent, and settled in Ireland, were an intrusive people, who, after a long struggle with the Caledonian or Pictish tribes, succeeded at length in obtaining the supremacy, and founded the little Scotie kingdom in what is now called Argyleshire. Close intimacy and intercourse subsisted between Scotland and Ireland, but the great fact with which we have to deal is the introduction of Christianity amongst the native tribes of Caledonia, which occurred about the close of the fourth century. Of Ninian, Palladius, Columba, and other holy men and missionaries; of Whithern and Iona, the seats of the earliest ecclesiastical edifices in Scotland, we need not speak, as their history is sufficiently well known, but we must advert to the fact, admitted by northern antiquaries, that Scotland and Ireland were Christianised centuries before Scandinavia. It was not until the ninth century that we find authentic traces of the Vikings on the Scottish shores, and then as pirates and marauders; and it is impossible to doubt that "numerous ecclesiastical fraternities had been established on the mainland and surrounding islands long before the natives learned to watch the horizon for the plundering fleets of the Norse rovers." First coming as a plunderer, afterwards as a conqueror, the Norseman established a permanent footing in North Britain, and for two centuries at least he exerted a notable influence on the civilisation of its islands and highlands, producing a mixture of race the evidences of which are still apparent in the national character of the people of Scotland.

We must now glance at a few of the existing memorials of this primitive Christian period, and first of the "sculptured standing stones". The "catt stone" near Edinburgh, one of which bears an inscription rudely carved in Roman characters, which has received various learned interpretations in connexion with its Celtic name of "Battle" stone, the last of which is epitomised in the title of an ingenious essay by Professor Simpson. "Is it not the tomb stone of the grandfather of Hengist and Horsa?" We should be inclined to reply, as these are deemed by some to be mythological personages, the idea is rather a shadowy one. But the most remarkable monument of this class is the so-called Newton stone, bearing an inscription which has puzzled the brains of learned men of all time: it is Phœnician; it is Greek; it is barbarous Latin; it is neither the one nor the other, but the language is Hebrew and the characters are Buddhist! And the inference drawn from this singular and ingenious discovery is, that a Buddhist colony, consisting of converted Hebrews, had visited the shores of Scotland as missionaries of the Buddhistic faith two or three centuries before the Christian æra, and erected this memorial to one of the brethren. Here is another nut for anthropologists to crack!

But the sculptured stones of Scotland, with their Ogham and Runic inscriptions, mysterious symbols, and beautiful yet primitive designs, have received such ample illustration in the learned work of Mr. Stuart, of the Society of Antiquaries of Scotland, and as on the appearance of his forthcoming volume we propose to devote an article to this interesting topic, we shall not now dwell on that subject. It is a remarkable fact that by far the greater number of sculptured stones of the early Christian period are not found within the original limits of the Scotie kingdom, where Irish influence prevailed, but in the north districts between the Moray Frith and the Tay. They differ in certain peculiarities from similar monuments found in England, Wales, and Ireland; and also in Norway, Sweden, and Denmark, so that the theory of their Scandinavian origin must be abandoned, and although great obscurity involves both their date and origin, they must be deemed to be specimens of ancient art, peculiar to Scotland. The comparative isolation of Scotland was favourable to the development of a peculiar style resulting from the modification of primitive designs, and their retention to late periods, uninfluenced by the mediæval styles of art of other countries.

But Scoto-Scandinavian relics exist, in the shape of sculptured crosses and rune-stones in the Isle of Man, which was an integral part of the Norse kingdom of North Britain; and in brooches and other personal ornaments, and weapons disinterred from the graves

of Orkney and the Shetland Isles. One curious class of relics of this kind consists of bronze vessels made in the shape of monstrous or mythological animals, reminding one of specimens of fictile ware that have occasionally been found in England of analogous patterns.

Nor is there any want of Anglo-Saxon remains in Scotland, which is not to be wondered at, considering that the kingdom of Northumbria extended its northern boundary to the Forth. But the eastern shores of Scotland received their Teutonic immigrants prior even to the intrusion of the Northmen. The Teuton gradually acquired predominance in the Scottish lowlands, where the Celtic race was never formally superseded as in England, but "merged into the Saxon by gradual and peaceful steps." Hence there is not that contrast between the remains of the Anglo-Saxon and the older native race as is found in England. The remains of the Anglo Saxon are chiefly of a later æra of Christian art, and are chiefly seen in ecclesiastical structures. There is, however, one celebrated relic, the Ruthwell cross, which is inscribed with Anglo-Saxon runes, and as the most important runic monument in Britain has excited great and deserving interest.

To this also a Scandinavian origin had been assigned: but Mr. Kemble pointed out the Anglo-Saxon character of the inscription, which, by a curious coincidence, was proved to be a portion of an Anglo-Saxon poem of the ninth century, entitled the *Dream of the Holy Rood*. In reference to the discovery of some very curious specimens of chessmen of this æra, in the Isle of Lewis, and which like other relics of ancient art have been erroneously attributed to Scandinavian influence, the author observes, "the farther we pursue this investigation into the history of primitive native art, we find the less reason to assign to it a foreign origin, or to adopt the improbable theory that the rude Scandinavian rovers brought with them from the pagan north new elements of civilisation and refinement to replace the Christian arts which they eradicate at the point of the sword." The author is justly jealous of the claims of his country to originality of conception and to the ingenuity displayed in embodying it in execution.

With the exception of the round towers of Brechin and Abernethy, which are the counterparts of those of Ireland, and were undoubtedly built subsequently to the introduction of Christianity, and are probably Culdee memorials of the eleventh or twelfth century, there is nothing to mark a distinction in the Romanesque style of architecture of the churches of Scotland and England. The same style of building, instances of which are not rare in Scotland, exists in both countries. Some interesting specimens of early art have been reco-

vered in the small portable bell and crozier of the primitive bishop; and we must make special mention of the golden chalice of Iona, perhaps the most interesting ecclesiastical relic that Scotland possessed, but which, alas! is now no more. It was treasured for years by the Glengarry family, until it was presented some years since to the Roman Catholic Bishop of Glasgow. The sacristy of St. Mary's was broken into in 1845, and the golden chalice of Iona shared the fate of numerous other invaluable relics of ancient art.

In his concluding remarks, the author, having alluded to the influence of geographical conformation on the direction of the lines of primitive Asiatic migration into Europe, thus speculates,—

“Of this comprehensive system of ante-historical research the archæology of Scotland forms the merest fractional item. It is indispensable, however, for the integrity of the whole; and as I believe that it is not at Babylon or Nimrud, but at the northern steppes of Asia that the primæval history of the elder continent must be sought; so also it is not in the annals of Greece or Rome, or in the antiquities of the most ancient historical regions, modified by their arts and arms, but in Ireland, Scotland, in the Scandinavian countries, and in Switzerland that we may hope to recover the unadulterated first chapters of European history. The precise conclusions to which we have been led, in relation to Scottish archæology, are such as amply accord with this idea. The Celtæ, we have seen reason to believe, are by no means to be regarded as the primal heirs of the land, but are on the contrary comparatively recent intruders. Ages before their migration into Europe, unknown Allophylian races had wandered to this remote island of the sea, and they in their turn gave place to later nomades, also destined to occupy it only for a time. Of those anti-historical nations archæology reveals the traces. Hitherto both the historian and the ethnologist have ascribed their remains to the later Celtæ, the first historical race of Northern Europe, introducing thereby confusion and cumulative error into all reasoning on their data. Those elements of history can only be rectified and properly adjusted when the primitive archæology of the various countries of Europe has been sifted and treated in detail.”

Much indeed remains to be learned, and much to be unlearned too, before we may arrive at any safe conclusions on the relations of the races who may be generically denominated “the ancient British” people.

It is unnecessary to eulogise a work that has already received its meed of public approbation; we must nevertheless remind our readers that this second edition appears in a different phase from its predecessor. In the author's own words, “The progress of antiquarian investigations, and the value they have acquired in recent years in relation to other studies, render the changes demanded in a second edition unusually extensive. I have accordingly availed myself of

the opportunity to remodel the whole. Fully a third of it has been entirely rewritten, and the remaining portions have undergone so minute a revision as to render it in many respects a new work." It is indeed a most valuable contribution to anthropological science; nearly always philosophical in spirit, generally accurate and painstaking in details, it will do more to raise archæology above the sneers and unmerited contempt of the intelligent part of the community than any work which has hitherto appeared on the subject; whilst to the scientific student of historical anthropology it commends itself at once by its obvious merits. The object of these studies is to draw aside that dark veil which at present hides the features of the pre-historic past from the fulness of our view; some glimpses indeed have been obtained, but we want more light; and even this is not a vain and hopeless aspiration whilst there are so many able, earnest, truth-seeking torch-bearers in the field. We watch and wait!

BODICHON ON HUMANITY.*

THERE are two classes of French books more interesting to scientific men than any others. These two classes are such as are crowned by the Institute (*couronné par l'Institut*), and such as are persecuted by the Government. To the former class belongs, among many others, the famous *History of Semitic Languages* by Renan; to the latter, the work now before us. A book professing to treat at any measure of length, and with any degree of system, on so wide a field as humanity, must have on anthropologists peculiar claims, and be scrutinised by the students of that science with the closest attention, and allowed every meed of respect possible to be bestowed upon it. But when such a work comes with the extra recommendation of governmental persecution, and is the work of a medical man in that great French colony now justly occupying the attention both of an emperor and of thousands of less prominent individuals—when it is printed in Algiers itself, and the course of its printing checked by departmental authorities, and finally emerges into the world in the free air of a Swiss capital,—such a work, the writer opines, is more especially worthy of consideration at the hands of the lovers of science or of humanity.

Though published twelve years since—and the worthy doctor is careful to inform us of the exact dates when the printing and publica-

* De l'Humanité, par Bodichon, Docteur en Médecine à Alger. Genève: 1853, quarto, double columns, pp. 176.

tion began and were completed—anthropology has not so entirely changed its aspect as to render the book obsolete or behind the times. All anthropologists know what an immense impetus the discovery of the lacustrine habitations, the weapons of the stone ages, the Danish and Scottish kitchen middens, has given to our studies; but though the veil which hides from us the early progenitors of our races, had not been drawn aside so far at the period when Dr. Bodichon composed his work, yet many of his ideas have been confirmed by recent discoveries, or illustrated by national events, thus fairly demanding from us a honourable hearing upon questions yet concealed from us.

A speculative book is always a difficult book to summarise. There is the primary objection to it, that it has to assume so much, that it necessarily must be dogmatic in tone, and that the writer himself, as it were, inspired with the entire idea of his production, has an eminent advantage over the reader, who finds on the first page an assertion the proof of which lies remotely buried amidst a mass of illustrations, arguments, and inferences, separated from it, perhaps, by half a volume, and tedious to the patient student to eliminate. Such a book truly resembles nature and the universe itself, where heaped in apparent chaos, but, probably, nay, almost certainly, general order, lie the fragments whence humanity has to reconstruct the edifice of its lost history—to rediscover the landscape changed a million years ago—and by which to penetrate into the arcana of nature itself.

But there is a secondary objection to a work of speculation like the one before us. And that is, that though the writer may himself have accumulated vast stores of learning upon every conceivable topic necessary for the illustration of his central idea, it is humanly impossible that he can have so probed the depths of each of these sciences, as to present their inductions and results with uniform verity; and, perhaps, it is this very inequality of effort which is the best guarantee for our ultimately arriving at a high degree of approximation to the truth in our speculations upon the origin of this earth, at least, if not, with similar fulness, upon the nature of cosmical bodies more remote from us.

However, when a labourer in this arduous field boldly steps forward and sets forth many doctrines at variance with the received views of his age, in the writer's opinion he is entitled to be exempt from the process of squelching until his arguments have been calmly considered. Surely, there is a great want of logic, and an infinite evidence of timidity, on the part of those who are terrified at doctrines being asserted controverting the established state of things.

Dr. Bodichon divides his work into six books of unequal length.

The first book, comprising about a fifth of the whole, contains the cosmological, geological, and ethnographical portions of the work, leading in its concluding sections through some singular psychological considerations to the second book, devoted to a social and political review, to which we will make subsequent reference. Our space here will not admit of so full a report upon the contents of each chapter as might be desirable, but the more salient points can be touched upon without unnecessarily increasing the length of this article.

The Creator is (dogmatically) represented as a being of ceaseless activity engaged in recreating and destroying portions of his universe, which is infinite. Chaos is a myth; the earth on which we live is, together with the planets and the present sun, merely a larger structure of a fiery nature cooled down into second astral groups. The earth was vaporous and so forth.* It is not too much to say that this eternally similar story is so wearisome, that it may be dismissed and passed over for more practical points. Unlike most learned systematisers, Dr. Bodichon appends no notes, makes no citations, and gives us no clue as to whence the principal ideas enounced in his book are primarily derived. Of course, these several ideas are common to the memory of most readers on cosmogony, and those who wish to verify can do so without much difficulty; most persons will, the present writer thinks, be more inclined to regard the unattainable as best left alone. So much, within our power, remains to be discovered, that the question of cosmogony in itself, may well be left to be considered at some period when science has shed its wisdom teeth, and sunk into senility, preparatory to the tomb.

But, if the cosmological inductions of M. Bodichon are not remarkable for novelty, they are, at any rate, so far a proof of an unprejudiced mind as to prevent his being terrified into slavish subservience to authorised opinions now, and perhaps for the last time, on their trial. That this world must succumb to the fate of other astral systems, and pass through a cataclysm at some period not very remote, geologically speaking, is his opinion; the necessity of such an event seeming to Bodichon to be reasonable upon chemical and other cosmical grounds. Yet for similar reasons of analogy we find him espousing the polygenistic side of man's origin; and here more legitimately we may begin to see what train of thought led M. Bodichon to the opinion.

Broadly stating that "it is repugnant to reason to suppose that the European rat was born of the same parents as the rat of Oceania,

* The growing of the earth at the expense of the air, an opinion advanced by M. Bodichon in 1853, we recommend to the consideration of Captain Drayson, who published a suggestive little book about 1857 on the subject.

from the same cause it is repugnant to belief that the German and the Australian had the same parents. If God had, for the whole of humanity, created but one couple, it would have taken millions of years for the children to have formed the races we now see in existence, with such opposite physical and moral types." And, now, defenders of the six thousand years theory, rejoice that the doctor is orthodox at your expense! If he concede the limited period, he abandons the monogenistic theory you have fashioned out of the primeval Hebrew myths! Hear the doctor, and sit at the feet of Gamaliel!

"Now," he continues, "this long existence of the human species" (*genre* is the French, anthropologists must translate as they will) "is not to be accepted; tradition, science, reason, demonstrate that it is recent. *I, therefore, admit a multiple creation of races*: furthermore, in consequence of the law of continuous progress, revealed by geology and history, I admit that the first created were the inferiors, and the last created the superiors." M. Bodichon regards the first created pairs to have been created in an adult state, but each couple suited to the climate and surroundings in which it was placed, and that, as the particular soil in which certain grains of wheat are sown modify the character and qualities of the product, so also with man diversely distributed over the earth's surface. Structurally, therefore, it may be deduced from the doctor's principal idea, men are brethren, but in kind and degree, not in physical or mental qualities. There is an archetypal resemblance, as between dog and wolf, cat and tiger, but no further to be talked of, as being really and absolutely identical. He expressly says: "Rationally and physically, parentage is truer than fraternity." And again: "Each civilisation is the result of the physical and moral organisation of the race which exhibits it. As every part of the globe offers its special vegetable and animal types, so also every part of the globe possesses its human race and its peculiar human types. The study of physical characteristics," he continues, "is the most important sphere of anthropology. Other sciences, history, archæology, numismatics, and philology, can only be auxiliary to it. Physiology will determine the origin and filiation of men as of other animals. Every anthropological classification should be made according to the organic structure, as the principle of life eludes our search."

These principles indicated, M. Bodichon descends into particulars, recommending the study of the inhabitants of the mountains and the plateaux, as being more primitive and less removed by long habit from their ancient centres; but he takes exception at some expressions employed in the terminology of previous ethnographers. "To be-

lieve that Asia peopled the world—to call nations Indo-Germans, Indo-Scyths, Indo-Malays—is a gross (*capitale*) anthropological error. These countries could not produce races so different as those so named. Fair (*blonds*) autochthones are not found in the Himalaya range, in the Altai, and other zones of central Asia; that portion of the globe is the home (*patrie*) of the yellow races.”

To hybridity of races M. Bodichon attributes the various aspects of mankind as now seen, everywhere the superior race stamping its own likeness upon the race inferior to it, and altering its features and general characteristics; but still the majority of races are found in much their original local centres, little changed by invasions and other disturbing causes. The mound builders of America linger near their ancient habitations, and the architects of Palenque, Uxmal, Ellora, have left their descendants near those ancient structures. Such may serve as a brief specimen of the general ideas of M. Bodichon upon the races of man. Each race, besides, has its destiny, its functions, and its use to general humanity.

It would be beside the present purpose to enter into the details of M. Bodichon's classification of man; such advances have since been made upon this head, that however valuable at the time, and useful when read in continuity with the remainder of his work, it would be out of place in this brief notice. Be it only said that he regards man as having been distinctly created at successive periods, and that to the first he counts the Australians, the Andaman Islanders, some tribes of Thibet, Siam, Formosa, China, New Guinea, the Hottentots, the Bushmen, the Lapps, the Samoyedes and Eskimos; the second comprises the Papuan, Polynesian and Micronesian Islanders, the redskins of North America, the Guaranis, the Caribs, Aztecs, Quichuas, etc.; to the third are allotted the Ethiopian, Kaffir, the Gallas and the Javano Malays; the fourth creation comprehends the Chinese, Japanese and Mongol races with their affiliations; to the fifth creation he assigns the Hindoos, Arabs, Jews, Irano-Caucasians, the Arameans, the Pelasgi (Hellenes and Roumans), Spaniards, Portuguese, Corsicans, Basques, Turks, Finlanders and Magyars; the final and sixth creation includes the Poles, Russians, Slovaks, Serbians, Croats, Illyrians, Normans, Danes, Swedes, Norwegians, English, French, Irish, Gauls, Celts of Scotland and the Teutonic races in general. The purpose of the creation of these numerous races M. Bodichon considers to have been that of serving the ends of progress, to be attained by a continual battle with innate desires and outward adversities, with a final triumph over the forces of nature, and the reign of perpetual happiness, but not after the fashion of the millennium of Dr. Cumming or learned enthusiasts of other creeds.

M. Bodichon having, to his satisfaction, though it seems somewhat empirically, settled the distribution and successive appearance of human races upon the earth, next proceeds to semi-political vaticinations as to the specialities of the millennium, and its mode of gradual evolutions. Inferior races are to be absorbed or destroyed before their superiors, and M. Bodichon pushes this doctrine to such an extreme, that he most unquestionably has overstepped the natural boundary of science. To enter into speculations as to *why* man was created is undoubtedly to forsake the realm of Positivism, and to replunge into the slough of metaphysics, by men of science left to thinkers rather than experimental observers. The chapter discussing this abstract point may therefore be passed over.

Dr. Bodichon considers that the races of greatest continuance have been those most applying themselves to the cultivation of the soil, most intermarrying among themselves, and (though this is beside the scientific question) most applying the doctrine of fraternity. Indeed, here may be seen the reasons why the government persecuted the book; ultra democracy, whatever view may be taken of it generally, was obtruded into a book purporting to be purely scientific, and hence its subsequent fate. His conclusions are, that wherever a race is seen to be smitten by great calamity, the three principles above stated have been violated, and that it is justifiable to destroy that race—hence the necessity for destructive personages.

A few instances of some very curious fulfilment of our author's speculations, and we will lay the book down. The principal instructors of the human races in their several orders, according to M. Bodichon, are North America (representative of liberty in all religious matters), France (that of Catholicity or the authority of one will), England (Protestant and oligarchical), and Russia (the absorption of religious and civil authority into one person); while Germany he regards as being an equilibrium upon these points. Other chapters of the book are occupied with the settlement of natural geographical frontiers. Our author, however, is singularly unfortunate in his speculations regarding Italian unity, which he deems impossible so far as Naples and Sicily are concerned.

The second book inculcates revolutionary principles, and we may therefore leave them there. More curious are the speculations as to the future of the Negro and other races. M. Bodichon predicts—Negro governments in Brazil, Guayana, Venezuela and the Antilles. The West Indies will form an insular federation of blacks. Madagascar will be developed in like manner, and an African state will arise along the various shores of that continent. For Egypt, M. Bodichon predicts a period of national grandeur in the future, and

the initiator of this progress is to issue from the race of Fellahs, while Nubia and Abyssinia will resume a high position. But as all this, and as much more, is to be accomplished only by the result of an intermixture of races, we fear the time is far distant.

We will conclude this notice of a really curious and suggestive book by one short extract, which, written in 1852, has received in a sad and impressive manner its fulfilment in 1865.

"Between the shores of the Atlantic, the Gulf of Mexico, and the Rocky Mountains, the Anglo-American union will continue its development. *The Southern States will make war for some time upon those of the North, but they will finally be subdued, inasmuch as they are inferior to them in morality, activity, and equality. The Negroes will be emancipated by consent or by force.*"

But a Frenchman who deliberately anticipates, as M. Bodichon has done, that his own country is not destined to be at the apex of civilisation, is a phenomenon of some interest. We trust, therefore, his book will receive more attention than it has hitherto done.

ON ANCIENT BRITISH SCULPTURED ROCKS.*

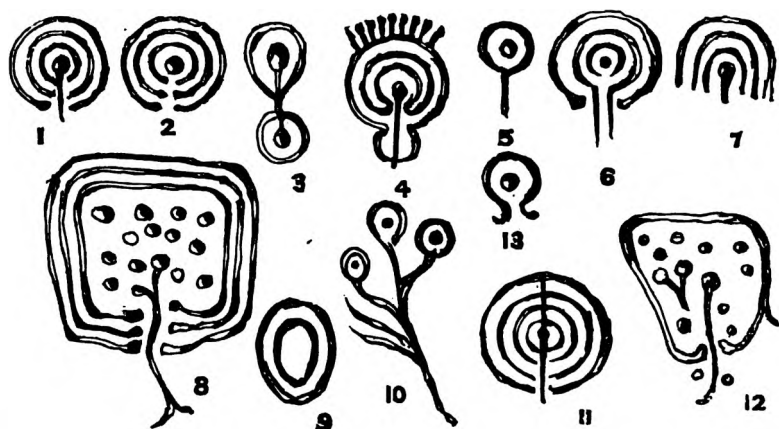
IN one of the counties in the north of England there exists a class of antiquities so rare as to be supposed to be unique to that part of the country. In the county of Northumberland there are fifty-three stones or rocks on which there have been discovered about three hundred and fifty figures.

Mr. George Tate, the accomplished and zealous Secretary of the Berwickshire Naturalists' Club, has recently issued a long hoped for memoir on this subject, and he thus describes the characteristic figures:—

"The most typical figure is composed of a series of circles around a central hollow or cup, from which proceeds a gutter or radial groove through the series of circles—*Fig. 1*, p. 141. In most cases the circles are incomplete or stop short of the radial groove; but in others, they are complete and join the radial groove; the distinction, however, is immaterial. This form distinguishes these sculptures from all others. Sometimes there is only one circle; frequently there are three or four; and in one case there are eight. The size varies from two inches up to thirty-nine inches in diameter. Some forms are true

* The Ancient Sculptured Rocks of Northumberland and the Eastern Borders, with Notices of the Remains associated with these Sculptures. By George Tate, F.G.S., Cor. Mem. Soc. Ant. Scot., Local Sec. of the Anthropological Society of London, Secretary of the Berwickshire Naturalists' Club. Alnwick: Blair, 1865.

circles, as if drawn by the help of an instrument; most, however, had been drawn without such aid, for they are irregular in outline—some bulged out in breadth, in the proportion of 13 and 14 to 12, others lengthened and pear-shaped. Usually the groove is straight, but sometimes it is curved and wavy, and oftentimes extended beyond the outer circle. The groove is very generally down the slope of the rock, but occasionally it is across the slope.



"Another highly typical figure consists of incomplete concentric circles around a central hollow, but having no groove—*Fig. 2*. The passage out of figure 1, is as it were, by a hollow way; but out of this by a causeway.

"These incomplete circles sometimes end in hollows.

"The groove passing through the concentric circles, sometimes is diametric—*Fig. 11*; but this is not frequent, and occurs chiefly in compound figures.

"A circle or circles around a cup, but with the groove extended from the circumference of the outer circle—*Fig. 5*.

"Incomplete concentric circles around a cup, and with two parallel grooves from the ends of the inner circle—*Fig. 6*.

"Another figure similar to this, has one groove from the central cup and another parallel to it from the outer circle.

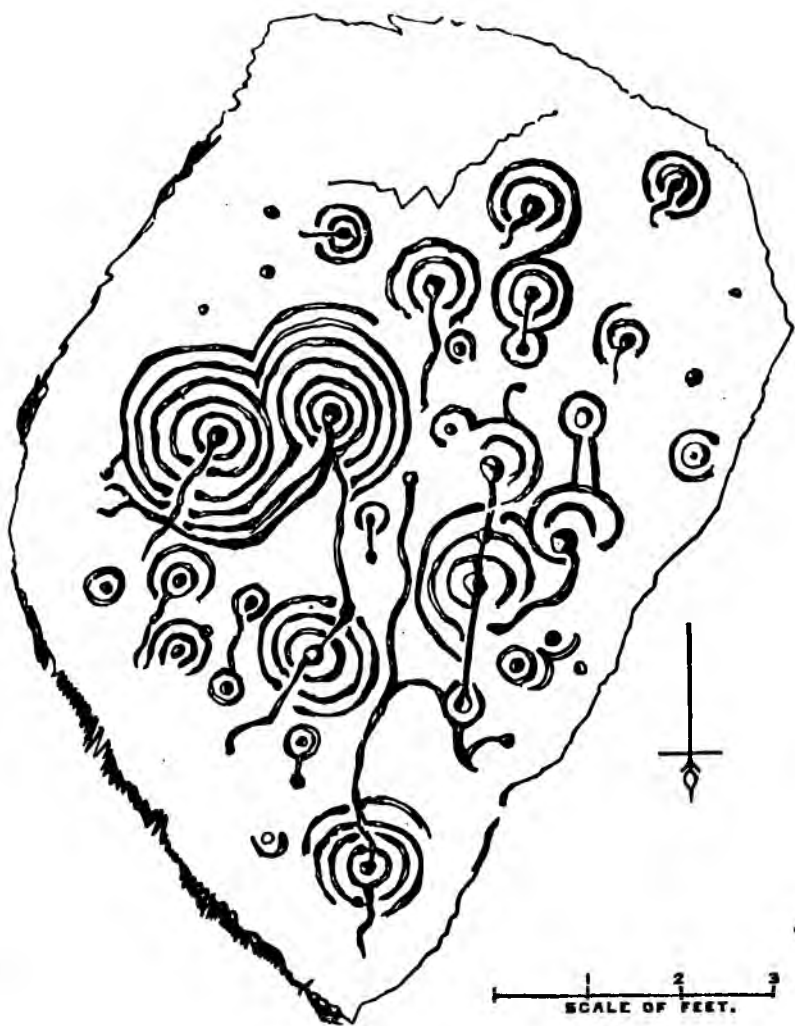
"Concentric arches over a cup, from which there is a straight groove—*Fig. 7*.

"Horse-shoe figure around a cup—*Fig. 13*.

"A figure of the common type, but with the addition of nine grooves radiating from the outer circle and directed southward—*Fig. 4*.

"Some figures inclose more than one cup; two examples of this are here given, along with forms considerably different from the common type.

"An oblong figure, rounded at the corners and contracted at the base, with twelve cups and a groove from the centre; it is difficult to



give an intelligible description of it, and reference must be made to *Fig. 12*.

"Three concentric squares rounded at the corners, having within them many cups and a radial groove—*Fig. 8*; both these forms we could imagine to be circles squeezed out of their normal state.

"Less characteristic forms are:—

"Concentric ovals—*Fig. 9*.

"A circle.

"A circle or series of concentric circles around a central hollow.

"Round hollows or cups occur scattered over stones without being enclosed by circles or other figures.

"Various forms are often combined with each other, presenting complicated, strange maze-like figures, which will be best understood by reference to the woodcut in plate opposite. Two of the simpler combinations may be noticed here.

"Circles and groups of circles united by a groove passing from centre to centre—*Fig. 3*.

"Three detached circles, each around a cup, are united by grooves, so as to give a rude resemblance to a plant with a stem, its branches, and flowers—*Fig. 10*.

"With a few exceptions, these sculptures are marked by a family character, which is readily recognisable by experienced observers; yet though fifty-five different inscribed stones have been discovered in Northumberland, no two of them are alike. Even where abnormal forms appear, we are enabled, by their association with figures of the common type, to include them in the family group."

These figures are inscribed on sandstone, in some cases the cutting is nearly half an inch, and the hollows sometimes as much as one inch and a half deep. Some of these markings are dreadfully worn by the elements, and can now be hardly traced; while in others, which have been covered over with peat, Mr. Tate states the marks of the tools are clearly to be seen. He says:—

"The markings have been chipped or picked out, and not made by rubbing; the best preserved figures show that the tool was bluntly pointed. All our sculptures are in sandstone, which could have been incised by such a tool as was used, in far distant pre-historic times, made of basalt, flint, hornstone, trap, or jasper. Metals, however, were known in the district when the sculptures were incised; bronze and copper objects have been found in their neighbourhood; and in some parts of North Northumberland considerable numbers of bronze celts have been discovered, as well as bronze daggers, spear-heads, and swords. Querns made of hard intractable porphyry have been taken from the forts about Yevering, and one from the Weetwood Camp; but as these could not have been fashioned by any stone tool, it is therefore probable, that metallic tools had been also used to inscribe the Northumberland rocks. This conclusion is corroborated by the character of the Argyleshire rocks, which are so hard that

stone tools could not have chipped out the inscriptions. Probably the metal was bronze, which seems to have been in considerable use at the period."

There are two interesting and important facts in connection with these inscriptions: the first is, that of all these stones, not one is more than a mile away from some traces of ancient British remains, such as camps, forts, or hut-circles; and the second is, the fact that four of these inscriptions have been found on the under surface of the covers of cists.

These inscriptions have also been found in Scotland and even in Orkney. Mr. George Petrie found in 1855 an upright stone in a sepulchral chamber with four concentric circles around a central hollow. The Rev. William Greenwell's explorations in Argyshire have revealed the fact that the sculptures of this part of Scotland "are of the same age and the same character as those in Northumberland." Similar inscriptions have been found in Dorsetshire and Yorkshire; and, says, our author, "recent researches in the South of Ireland have revealed sculptures of precisely the same family character as those in Northumberland."

Mr. Tate says: "So far as I have been able to ascertain, inscriptions of the same character as ours have not been discovered beyond the British Islands."

Now, this is the point to which we especially wish to direct the attention of anthropologists in different parts of the world. We cannot but think that similar, if not identical, inscriptions will be found in other parts of Europe, if not in India and America. We hope that all who have an opportunity will closely examine all the rocks in the vicinity of ancient remains or on the covers of the cists.

The first stone was discovered nearly forty years ago by Mr. J. C. Langlands of Old Bewick, in close proximity to the great camp on the hill at that place. The following is a woodcut of the inscription on this stone.

Mr. Tate observes:—

"All the figures are of the common type; indeed, there is less variety on this stone than on any other of similar dimensions. The figures, however, being much connected with each other, give the whole a strange maze-like appearance. Imagination could revel amid these complicated forms; life budding might be seen—the passage of life to a higher life—the transmigration of souls—central suns—orbital planets—attendant satellites—and perhaps too, divinity might be thought symbolised by the central hollow; and the radial grooves penetrating through the circles and beyond them, might represent a Divine influence pervading all the realms of matter and spirit."

Mr. Tate's admirable memoir concludes with a section on the meaning of the sculptures, and observes :—

“Though of late there have been many speculative views put forth as to the meaning of these symbols, it is doubtful whether any advance has been made on the general views proposed by me in 1852. The numerous additional facts observed, confirm I think the conclusions—first, that these inscriptions have been made by the Celtic race occupying Britain many centuries before the Christian era; and second, that the figures are symbolical—most probably of religious ideas. Look at the extent of their distribution, from one extremity of Britain to the other, and even into Ireland; and say, what could induce tribes, living hundreds of miles apart, and even separated by the sea, to use precisely the same symbols, save to express some religious sentiments, or to aid in the performance of some superstitious rites.

“Beyond these general views, I confess we wander into the regions of fancy and conjecture.”

Here, for the present, we must leave this subject, looking with great interest to future observations to elucidate the meaning of the remarkable remains. We cannot, however, conclude without passing a tribute of praise for the zeal with which Mr. Tate has worked out this subject up to its present point. It is true that Mr. Langlands was the first to notice these figures, and is deserving the highest praise for the attention and hospitality which he has always shown to visitors to this wild region, and it is none the less true that the Rev. William Greenwell was the author of a still unpublished paper on this subject in 1852, read to the Archæological Institute; but it was left to Mr. Tate to work up the whole subject, and by his personal wanderings over the whole district to produce a memoir so complete as the one under consideration. This book forms a complete hand-book on the subject, and contains the only reliable account of the curious inscriptions which has been published.

We would especially warn our readers against the partial, and in some cases, most inaccurate accounts which have from time to time been put forth by Dr. Bruce, of Newcastle, and others, who know just enough on the subject to confuse both themselves and those who listen to them. Some of the natural markings on these rocks have been described as artificial inscriptions. This has thrown the whole subject into confusion; but, thanks to the geological knowledge of Mr. Tate, he has removed a great deal of the misconception existing on this subject, and we most heartily thank him and the Berwickshire Naturalists' Club for giving to the world in such a complete and convenient form such thoroughly reliable data on the subject. We have recently had an opportunity of comparing Mr. Tate's drawings with the original stones, and fully appreciate the difficulties

which were encountered in giving correct representations of these drawings, and the easy manner in which those less versed in the subject might have been led astray by those natural markings which exist side by side with the inscriptions.

MEDIÆVAL TRAVELLING IN SOUTH AMERICA.*

THE travels of an author who, at the age of fourteen, with all the crude ideas of early youth seething in his brain, and imbued with the most anti-scientific prepossessions, ventured to commit to paper, under the auspices of Philip of Spain, the impressions of his travels, may not at first sight appear very interesting to anthropologists. We know so little respecting the life of our author, that should we reject the theory that he was one of the companions of D. Pedro de Heredia, little of accurate fact is left wherewith we can compile our notebooks, or found our hypotheses respecting him. But we have the one important fact that he was the first European traveller on the western coast of South America, who gave to a then credulous and admiring world, more or less reliable information respecting the inhabitants of that portion of the American continent.

The question ever and anon presents itself to our mind, whether the saying of Mephistopheles is not true after all; mankind merely advances in a spiral direction; our knowledge of the anthropology of South America is scarcely in advance of that of the mediæval explorers. Many districts—Mr. Markham especially alludes to the Cauca—have not been described by later explorers with the same completeness as by Cieza de Leon; and to those who remember Padre Fray Pablo Simon's interesting description of the Huallaga, modern explorations of the headwaters of the Amazon will appear uninteresting. Taking as a standpoint the period immediately subsequent to the Spanish conquest, the questions which crowd in upon the reader of Cieza de Leon are numerous and manifold. Does this writer give us accurate and extensive information respecting the nations who preceded the great civilising and unifying influences of the Quichuan inhabitants? Do the writings of Cieza de Leon afford us reliable facts whereon to admit or to reject the theory of the

* The Travels of Pedro de Cieza de Leon, A.D. 1532-50, contained in the first part of his Chronicle of Peru. Translated and edited, with Notes and an Introduction, by Clements R. Markham, Esq., F.S.A., F.R.G.S. London: printed for the Hakluyt Society. 1864.

existence of Pre-incarial rulers prior to the advent of the worshippers in the temple of Pachacamac? Does he throw any light upon the great mysterious problems of South American archæology, the date and lineage of the builders of Tia-huanaco, or the possible nucleus of truth which may exist respecting the mythical legends of Manco Ccapac? On such topics as these, the light which Cieza de Leon has transmitted to posterity is but indirectly thrown; nor do his pages afford many facts on which to criticise the generalisations of Rivers, Tschudi, Bollaert, or even Prescott.

At the time when Cieza de Leon visited this country, he found numerous tribes of Indians over the whole of Nueva Granada and Peru. Diverse characters distinguished their physical organisation. There were the Quichuas—with their high acrocephalic heads, their long plaited black hair, their scanty beard, thick lips, high but receding forehead, large and aquiline nose, and small chin. Their physical characters survive, even in spite of the definition of them by D'Orbigny, in his *Homme Americain*. Mr. Markham tells us:—

“In the temperate valleys of central Peru were the Quichuas, the most powerful and civilised of all. To the eastward of them were the savage Antis and Chunchos in the great tropical forests. To the south were the wild shepherd tribes of Canas, Canches, and others; and still further south were the more civilised Aymaras, struggling against the difficulties of a rigorous climate. To the westward of Cuzco were the warlike Chancas, Pocras, Huancas, and other tribes; and on the coast were numerous tribes known to the Yncas by the collective name of Yuncas. Finally, in the kingdom of Quito, among others of less note, were the nations of Caras, Puruaes, and Cañaris.”

We absolutely know nothing about the physical character of the majority of these tribes. The skulls of the Quichuas have indeed been accurately described as presenting, in common with the majority of the skulls of the Indians of the west coast of America, a brachycephalic sugar-loaf type. They have been contrasted with those of the Aymarás, the only western South American nation whose cranial form is essentially dolichocephalic. And here it should be observed that we speak of those Aymará skulls which do not present any well recognised evidences of artificial distortion. Such are not of course the skulls from Titicaca, but those which still exist of those surviving inhabitants of the old Aymará country who do not retain the habit of artificial cranial distortion. When, however, we turn to such tribes as the Antis, we are perfectly ignorant of their cranial form; and the further we go, either southwards or eastwards, the more ignorance of cranioscopical facts encounters the anthropologist. It is not until we reach Rosario, in the Argentine Confederation, that we arrive at a locality, the character of the skulls of the inhabitants of which has

been defined. Mr. T. J. Hutchinson has been the first Englishman to afford us reliable information on this topic.

Some zoological errors disfigure this translation. Mr. Markham states :—

“The most ancient traces of the American race have been found on the Pacific coast, in the shape of *middings* or refuse heaps, similar to those in Denmark. These *middings*, which have been examined by Mr. Spruce at Chanduy and Amotape, consist of fragments of pottery, sea shells, and crystal quartz-cutting instruments. They are the remains of a very ancient people of what is called, in European archaeology, the stone age; and they suggest the possible existence of man in South America, contemporaneously with the post-pleistocene fossil vicuña of Corocoro. Be this how it may, there can be no doubt that the coast valleys of Peru had been inhabited for many centuries by Indian communities, which had made gradual progress in the improvement of their condition.”

The animal here referred to is the *Macrauchenia patachonica*, which was originally described by Professor Owen from Darwin's Patagonian specimens, and afterwards discovered by Castelnau at Tarija in Bolivia. Similar specimens having been discovered in Bolivia by Mr. Forbes, a temporary confusion arose as to the specific name by which these specimens should be described, but we must remind Mr. Markham that the name *Macrauchenia Boliviensis*, which he adopts in his xxv page, has since 1861* sunk to “the limbo of all hasty blunders.” There are four objections, however, which we have to make to the above passage—Firstly, the *Macrauchenia* is not a vicuña, nor even allied to any llama except by the vaguest possible affinity; secondly, the beds in which it is found are not demonstrably proved to be “post pleistocene”; thirdly, Corocoro is not a locality to which it is peculiar, or in which it is common; fourthly, we fail to see how the occurrence of quartz chips at Chanduy in a shell mound can be in any way correlated with the discovery of fossil bones at Corocoro, about one hundred and twenty miles distant. We are afraid that the advocates of a very high antiquity for the human species in America must search for some more exact evidences on which to found their hypotheses.

The following passage occurs on the xxiv page :—

“One important test of the capacity of a people for civilisation is their ability to domesticate animals. The inferiority of the African, as compared with the Hindu, is demonstrated by the latter having domesticated the elephant and made it the useful and hardworking companion of man; while the former, during the thousands of years that he has inhabited the African continent, has never achieved any such result, and has merely destroyed the elephant for the sake of his ivory tusks.”

* Annals and Magazine of Natural History, June 1861.

We believe that Mr. John Crawford was the first to adduce this absurd argument,* when he stated that "the African elephant, although specifically distinct from the Indian, in all probability possesses the same docility, sagacity, and capacity for servitude, yet it is remarkable that no negro nation has ever tamed it," etc., etc., *usque ad nauseam*. Considering that the African elephant (*Loxodonta Africana*) is not merely specifically, but generically distinct from the Indian species (*Elephas Indicus*) and that we have never had a shadow of experience as to its docility or sagacity, we fail to see that, *ceteris paribus*, the domesticity of the two species can be considered as amenable to the same laws. The fact must also be remarked, that the tusks of the African elephant usually exceed both in size and weight those of the Indian elephant.

Mr. Markham's own observations, however, contrast exceedingly with those which he has adopted from other and less reliable authorities. The success of his grand experiment for the naturalisation of the *Chinchona* plant in India has earned him the gratitude of the European medical profession. He is most at home in the philological portions of the work, in which the author of the *Quichua Grammar and Vocabulary* may naturally be supposed to be able to throw most light on anthropological requirements. The work in many respects is of great value, inasmuch as it affords us a clear picture of the state of mind of the natives, unsophisticated by the absurdities which were foisted in upon Peruvian anthropology by the early missionaries and travellers. The statement has been ever and anon inserted into our popular text-books that some aboriginal natives of South America exhibit, when interrogated by the European traveller, a knowledge of the existence of a universal deluge within their own territory, and by which their ancestors have been partially exterminated. When, however, these traditions are subjected to the scrutiny of careful examination, there is always found some admixture which is due to the influence of the questioning traveller. Any one who has had practical experience with American savages knows that, for a small present, they can be easily prevailed on to narrate the most improbable traditions, or to declare their belief in the most recondite points of faith. Again, the common practice of the native, who when interpellated, drawls out, "Si, señor," to every question put to him, renders the attainment of any positive result to the interrogatories almost unattainable. Mr. Markham wisely rejects all these traditions, as well as some of the more improbable statements of Herrera, Montesinos, and Garcilasso de la Vega. The broad facts, however, remain, that we have distinct

* Trans. Ethno. Soc., new series, vol. ii, 433.

evidence at the most remote period on which history can throw a light, that the whole western coast of South America was inhabited by hosts of natives, the majority having distinct physical and psychological characters; that we have sufficient facts on which we can engraft the surmise that for centuries prior to the Spanish invasion, these natives have existed, in some instances attaining a very high state of civilisation, especially exemplified by their architecture; but that the defective historical materials at our disposal preclude us from arriving at any conclusion as to the period at which many of the events in Peruvian history took place. This is the scanty record which is left to us by three centuries of the bloodstained annals of South America since its conquest by the malevolent and tyrannical Spanish *conquistadores*.

The chief fault which we find with Mr. Markham is the manner in which he has exercised the responsibilities of Editor, and has omitted frequent passages, and in one instance a whole chapter, on the grounds that these portions were "unfit for translation." We cannot consider that the editor was justified in this course. Some of the customs of nations, which at first sight may appear to be obscene, have the greatest possible bearing on the science of descriptive anthropology. The rites of marriage, the worship of the phallus, the act of circumcision, are observances which should be carefully and systematically noted and described. Those who have deepest at heart the advancement of the science of anthropology will not wish to evade these questions; but will investigate them calmly and reverently. To the pure all things are pure; to the anthropologist all things relating to man have to be investigated. No blush can be justifiably raised excepting on the cheeks of those who have already conceived impure thoughts; and we trust that no editor of any scientific book of travel will ever again reduce the record of a careful and dispassionate observer like Cieza de Leon to the similitude of the most indecent of all compilations—Bowdler's Shakespeare. The effect of this emasculating process is inoperative on morality; with the vast number of inquiring and frequently sensual mankind, it causes a run upon the original edition, and a frequent reference to the pocket dictionary. The fact that in the British Museum reading room, when the Italian dictionaries are, as usual, missing from their accustomed shelves, the inquiring reader may most often find them in juxtaposition with a turned down copy of Boccaccio's *Decameron*, or Graglia's edition of Martial, is significant; whilst the painful truth that the copies of Rabelais and Petronius Arbiter in the National Library are almost worn threadbare, ought to have warned Mr. Markham not to direct by suppression the reader's attention to indelicacies which otherwise

would have been passed over in silence. This defect is very patent to anthropologists; but however grave, it cannot permanently detract from the acknowledged merits of Mr. Markham's excellent translation.

TEXT BOOKS ON ANTHROPOLOGY.*

THE posthumous work of Professor Karl Schmidt is based upon the "Anthropological Letters," written in 1852; but, as the editor M. Oehlmann informs us, is in fact quite a new book.

The first volume consists of *The History of Anthropology*, and in true German style is about all and everything. It is the genuine *History of Man*: for it is concerned with everything which man influences, and by which man is affected. All nations have had their Anthropology; but how will not our orthodox readers be rejoiced with a chapter *On the Anthropology of the New Testament*, or *Jesus Christ and the Anthropology of St. Paul*! Hence, through the Cabala, Philo, and Neo-Platonists, we pass to the schoolmen, through the metaphysical age of Europe down to Kant, and end with John Stuart Mill!

Then we have a long chapter on *The results of the present anatomical, physiological, and ethnographical discoveries*; and a most disproportionate digression on phrenology and physiognomy. This is indeed the province in which the author seems most at home, and as the second volume consists almost entirely of anatomical, or physiological matter, it seems subject of regret that the original title and conception of the book should have been altered to the more ambitious one, which it has no pretence to satisfy.

The ethnographical portion is quite beneath criticism, and we are astonished to find in a learned work that "bleeding roast-beef, fat puddings, brandy and porter, denote the nationality of every son of Britain."

Dr. Schmidt cannot claim to have written a good text book on Anthropology. We do not look under such a title for a meagre history of metaphysics, or rather a catalogue of some of the principal writers thereon; and though there is nothing to say against the anatomical portion of the work, and though the woodcuts strike us as

* Die Anthropologie: Die Wissenschaft von Menschen in ihrer geschichtlichen Entwicklung und auf ihrem gegenwärtigen Handpunkte. Von Prof. K. Schmidt. 2 vols. Dresden: 1865.

peculiarly elegant, still in all this there is nothing new, even in Germany.

A better hope is held out by Dr. Reich, the first portion of whose work on *The universal science of man*,* has just reached England, if indeed the performance comes up to the boasts of his prospectus. "The author, whose name is known far beyond the limits of Germany, will in his new work lay a foundation on which naturalists and philosophers, physicians and statesmen, teachers and moralists, and all whose interest lies in the study of man, may come together, join hands, and unite." The part we have in hand is taken up with metaphysical discussions on the nature of the soul, with very long extracts from the opinions of the ancients on that subject, and on the position of man in the universe. But Dr. Reich, as he says, "does not bind himself to any chronological order," and the views of Buckle, Büchner (with whom he seems principally to agree), Erdmann, Philo, Lenz, and Huxley, are all pressed into his service as he thinks fit. Altogether, whilst we look with interest for the remaining part from Dr. Reich, we cannot allow that he has been hitherto much more successful than Dr. Schmidt.

The increasing number of books bearing the superscription of this science inspires, however, a hope that before long some durable *Elements*, or *Principles of Anthropology* will be produced. The great mistake to be avoided in such an undertaking is the attempting too much; and the incorporation into the general plan of such isolated portions as the anatomy or physiology of man, which have as everyone knows been already elaborated in a thousand treatises, and for which no one would look under a name which must include much that is entirely independent of all considerations of the physical nature of man, much that is conjectural, and much that is new. However arduous, and indeed hopeless as some would say, such a task must be, no science can be fairly said to take its place as such until it has its acknowledged text book to refer to, as denoting its sphere, and the way it can be taught, or learnt. Not that it is necessary for success that the first grammar of Anthropology should be unimpeachable either in its method or its aims, but that the solitary student should feel satisfied that having mastered its details, his labour will not be entirely thrown away. It is only after a long series of attempts that any science can hope to have its works of reference or its elementary treatises brought to that perfection for which the example of the most advanced branches of knowledge has caused a demand. But young anthropologists should not stand by in idleness till the work is done

* Die Allgemeine Naturlehre des Menschen, etc. Von Eduard Reich, Med. Dr. Erste lieferung. Giessen: 1865.

for them. The opportunity of associating their names with a new science will probably never occur again, and next to the production of a successful novel, there is perhaps nothing so lucrative as the construction of a sound and well-digested text-book.

PROCEEDINGS OF THE PARIS ANTHROPOLOGICAL SOCIETY.*

At the meeting of December 3, Dr. Pruner-Bey read a very elaborate paper "On the Asiatic origin of Europeans," which was followed by an essay "On the Ethnic Elements of Europe," by M. Lagneau. Neither of these papers admits of an abstract, which we regret the less as the more salient points are touched and commented upon by M. d'Omalius in his reply.

"On the Cranium of Schiller and the cubic index of Crania."

At the meeting of March 17, Dr. Broca, in exhibiting a drawing representing the profile of the cranium of Schiller taken from the second edition of Carus' *Cranioscopic Atlas*, said: The Society will remember that in our discussions on the brain, three years ago, conflicting opinions were expressed relative to the volume of the cranium of Schiller. The contemporaries of that great man said that he had a very large head, and M. Gratiolet in his *Anatomie comparée du Système nerveux* repeated this assertion. But as he had since an opportunity of studying the profile of the cranium of Schiller in the first edition of M. Carus' *Atlas*, he found that the antero-posterior diameter measured only 190 m.m., and thus did not exceed the average as observed in dolichocephalic crania. I then observed that this test was insufficient, inasmuch as the volume of the cranium depends as much on its width and height as in its length. The main question remained, however, unsettled.

The table of measurement which is now added to the second edition of M. Carus' *Atlas* enables us to solve this question. The measures are expressed in inches and lines, the width of the parietal region of the cranium of Schiller amounts to 5 inches 10 lines, equal to 158 millimeters. This cranium is consequently not dolichocephalic; it is, on the contrary, brachycephalic, for the antero-posterior diameter is, as stated by M. Gratiolet, exactly 190 m.m., and in comparing the two diameters we find a cephalic index of 83.16 per cent.

This cranium is, moreover, greatly developed in the vertical line; the

* Continued from vol. ii, p. 101.

elevation of the vertex above the meatus auditorius is 140 m.m.; and in the 450 crania of which I have drawn the profiles by the cranio-graph there is not one in which this height exceeds 131 m.m. The vertical diameter of Schiller's cranium cannot be measured in the drawing, but this measure always exceeds the preceding elevation by from 7 to 23 m.m., and this fully agrees with the number of 149 millimeters given in Carus' table as the height of the parietal region, that is to say, the vertical diameter of Schiller's cranium. . . . In my researches on the relations which may exist between the capacity of the cranium and its external dimensions, I am in the habit of using the product of the three diameters as a term of comparison. Experience has shown me that this product gives in centimeter cubes the volume of a solid a little above the double of the internal capacity of the cranium. The difference between these cubic measures is always in favour of the former, and far from being fixed; but it only oscillates within very narrow limits. It results herefrom that a moiety of the product of the three diameters gives an approximative idea of the cranial capacity, for which reason I have denominated it the cubic index of the cranium (*indice cubique du crâne*).

By multiplying the three diameters of the cranium of Schiller ($190 \times 158 \times 149$) we obtain the product 4472^{cc} 98, which gives a cubic index of 2238.48 centimeter cubes.

In a catalogue which I shall present to the Society, I have carefully noted all the dimensions of the 600 crania in our Museum. Excepting one single cranium, the cubic index of which amounts to 2274^{cc} all the rest give a cubic index below 2056.

This exceptional cranium No. 16, in the series of Parisian crania of the nineteenth century, is evidently pathological; the parietes are very thick, and though half of the face is wanting, the cranium weighs 1249 grammes, that is, double the weight of other crania. The heaviest negro cranium in our museum weighs only 970 grammes. The heaviest European cranium in our collection, excluding No. 16, weighs only 923. The cranium No. 16, despite the extreme thickness of its parietes, is nevertheless the largest of the 600 crania I have measured, having an internal capacity of 1885^{cc} . I am disposed to think that it belonged to an individual affected with cerebral hypertrophy; be this as it may, it is only necessary to state that it deviated considerably from normal conditions.

Setting aside this exceptional cranium, we find that the cubic index of the cranium of Schiller notably exceeds that of any other cranium in our museum, which sufficiently establishes that this cranium is one of the largest hitherto measured.

M. Gratiolet here observed that, when speaking of Schiller's cranium,

he had only before him the drawing of the profile as given by Carus. He then said that this cranium was distinguished by the admirable harmony of its outlines, the majestic form of the forehead, and by a facial angle approaching a right angle; but he added that the antero-posterior diameter presented nothing remarkable, and that the aspect of the profile did not indicate a very large cranium. The document now published by M. Carus modifies that conclusion, since it appears that the transverse diameter of the cranium is very considerable. He must, however, remark that the size of the cranium varies according to the regions, and that the width of the parietal region may be accompanied with a retraction of the anterior region. We must also observe that the average of external cubage employed by M. Broca wants precision. The cranium varies so much in its shape and thickness, that the product of its three external dimensions can give no exact idea of its capacity.

M. Broca replied that Schiller's cranium was far from being contracted in the frontal region, the width of the forehead at the level of the eyes being 119 m.m., about 15 m.m. above the average. The maximum width of the frontal amounts to 131 m.m. The cranium was thus very large in all its proportions. As regards the objection of M. Gratiolet to the process of external cubage, he had at the outset declared it to be merely approximative. After showing the results he obtained by employing his process in the measurement of the collection of crania belonging to the society, proving that the cubic index is really more approximative than he at first supposed, Dr. Broca concludes thus:—"The largest cranium of the Mortonian collection at Philadelphia is that of a German, measuring 114 cubic inches, equal in French measurement to 1867^{cc} which is less than the minimum capacity which can be assigned to Schiller's cranium. This cranium is thus very large, and I repeat we have reason to think that it exceeds in capacity all such which have hitherto been measured."

On the resumption of the discussion on Indo-European origins, the Secretary read the subjoined letter, addressed to the Society by M. d'Omalus d'Halloz.

"As at our last meeting the hour was too far advanced for me to reply to the learned discourse of M. Pruner-Bey, and as I had to leave Paris, I take the liberty of addressing to the society the following remarks, whilst acknowledging that my octogenarian memory will not enable me to touch upon all points, so that my notes may appear rather incomplete.

"I shall perhaps be better understood by premising that I consider the first distribution of human races to be a question beyond the reach of our present state of science. The palæontological documents re-

lating to man are confined to some discoveries lately made in the north-west of Europe, and do not carry us to periods anterior to the actual condition of the globe. Palæontological researches have, no doubt, in the course of this century yielded unexpected results, but apart from the circumstance that they have scarcely been applied to man, we must bear in mind that they have only been effected on a very small portion of the surface of the globe, so that we must be very cautious as regards any negative inferences in our hypotheses. The hypotheses may be ranged in three categories, which I call historical, philological, and natural.

"As regards the historical hypotheses, they are, in my opinion, only founded upon some badly interpreted texts or some mythical notions.

"As regards linguistics, I have already said that I have a great respect for that science so long as it keeps within its limits; but when it is proved that a people may change its language, and believing, as I do, that languages are formed by the use man makes of them, and that they are not like the songs of birds, a simple result of the organisation, my opinion is that we should be very reserved in judging of the filiation of people from the language they speak.

"As to the hypotheses I call natural, I have already indicated that they consist in the supposition that things have gone on formerly as they do now, and that in periods immediately preceding historical documents, the people dwelt already side by side as they did at a later period.

"If my memory serves me right, M. Pruner-Bey stated at the beginning of his discourse that the migration of the people of the east towards the west was generally accepted as an article of faith, but surely this is no proof that this opinion is well founded; I moreover believe that this theory is a modern creation and is not found prevalent among the ancients.

"He then mentioned the Magyars and the Turcs, but my questions do not concern these people, the Asiatic origin of whom is sufficiently proved, and who in my opinion form an exception, tending to disappear; for the Magyar and Turkish population diminish in Europe, whilst the European populations surrounding them continually increase.

"M. Pruner-Bey stated that the Phrygians were the ancestors of the Greeks, but he has not told us upon what his theory is founded, nor do I remember having heard of it before. But, supposing it were so, this would not prove that the Greeks came from Central Asia; for the western portion of Asia Minor being separated from Greece by narrow channels, the conquests and the wars which the inhabitants of these countries carried on in Greece were, so to speak, civil wars.

"Our colleague then endeavoured to prove that the Scandinavians

were not indigenous of Scandinavia. No person contests this at present; but the circumstance that they have come from the south does not prove that they came from Germany, where there are people of the same type.

"M. Pruner-Bey supports also his theory by the assumption that all our domestic animals are natives of Asia; but without dwelling upon the doubts raised in this question by Palæontology, I should say that such would be the case even if the ancestors of the Europeans had not come from Asia; for, as it is unquestionable that the south-west of Asia has been civilised before Europe, it is from that portion of the globe that man could obtain animals for his domestic use. I must also say in reference to animals, that if the Scandinavians are natives of Asia, it is astonishing that their mythology makes no allusions to the camel or the elephant. With regard to the traces of Asiatic civilisation met with on the coasts of the Atlantic, they are more easily explained by the commercial relations of the Phœnicians than by the arrival of Asian conquerors, who were themselves hardly civilised. On the other hand, we cannot say that the trading Phœnicians were sufficiently numerous to change the blood of the populations; if it had been so, they would have imported a Semitic and not an Asian language. Our learned colleague has also noticed the immigrations which have taken place in the British Islands; but instead of making these immigrants come from Central Asia it seems to me more simple to adopt the opinion of Tacitus, who assigns to the Silurians the black hair and black eyes of the Iberians, and to the Caledonians the light hair and the blue eyes of the Germans.

"Like the greater number of modern authors, M. Pruner-Bey derives the Celts from Asia, and he sees the traces of their passage in the Celtic population between Asia and the Atlantic; but apart from natural considerations, the historical documents are opposed to this theory, for all the invasions of the Gauls proceeded from west to east. I admit, nevertheless, that the Celtic question is obscure. Induced by the opinion of Desmoulins, I thought at first that it was a people of a dark type with black hair, but I soon found out the Celts were of a fair type. With regard to their language, the general opinion is that it belongs to the same group as that of the Bas-Bretons, the Welsh, the Irish, and the Scotch Highlanders. But in this hypothesis it is very difficult to admit that a race so energetic, so numerous, who have made so many conquests, should have disappeared from its native countries, and been driven to some mountainous region. I think, on the contrary, that these difficulties are removed by adopting the opinion recently sustained by MM. Holzmann and Renard, who look upon the Celts as Germanic people. . . . The objection drawn from the fact

that at Cæsar's time the Celts differed from the Germans, has, in my opinion, no more value than that which denies the Francks to have been of Germanic origin, because the French of the present time differ from the Germans. I know not what language the Gauls spoke at the time of Cæsar, but the facility with which they adopted the Latin idiom indicates that a conflict arose between the language of the conquerors and those of the people whom they vanquished. By this assumption we may, perhaps, explain the names and the characters which Cæsar ascribes to the inhabitants of the three great geographical divisions of Gaul. He called Celts the population between the Seine and the Garonne, because it is there that the conquering Celts, intermixing with the vanquished people, acquired a peculiar character. He has given the name Aquitanians to the populations south of the Garonne, because then, as now, the Iberian element greatly preponderated. And finally the Belgians north of the Seine distinguished themselves from other Gauls, since, being nearer to Germany, the Germanic element was more abundant.

"As regards the Germans proper, I do not remember that M. Pruner-Bey mentioned the time of their arrival in Europe nor the population they displaced; but I think he considers their Asiatic origin as demonstrated, which induces me to cite two passages of Tacitus:—"With regard to the population (of Germany) I believe it to be indigenous, and free from intermixture with foreigners either as settlers or casual visitors (M. Ger. c. ii). . . . I concur in opinion with those who deem the Germans a pure race who have never intermarried with other nations." (id. c. iv.) These two passages confirm my propositions if, instead of the word *indigenous* we substitute, have inhabited the country since the last geological revolution."

M. Liétard then read a paper "on Arian Migration," followed by an essay "on the origin of Europeans," by M. Bonté, after which the discussion recommenced.

M. Dally: I have no intention to exhaust the question; I merely wish to state the impression produced on myself by all that I have heard in this discussion. I have attentively listened to the communication of Messrs. Pruner-Bey and Liétard, but I am bound to say that the propositions of M. d'Omalus still persist in their integrity, and that no solution has been given to the questions he proposed. I was much struck by the multiplicity of documents cited by M. Bonté in his paper, but I could not well comprehend their bearing, nor has he demonstrated that the Europeans are descended from an Arian stock, which came from Asia and has since disappeared from Europe.

Where is the proof of this? Is it in linguistics? Is it in that language preserved intact in India, now found degenerated in Europe?

But it is by no means inadmissible, that a language originating in Europe may have been imported into India or any other part, into Bactria, for instance, and may there have preserved its purity whilst it was altered or even disappeared in other parts of Europe. Though philology may give us proofs of the intimate connexion which existed between certain languages, it has no longer the same force when applied to the origin of peoples. In respect to the existing differences between European populations I accept the explanations of M. Broca, and I confess that I no longer understand what is meant by a race if you give the same origin to Portuguese, French, Russians, Germans, etc. I am much disposed to express the same reproaches which have justly been addressed to me, when, from want of profound study, I, in one of my papers, confounded into one all the American populations. In the sense I take it there is no Arian race the primary stock of European populations; but if in reality there be one, I ask with d'Omalius, whence it came? From India? here arises the question of acclimatisation. How can we explain that an acclimatisation deemed impossible at present was possible then? Did it come from Bactria? how does it come to pass that we find no trace sufficiently pure to be affirmative? I must, therefore, for the present, accept the opinion of d'Omalius d'Halloy, and believe with him that Europeans are natives of Europe.

M. Pruner-Bey has mentioned an opinion which has several times been refuted, namely, that there exists a certain analogy between the migrations of peoples on the surface of the earth and the atmosphere, and maritime currents, but nothing shows that they had, *ab ovo*, followed the direction from east to west. I persist, therefore, in asking for the primary stock; has it been demonstrated? I ask M. Bonté what are the Sia-posh of whom he speaks? Where are the fair-complexioned Afghans whom he cites? Is it the expression of mere coloration, or of an *ensemble* of characters constituting peoples different from others? Nor do I think the question has been solved by the induction of civilisation and domestic animals as appealed to by M. Pruner-Bey, nor by the mythological studies of M. Liétard. They may serve in the indication of certain epochs, but afford no incontestable proof of the first origin of European nations.

M. Bertillon: I wish that members would not engage in hollow discussions which lead to no solution, but keep to the question, whether the origin of European nations is to be sought for in Asia or in Europe. M. Dally has just said that there are no longer any Arians in Bactria; does it follow that they did not exist there at a certain time? The disappearance of a people is by no means a rare phenomenon, as it happened in more recent times. As to the phe-

nomenon of acclimatisation, alluded to by M. Dally, it must be observed that there is a distinction between slow progressive movement and the absorption of peoples, and such movements as a European population returning to India. In these two cases the results would certainly differ. The dissimilitude now existing between the European nations may be well explained by successive intermixtures, and is quite compatible with the assumption of a primary Eastern origin.

M. Bonté : M. Dally pretends that I have spoken of light-complexioned Afghans in my *Resumé analytique sur l'influence du milieu* ; this is an error. It is true, that in his table of 1863, he makes me say so ; but on referring to the page which he cites, he will find that I said nothing of the kind. Fraser, Prichard, and Elphinstone certainly speak of fair-complexioned Afghans. As to the assertions of our colleague that the character, *fair or brown*, has no value ; it amounts to the same thing as to say the *constitution* is no character. If it were as he says, we should not be so anxious to ascertain whether this or that nation were fair or dark-complexioned. The importance of this question is manifest from what has been said of the character regarding the Celts only. Our colleague will also see that it is chiefly by the difference of coloration that the races in Gaul have been distinguished.

M. Liétard : In admitting without discussion the common origin of Europeans, I did so because M. d'Omalus said that we were all agreed upon that point, with this difference, that he placed it in Germany whilst we placed it in Central Asia. In support of my opinion I appealed to comparative mythology, which appeared to me a productive source for obtaining proofs. We find, in fact, amongst the Greeks and Latins the same mythological traces which formerly existed in India. To cite only one instance, I may observe that the medical divinity to which the Greeks sacrificed was already represented in Indian mythology.

M. Bertrand : There are certain facts which I am astonished to hear still discussed. In speaking of Arians we are not so much concerned to learn in what proportion they came to Europe ; but what was the result of their introduction, and everything leads to the belief that civilisation came from Asia. In Greece, Italy and Germany, about seven hundred years before the Christian era, we find only rude traces of a civilisation much inferior to that in Phœnicia, and generally among the peoples approaching the Indus. But in assuming that civilisation came to us from India, the question arises, how it came. This question belongs to anatomical anthropology, which alone can tell us whether an Arian immigration has intermixed with

a pre-existing European population less civilised, and of whom we are the descendants. In any case, we must not confound races with civilisation, which are perfectly distinct. I have studied a considerable portion of monumental Europe, and I found that by the side of monuments and palaces generally elevated on the banks of rivers there existed tumuli of altogether different characters. It seems to me, therefore, very probable, that two civilisations existed side by side, the one belonging to the soil the other imported, and that the latter more advanced had its birth-place in the East whence it came to us, and the progress of which we have to study.

M. Broca: The interesting lecture of M. Liétard certainly left upon me the impression that there existed between us decided differences, but the explanation which he has just offered convinces me that we agree as to the main points. Like most members who have spoken on the question, M. Liétard admits that Europe contained indigenous populations before the commencement of the Indo-European era. On the other hand I agree with him, that according to the testimonies of linguists, archæologists and historians, the Indo-European languages and civilisation came to us from Asia. This double starting point being admitted, we may easily come to a good understanding. I must, however, in the first place, reply to some observations of our colleague, M. Bertrand. I am happy that he makes a distinction which appears to me indispensable, and which I endeavoured to lay down at the commencement of our discussion. I then asked: Whence came the races of Europe? I answered from Europe. Whence came the European languages? I answered from Asia. I concluded, therefore, that the question should be divided; that race was one thing and language another thing; and that the objections raised by the second proposition of M. d'Omalius d'Halloy touched neither the first nor the third question.

M. Bertrand has spoken to the same effect, and I am glad to find that we agree in this respect, although we have started from different stand points. . . . The distinction between two questions, which have unfortunately been confounded, seems to M. Bertrand so natural that he is astonished to find that anthropologists still discuss so simple and demonstrated a fact as the Asiatic origin of the European languages. I reply that this truth would have met with a different reception if inferences had not been made tending to decide the question of the mutability of types, one of the most contested questions of general anthropology. Two theories were started. One endeavoured to establish by direct observation that types were permanent; the second, on the contrary, maintained that modifications were produced by external agents too slow in their action to be per-

ceptible after a few generations, but which, after the lapse of many centuries, must induce a transformation of types. It was then that philology or rather linguists interfered. They said: All Indo-Europeans speak the same language; they are consequently descended from the same stock. . . . And as these numerous peoples inhabiting different zones present very different physical characters and constitute several distinct races, it has been inferred that the influence of climate has in a great degree modified the characters of the primitive race. This argument has been frequently appealed to by M. Pruner-Bey and others before him, and it is certainly the most important of all arguments which have been invoked in favour of the mutability of human types.

On the other hand, the partisans of the permanence of types had before them facts opposed to this argumentation. They had to choose between natural history and philology, and gave preference to the former, whilst the linguists preferred the latter. This is the point from which our discussion started. Our eminent and venerable colleague, D'Omalius d'Halloy, put the question whether a linguistic datum can be considered as correct, which appeared to be in contradiction with a series of well observed facts. I replied from the first that the contradiction was not real. Philology and anthropological observation are two sources of information equally precious. The British Islands, without speaking of modern conquerors, contain, from time immemorial, a brown and a light race, who despite the uniformity of the climate, have preserved the diversity of their characters. Here, then, we have an absolutely positive fact. These two races speak languages issued from a common stock; here is another positive fact. But it is quite clear that two truths cannot be in contradiction to each other. In the particular case before us a theory is only then valuable when it reconciles the testimony of observation, shewing that the differences of races in Indo-European peoples cannot be attributed to the influences of media, with the testimony of philology and archæology, which establishes between these peoples a community of languages and civilisation.

Such a conciliation is not only possible but easy; it is sufficient to assume that Europe was already peopled before the invasion of Asiatic conquerors, and that the latter necessarily infused their blood into the vanquished. Everything is then easily explained. The triumph of language and civilisation becomes then a fact as natural as the variety of types resulting from the unequal mixture of races. We must not judge from the present to the past. With their formidable civilisation, their means of destruction, their floating cities wafted by steam, Europeans invade islands situated at the anti-

podes, inhabited by wandering brutalised savages—the two extremes of the human series—meet; and if the invaders, whose numbers increase by constant additions, consider it to their interest to destroy the autochthons, they easily effect it. Hence there are no Tasmanians in Tasmania. It would have been different if these unfortunates had been able to render some service to the English colonists, or if they had only possessed that degree of intelligence which renders the Negroes valuable as slaves. There would also still be Tasmanians if they had inhabited a spacious continent, so that they might have retired before their aggressors like the red skins of America. In order that a race should be exterminated it is not sufficient that it should be attacked by a stronger and more intelligent race, but the inequality must be excessive; and the conquerors must continually receive reinforcements.

If one of these conditions be wanting, the autochthonic race will persist, more or less modified in its manner, knowledge, language, and physical characters; but as it is numerically superior, the foreign blood becoming more diluted in every generation, is sooner or later absorbed in the indigenous blood, and the mixed race will approach much more the type of the vanquished than that of the conquerors, though the latter transmit their name, language, and civilisation. Or may be the two races are at a given point numerically equal, then the two types will persist; they will constantly reappear amid mixed types, and will be found side by side after the lapse of many centuries. It has just now been asserted that the Etruscans had disappeared from the earth; that nothing was left of them save archaeological and historical souvenirs. This is an error. The type of the ancient Etruscans is still living, and I appeal to M. Perrier, who two years ago had studied and visited the population of ancient Etruria.

Let now M. Liétard ask himself whether it is admissible that the first Asiatic invaders, generally named Celts, have destroyed the autochthonic populations to the last man. Where were the conditions which rendered such an extermination possible? As regards type, the differences between the indigenous and foreign races were but little marked. The Basques and modern Fins, who have preserved their pre-Celtic language, and whose ancestors had mostly escaped the foreign influence, have a fair skin, an orthognathous face, smooth hair, and Caucasian features like the Indo-Europeans from Asia. The physical characters, which might establish between the Celts and the autochthons of Europe appreciable differences, are thus reduced to a few shades of colour of the eyes and hair, and this slight contrast far from exciting repugnance was on the contrary apt to excite the desires of the conquerors as regards the women of the

vanquished, and intermixture of races became thus unavoidable. As regards number, there is no doubt that the conquering Celts were much inferior to the indigenous population of Europe.

But it may be said, that in order that the Celts should succeed in conquering a continent already inhabited, their numerical superiority must have been compensated by an immense intellectual superiority. The autochthons must have been brutal savages, incapable of resistance, and thus exposed to destruction like the Tasmanians. It is true that the autochthonic races were still in a state of barbarism; they possessed but scanty knowledge; but they were intelligent and improvable. Anteriority of civilisation does not prove absolute superiority of intelligence and aptitude. The Egyptians have in civilisation preceded the Greeks, Romans, and modern Europeans, but no one will maintain that the Egyptian race is more intelligent and perfectible than the races of Europe. But granting that the Celts were superior to the autochthons in intelligence and perfectibility, M. Liétard must also admit that the difference was not very great; for the Basques and Fins, whom he considers as the only actual representatives of the pre-Celtic races, may well sustain the comparison with the Indo-European peoples. . . . The Celts did not bring with them an irresistible civilisation which absorbs everything, and at the contact of which the superior races vanish. Their civilisation was rudimental. They had no written language, no history, and nothing would be known of their first migrations were it not for modern archæological and linguistic discoveries. They had large domestic animals, and some cereals, but they were nomades, were not attached to the soil, and did not constitute great nations. It seems that they knew the use of bronze—at least at the time they arrived in the western regions of Europe where metals were unknown before. In this, perhaps, consisted their chief superiority, as they could only be opposed by weapons made of wood, bone, and stone. They knew nothing at that time of the use of iron, without which it is difficult to cultivate the soil and construct towns. No doubt the autochthons of Europe were less advanced, they lived yet in the stone period; but the difference subsisting between the two civilisations was so little marked that for many archæologists the distinction between the Celtic and pre-Celtic monuments rests exclusively on the presence or absence of bronze.

Thus the superiority of the Celts, although real, was nevertheless not considerable; the vanquished had only to advance a single step to equal their conquerors. Under such conditions extermination is impossible; sooner or later the races become fused. The mixed nation resulting from this fusion, by adopting the language, customs,

and the nationality of the foreign race, may at length forget the existence of her autochthonic ancestors, whose physical characters continue to predominate ; sometimes however, they are held in remembrance, witness the Celto-Scythians mentioned by Plutarch, and the Celto-Iberians of the Spanish peninsula.

The Celts, or rather the conquerors passing by that name, occupied the greater portion of Europe from Scandinavia to Gibraltar, from the Black Sea to the extreme end of Great Britain. It is imagined that all these conquerors formed but one people, that they spread like a deluge over the whole of our continent like the incoherent and desperate hordes which Attila led within a few years from Central Asia to the heart of Gaul. We are, however, not told where that great nation is to be found which could pour over Europe millions of warriors. I account quite differently for the diffusion of the language and civilisation of the Celts. I look upon it as a simple emigration of a pastoral and warlike people who, after crossing the Caucasus, or, perhaps, the Hellespont, settled with their herds in a corner of Europe, subjugated the natives, intermixed with them, imposed upon them their language and nationality and imparted to them their knowledge and customs.

At a later period there issued from this focus a swarm, Celts by name more than by race, who transported in their turn to other countries their language and civilisation, and thus gradually from emigration to emigration, from century to century, people, always Celts by language, but much less so by blood spread in all directions to the extremities of Europe. I of course speak here as if it were demonstrated that the Asiatics had already adopted the name of Celts when they penetrated into Europe ; that this name had been transmitted intact from people to people since that immensely remote period down to Julius Cæsar ; that the language of the first conquerors had everywhere remained the same, and that their nationality had everywhere been preserved along with their language. I have thus as much as possible multiplied the difficulties of my explanation. No one, however, can tell how these adventurers called themselves in Asia, nor by what name they made themselves known when first they appeared in Europe. The name of Celts occurs only at a relatively late period, and only in Central and Western Europe. It is now on philological grounds given to people who never went by that name, and on archæological grounds to other tribes who never spoke their language. Thus when we only consider such people as are known to have called themselves Celts and have spoken a Celtic language, the phenomenon of the diffusion of the same nationality and the same language becomes much simplified, and still more so when we see that among the latter the unity of language was but very imperfectly preserved.

There are two very distinct groups of Celtic languages apart from those which are lost, and which probably formed other groups. These different Celtic languages presented relations analogous to those subsisting between the French, Spanish, Italian, and other Neo-Latin languages.

Thus the population which now pass under the collective name of Celts constituted in fact peoples distinct by their nationality and their dialects. I may add that these people were frequently at war with each other; that they differed in customs, dress, and physical characters, and hence arose the frequent discussions, whether the Celts were brown or fair complexioned. The fact is that the colour of their eyes and their hair varied according to the characters of the autochthonic races with which the Asiatic element became intermixed. As regards the primitive colour of the people who crossed the Caucasus it is impossible to determine it after so many successive dilutions.

Thus vanishes the pretended uniformity attributed to the people called Celts. They possessed a common fund of knowledge, faith, and language. It is not a race which spread in Europe, but a civilisation with which, so to speak, one people inoculated a succeeding people.

I neither deny the great movements of people nor distant expeditions and conquests, nor the geographical extension of certain races. I merely maintain that most of the people who migrated in masses to implant and preserve their type in new settlements were of a European and not an Asiatic race. These migrations gave rise to more or less intense crossings, which modified to a certain degree the anthropological characters of the primitive populations, and it is even probable that such migrations took place before the first Asiatic invasion. The repartition of fair, brown, short, tall, brachycephalic, and dolichocephalic races has thus unquestionably undergone several modifications both before and after the historical period; but I feel convinced that these modifications were at no time general, and that the human fauna of Europe considered in its ensemble does not essentially differ from what it was before the introduction of Indo-European civilisation and language.

M. Dally: According to M. Broca there are no Arians now in Europe; but were there Arians in Europe at any former period? That is the question asked by M. d'Omalius d'Halloy. In historical times we find proofs of Arian civilisation, but nothing shews that a civilisation already existed before that epoch.

M. Bertrand: The archæological documents shew it.

M. Dally: They don't prove that at the period I speak of the civilisation of India might not have come from the west. I don't deny the importance of mythologies; but just as a people may change

its language so may it change its mythology. Every people chooses its religion and adapts it to its instinct and habits. I recollect having somewhere read that in the province of Guatemala human sacrifices have been associated with the rites of catholicism.

M. Gerard de Rialle: According to M. Dally there are no Arians south of the Caspian Sea; but there are the Persians who live south of the Caspian Sea. I cannot understand upon what M. Dally bases his opinion.

M. Bertrand said that the priority of oriental civilisation is proved by the study of the beds of the soil, in which are found implements and objects of bronze, silver, and gold. If no value is to be attached to the succession of the beds it would be impossible to form any opinion whatever.

M. Halléguen thinks that we should not go beyond historical times, or we should be lost in the domain of gratuitous suppositions.

M. Broca: The gravings upon a bone or a stone is as much history as the writing upon a parchment. The engraving upon a reindeer bone discovered by M. Lartet is an historical fact of great importance, and unquestionably quite equal in value to a fragment of Herodotus. There is one question which I must put to archæologists. Exists there any positive proof for or against the introduction of metals into Europe by Asiatics? In studying the characters of crania we are frequently embarrassed in determining their age, and it would for us be an important point to be enabled to affirm that when a cranium belongs to the stone period it dates from a pre-Celtic period.

M. Bertrand: It appears to me that archæology is unable to give a positive reply to this question. Archæology has indeed shown that copper and bronze coincide with the Arian immigration, but it is as yet impossible to say whether the populations have not prior to these immigrations used metals.

All that the study of sepultures has hitherto established is the existence of three distinct periods:—1. Stone period coinciding with burials. 2. Stone period coinciding with incineration. 3. The period of metals.

M. Gerard de Rialle: It is possible of demonstration that the first Arians knew the use of metals.

M. Leguay: I entirely agree with M. Bertrand that the soil is the best document to consult; but I differ with him as regards the difference in the periods of cremation and burials. In my opinion both systems were employed simultaneously. . . . This conviction is the result of my own researches in the vicinity of Paris, and which I hope to demonstrate in a work I am now preparing, and which I shall submit to the Society. I can even now affirm that burials in graves, that

is to say, without cremation, was applied to the chiefs whilst incineration was the lot of the multitude, common warriors, women, and children. In point of fact the beautiful polished hatchets, large and fine knives, and generally the fine objects which adorn our Museum, are found in the sepultures of the chiefs, whilst in the graves of the latter only fragments are found indicative of their poverty and industry. In the former we find also the large tumular stones which required the concurrence of numbers for placing them, the sacred insignia as seen in the sepulture of Varenne Saint-Hilaire, and which I have deposited in the Musée Cluny; whilst in the latter were only found the fragments of flints unquestionably shaped by the hand of man, or pieces of pottery, some sufficiently curious to make us regret the loss of a vase, for despite the coarseness of the material they denote sometimes an artistic talent in its simple execution. Fire was not excluded from the burial of a chief, but it was not allowed to reach his remains. As regards the rest, a hole dug into the earth received the few bones spared by the fire, and which were collected into a fragment of a vase. The remains were not burned on the spot, which is demonstrated by the number of sepultures of this nature which I have found; I think I have even found the stone upon which the cremation was effected in a dolmen placed in the centre of the place occupied by these sepultures. I am, therefore, of opinion that, although the form of the sepultures may indicate their age, we cannot establish a difference in the stone period between incineration and burial (at least, as regards the environs of Paris). Some preserved the bodies because they were those of their chiefs, whose memories they venerated; the remains of the greater number were, however, burned, so as not to contaminate the air by their odour.

The meeting then adjourned.

At the meeting of April 7, 1864, Dr. Gratiolet, the President, said: I beg to inform the society that Mr. George Witt, of the Anthropological Society of London, is now present. He has kindly brought us several works recently published by the London Society. I beg now to thank him for the trouble he has taken, and for the honour he has done us in assisting at our meeting. I request him to return our thanks to our sister Society of London, and to sincerely congratulate it on the great activity which it has displayed in rendering such eminent services to our science.

Ancient Cranium of a Briton of the Stone Period. Dr. Thurnam, foreign associate of the Society, sent a photograph representing the profile of the cranium of an ancient Briton, which was found in 1863 in a long barrow at Tilshead. This cranium is perfectly orthognathic and dolichocephalic. The occipital region is much developed,

and the curve of the vertex at the level of the anterior portion of the sagittal suture is slightly concave instead of convex.

M. Broca remarked that this cranium much resembles one of those obtained from the sepulture of Chamant, which is a long barrow of the stone period, like the sepulture of Tilshead.

On the Etruscans. M. Perier said that, having been appealed to by M. Broca, he wished to offer some observations on the Etruscan type, which he had studied at the Campo Santo, at Pisa, and especially in the celebrated museum of Volterra, an important Etruscan town, in the vicinity of which are found subterranean galleries containing ancient funerary monuments.

The Etruscans incinerated the bodies, and placed the ashes in small sarcophagi made of burned earth. A faithful representation of the deceased, in the form of a statuette, invariably adorned the lid. There were also at Volterra and elsewhere large sarcophagi containing entire bodies.

It is the great number of these statuettes, generally very well executed, and the bassi relievi sculptured upon the mausoleums, which facilitated the study of type. By these means, said M. Perier, he was enabled to recognise two chief types—an aristocratic and a vulgar type. In the first type, which is more corpulent and compact, the profile of the head is much curved, the forehead is wide and tapering vertically, the nose is aquiline, thin at the root, and coalescing with the base of the forehead, mouth small, chin beardless, round, and short. The contour of the face is oval. The *ensemble* of the features is grave, and not deficient in grandeur and majesty. A remarkable feature in this physiognomical type, is the union of nose and forehead without any intermediary depression. In the Egyptian, the nose and the forehead form a straight line inclined backwards and upwards; in the Greek, the nose is also continuous with the forehead in nearly a vertical direction; in the Etruscan, the forehead with the nose describe a convex line.

The second type is less homogeneous, less refined and pure. The forehead is not so wide at the base, but is not less in height; the nose is frequently straight, or nearly so; the fronto-nasal furrow is very perceptible; the mouth is larger, the chin less round, and wider; and finally, the contours of the face are less regular, less uniform, and not so fine as in the preceding type.

These two types still exist, especially the second. They are seen at Volterra, and on the road to Sienna. I have seen some perfectly pure exemplars of the first type in Florence; and in the environs of that city, in the little village of Fiesole, formerly an old city, the inhabitants still present the principal characters of both Etruscan types.

And why should not the ethnic remnants of the Etruscans be in the same conditions as those of other ancient peoples? Even at Rome, mixed as its population is, these types are found, especially in the Campagna and the adjoining territories, as mentioned by William Edwards (*Mém. de la Société Ethnol.*, t. i, p. 43). Thus Pouqueville recognised in the Morea the ancient types; at Mitra he found the fair-haired daughters of Sparta; and the descendants of the Hellenes in the whole of Greece. Thus the Assyrian is found at the ruins of Nineveh, and the Egyptian at the ruins of Thebes. And so is it everywhere. In Hindostan, a country so frequently invaded, the types are not so much mixed as is generally imagined. The Hindu is now what he ever was.

Whenever a great people has for a long period been in possession of the soil, though it may no longer exist as a people, it still exists more or less in its representatives, the traces of which are almost indestructible. This is a general law.

M. Perier having read a letter from M. Renard, on a cranium of an old Roman, the discussion on the origin of Indo-Europeans was resumed.

M. Pruner-Bey, in reply to M. Lagneau, said, our colleague considers the Kimmerians of the ancients as identical with the Cimbrians, who were Germans, according to most historians, whilst I only alluded to Celtic populations, who spoke and still speak *Kimraig*, a widely spread Celtic idiom; for the Gauls also, as shewn by recent researches, belong to that Celtic branch speaking *Kimraig*. Consequently the inhabitants of Wales, where this is still a living language, can scarcely be Cimbrians; that is to say, Germans and Celts at the same time. As regards the traces left by the Gaëls in the geographical nomenclature of the Caucasus, I would only remark that, instead of limiting it to two roots, as M. Lagneau has done, M. Pictet gives a very extended list. Are there proofs existing that ancient races, of whom we find osseous remains, have disappeared from Western Europe? M. Lagneau thinks so, and he founds his opinion on two facts. As to the first, the Neanderthal cranium, I look upon as an exceptional case. This cranium in fact represents, apart from the enormous development of the frontal sinuses, outwardly all the characters of the Celtic type. This character is found in a reduced form in other ancient crania, whether Celtic or brachycephalic. The illusion, moreover, disappears when the internal cast of this cranium is examined. Among sixty casts of the cranial cavity, belonging to various races, which I have examined, that of the Neanderthal corresponds with the cast of the skull of a modern Irishman, which is an excellent specimen of the Celtic type. We know, more-

over, that the Neanderthal skeleton is of high stature, like that of the old Celts, and that there is also an anatomical peculiarity concerning the direction of the neck of the femur. One word more on the ancient prognathic brachycephali observed by M. Spring, who, M. Lagneau thinks, are now extinct. The description given by the learned Belgian is very concise, but there is nothing in it which I have not found in other old brachycephalic crania belonging to various localities. I shall only mention three specimens, in which brachycephaly is combined with well marked prognathism. One cranium was obtained from a battle-field near ancient Alesia in France; the two others, one from the lake of Geneva, and the last from a marl pit of Upper Italy, present an almost animal prognathism. Are there, then, individuals still existing, in whom brachycephaly is associated with prognathism? I have positively seen them in the environs of Geneva. Thus Celts and ancient brachycephali still exist amongst us; and I do not, like our honourable colleague, conclude from some isolated and exaggerated facts.

M. Liétard then read a long paper "On Comparative Philology and Aryan Migrations."

M. Simonot read a report on the progress of the Anthropological Society of Paris, from its foundation on the 19th of May, 1859, when it consisted only of nineteen members, whilst at the end of March, 1864, the number of members amounted to 250. The report includes an account of the objects contained in the museum of the Society, and its relations with foreign scientific institutions.

At the meeting of April 21, 1864, M. Pruner-Bey read a note from Dr. Lorange, Director of the European Hospital at Beirout, (Syria), "On a Case of Multiple Horns on the Scalp." The subject is a woman, aged 55. One of the horns, $15\frac{1}{2}$ centimeters long, resembled the horn of a ram. M. Pruner-Bey observed that these excrescences were purely epidermic, and possessed nothing in common with the natural horns of animals.

Colour of Mulattoes at Birth. M. Berchon sent the following note: The discussion raised at the meeting of Dec. 3, on the colour of new-born Mulattoes, induced me to point out a constant phenomenon, which enables us at the birth of a mongrel to recognise at once the characters of the parents. I have previously pointed out the difficulty, or rather impossibility, to distinguish at birth a black from a white child by the mere inspection of the skin. There is no such difficulty as regards Mulatto children. In such cases, we always find on them black patches,—unquestionable indications of their origin,—generally situated near the generative organs (penis, scrotum, umbilicus, labiæ, nipple). I have recently assisted at the de-

livery of a Mulatto lady married to a Mulatto of colour darker than herself. The new-born baby was at birth much darker than a negro child, nevertheless it presented the marks I have just indicated. On the scrotum was a round black patch of the dimensions of a five-franc piece. One of my friends, an accoucheur of great practice in the colonies, confirms the generality of this fact. These patches are very tenacious, and are perceived for a long time despite all crossings.

Dr. John Thurnam, foreign associate, sent ten photographs, representing crania found in burial places of the stone period, with a manuscript bearing the title "On the two Principal Forms of Ancient British and Gaulish Skulls."

Traumatic Aphonia. Lesion of the Third Frontal Convolution on the Left Side. M. Broca presents on the part of M. Perier the brain of a man who died ten days after a fall on the head. The man fell on the right side of the head, and sustained a fracture of the right temporal fossa. The patient remained unconscious for some time, but when M. Perier saw him first, the only reply he could make was "*La tête, la tête.*" Pulse feeble and slow, vomiting, suborbital ecchymosis on the right side, bleeding from the nose. Some improvement showed itself on the fourth day; he understood everything said to him, but could only pronounce the monosyllable *oui*.

Though the man fell on the right side of the head, M. Perier, from the loss of speech, suspected a lesion of the third frontal convolution in the left hemisphere. At the *post mortem* examination, the right hemisphere, the cerebellum, and the pons, were found perfectly sound. On the external surface of the left hemisphere were found three small but distinct hemorrhagic foci. The first, situated on the middle portion of the second convolution of the temporo-spheroidal bone, corresponds with a superficial contusion of the cerebral substance; the pia mater is torn on this spot, from which the blood spread into the arachnoid. The second focus is situated in the same convolution, about two centimeters behind the former. The third, finally, is situated on the superior margin of the fissure of Sylvius, and a half centimeter in front of the external end of the fissure of Rolando, covering almost entirely the posterior gyrus of the third frontal convolution. M. Broca had no hesitation in considering this lesion as the cause of loss of speech, as it occupies strictly the spot indicated as the seat of articulate language.

M. Bertrand then read a paper *On the Origin of Indo-Europeans*. He requested the members not uselessly to spend the time in questioning the fundamental principles of historical science, but to admit as provisionally established the following three propositions.

1. Science has demonstrated that the origin of the chief elements

of Indo-European civilisation must be sought for in the East, namely, the origin of the Greek, Latin, Celtic, Germanic, Slavonian, and Lithuanian languages. The origin of mythology, i. e., of the primitive religion of these peoples; the origin of architecture, of the alphabet, of metallurgy, and of coining money.

2. At the most remote period which history can reach, the arts enumerated above were already flourishing in the East. The Western countries, namely, Greece, Italy, Spain, Gaul, Great Britain, Sweden, Denmark, and Germany, were then in a complete state of barbarism, scarcely emerging from the savage state; no trace, at all events, is found of a civilisation having another than an Eastern origin.

3. The Eastern civilisation has not been imported into Europe by purely commercial relations, and the establishment of isolated colonies and coast settlements. It was mainly imported by the immigration of tribes sufficiently numerous to leave on their passage from East to West traces of their passage—traces which are recognised by philologists, mythologists, and antiquaries, and of whom there exist some historical records. These tribes belonged mostly to the Arian race.

These three propositions are now accepted by all the learned bodies of Europe. The most eminent men, such as Humboldt, Grimm, Pott, Eugène Burnouf, Lassen, have admitted them as axioms. Let us, then, no longer discuss truths established by the masters of science. To whatever schools you may belong, whether you are partisans of the unity of the human species, or whether you admit two or three races distinct from the Arian, the propositions enunciated may be admitted by all independent of their predilections.

ASTRONOMICAL TRADITIONS.

IN the first volume of the *Memoirs of the Anthropological Society of London*, there is an interesting paper by Mr. Bollaert on the "Astronomy of the Red Man of the New World," the result at which the learned author arrives being that "assuredly the astronomical knowledge of the aboriginal Americans was of domestic origin; and any of the few points of seeming contact with the calendars of the Old World, if not accidental, must have taken place at an exceedingly remote period of time."

In the work before us,* we have an inquiry into the most ancient

* "Mazzaroth; or the Constellations." In four parts. To which is added "Mizraim; or the Astronomy of Egypt." Illustrated by lithographs of the Planisphere of Dendera, and the Zodiac of Esné. By the late F. Rolleston. New Brighton: 1865.

astronomy of the Old World, not, however, dealing with the primitive calendars or physical theories of the past, but with what would seem to be more ancient still, namely, the apparently fanciful names given to certain groups of stars called constellations, and the meaning of the corresponding extraordinary figures which we find delineated on the celestial globe. The calendars of all nations—making allowance for differences of latitude, and consequent differences in the recurrence of certain visible phenomena of the sun, moon, and stars—might antecedently be expected more or less to agree. But nothing can or will be imagined more entirely arbitrary than the signs of the zodiac, and other constellations. Excepting, perhaps, the Pleiades, Orion, and the Great Bear, there are no groups of stars in the northern hemisphere that in a marked manner connect themselves together; and were half-a-dozen independent observers required to endeavour to form them into separate groups, the chances are infinite that there would not be the least resemblance in the results. Perhaps, too, the last thing that any of them would think of would be to find any resemblance to men, women, or animals among the stars. Orion may be considered as something like a sandglass; the Great Bear as like a cart or wain, or in the reverse way, like a plough; and hence the popular names in England and Scotland of “Charles’s Wain”, and “Peter’s Plough”, but any resemblance to the “great bear” will be sought for in vain. It is also well known that attempts have been made to get rid of the “arbitrary divisions” of the stars into “the constellations”, and to connect them, with reference to their actual appearances, by lines, and angles, and triangles; though all such attempts have hitherto failed.

The closely printed volume before us furnishes us with a theory, or *rationale*, of the names given to the signs of the zodiac and other constellations, which, to say the least, is remarkable, and which certainly disposes of the arbitrariness we are apt to assign to the grouping of the stars. It is certainly the most consistent account that has ever been put forward of the origin and real meaning of the constellations as figured upon the celestial globe.

The title of the work is taken from the 32nd verse of the 38th chapter of the Book of Job: “Canst thou bring forth *Mazzaroth* in his season?” In the margin of the English Bible we find that *Mazzaroth* is rendered “the twelve signs”; and the word is a feminine or neuter plural noun, meaning *chambers* or *separate divisions*; such as are the *constellations* “Mazaloth”, with which the word is sometimes identified, signifies “the way through which anything goes”, as the sun through the zodiac. It occurs only once in the Bible, in 2 Kings, xxiii, 5, where it is rendered “the planets”, but as “the twelve signs” in the margin.

The author of *Mazzaroth* professes to establish—and certainly not without a vast accumulation of proof—that the names and figures assigned to the constellations are, as it were, hieroglyphic embodiments of the great truths of revealed religion first made known to Adam and Seth in Paradise and after the Fall; and that these formed the primæval teaching of mankind generally, and thus became the foundation of the various myths and traditions of all peoples throughout the world. The subject is a very large one to examine in detail; but we may apply one significant test which is furnished by the accomplished author. Taking the twelve signs of the zodiac we shall find that they correspond very strikingly with the imagery in Jacob's dying blessing; and the Hebrew tradition is that he spoke of them as the appointed cognisances of his twelve sons, which were borne as the standards of Israel in the wilderness.

Although we admit that, as we have said above, the author has endeavoured to accumulate a vast amount of proof in favour of his theory, we fail to perceive that the arguments employed are of such a nature as to carry conviction to the reader's mind. It is attempted to prove that a certain coincidence exists between the form of the constellations and the events narrated in various Semitic traditions. To do this, a great amount of learning is brought to bear on the subject, and the pages are covered with classical, Hebrew, and Arabic quotations, Hudibrastic verse, and references to many curious subjects bearing upon general science, but which have been hitherto unconnected with astronomical investigations. From these topics, of which we may say *sunt bona, sunt quædam mediocria, sunt mala plura*, we may cull a few elegant extracts. We are told, speaking of the early Christians, "So the beautiful token of their faith, the passion-flower, was worn by them for the same purpose," etc. (p. 107). Considering that the passion-flower was not known until after the discovery of America by Columbus, we are a little surprised at the above statement. However, we shall prefer to give an extract which will give a clearer notion of the author's style than we could adequately describe to our readers:—

"The primitive year began in the sign Virgo, the stars of which were seen most strikingly in the evening sky when the sun was in Aries, the splendid star still by us called Spica, the ear of corn, in the woman's hand, marking the leading idea, the Promised Seed. Thus was represented the subject of the first promise, the foundation of the hopes of fallen man. In the next sign, Libra, we have His work, which was to be to buy, to redeem, figured in the balance weighing the price against the purchase. Then in Scorpio follows the indication of what that price was to be; the conflict, in which the seed of the woman receives the wound in his heel, while his other

foot is on the head of the enemy, here figured by the scorpion, a venomous reptile, who can sting even while his head is bruised."

Certainly the train of ideas which a contemplation of the sign *Libra* is presumed to evoke, is a little complex. How the idea of a balance necessarily implies the idea of price and purchase we fail to perceive, as we confess that scales have always been associated in our mind simply with the idea of weight. But the *petitio principii* by which the constellation *Ophiuchus* (which is nowhere in the book demonstrated to represent the "seed of the woman") is identified as the emblem of the Hebrew idea of the Messiah, is to our mind shamefully manifest. And again, further on in the book, it is the serpent in the hand of *Ophiuchus* who represents the Evil One; but here we are told that he is typified by the sign *Scorpio*. Now, either there must be two devils,—the admission of which fact would be exceedingly inconvenient,—or else the same personage is represented by two distinct emblems, which would be highly improbable. If *Ophiuchus* is, as stated on p. 19, the "human figure grasping the serpent, treading on the scorpion," and both serpent and scorpion are manifestations of the same enemy, it is an unwarrantable exercise of his diabolic supernatural attributes to be at the same time in the man's hands as a serpent and under his feet as a scorpion. This is really one of those things "no fellow can understand."

We can scarcely congratulate our author upon his philology; we see that he derives Scandinavian words directly from Hebrew roots; and we observe Arabic, Hebrew, Chaldee, and Syriac reciprocally interchanged with a confidence quite alarming. As, however, the writer has exhibited a dexterous ingenuity in contriving to misspel nearly every word quoted from foreign languages, less evil may result from these pleasing recreations than might at first be supposed. But it is really too bad when we are told that *Hela*, the Scandinavian goddess, from whom the word *hell* is derived, "has had her name from the primitive root *Hel*, to which *Æschylus* appears to allude in the *Agamemnon* when he speaks of *Helen*!!!" "*Helen* is here referred to the primitive root, to destroy; but it is more likely that she had been named from to shine, whence *Ἥλιος*, the sun." If such a derivation can be imagined from such a root, we must admit that such words as eel, elder, elbow, heeltap, highlow, island, highlander, Elohim, ell, and hundreds of others of equally ridiculous affinity, have all been derived from the common Hebrew root.

We have a right to complain of the suppression which the author makes of all reference to early American astronomy. If there is any reference in the astronomy of the Shemites or the Aryans to the traditions or the hopes alluded to in the bible, early Mexican traditions

should also bear some reference to the sacred narratives. Let us, then, take one of the Mexican "phases of the moon", and see whether it bears any similarity to the astronomy of Europe, Western Asia, or even of China:—

"In a group from the *Fejevary Codex* is represented the state in which they portrayed the phases of the moon, according to the Aztec mythology. We first see the sun and the moon quarreling; the next group shows the defects of the moon, which, in the third group, is swallowed by the sun; the fourth figure represents the triumphant sun; in the fifth, the conqueror spits the head of the moon out as symbol of the first quarter" (Bollaert, *Mem. Anthropol. Soc. Lond.*, vol. i, p. 217).

We cannot say that this grotesque combination of emblems represents any especial tradition; yet we recollect that these and other far more absurd legends form part of the intellectual heritage of thousands of living savages.

The appeal which is continually made to the admitted coincidence between the traditions of Christianity and Buddhism is repeated *usque ad nauseam*. The possibility, on the one hand, of the later system having owed many of its peculiar tenets to the more early form of faith, our author apparently does not contemplate. Still less does he give in these comparisons due weight to the fact that the early Christian missionaries, in Buddhist countries, have left in Thibet traces of their presence, which have led to the perpetuation of customs and ceremonies foreign to the innate precepts of the Buddhist religion. And we are not surprised to observe in the passages which treat on this subject an intolerance towards those who differ from the writer, which is only justified by the fact that his knowledge of mediæval history is nearly equal in excellence to his acquaintance with philology or botany.

Considering that the whole work bears the mark of crude conception, ill-considered plan, and imperfect arrangement, and observing that no reference is made to those authorities who have most illustrated the subject, we regret that any theories on a matter of such supreme anthropological importance as the investigation of early traditions, should have been attempted without a due contemplation of the difficulties to be encountered, and the object to be attained by the study of the names and figures of the ancient constellations.

OBSERVATIONS ON THE SKELETON OF A HOTTENTOT.

By JEFFRIES WYMAN, M.D.*

THE subject was nearly adult, and came to his death by suicide. The chest was well formed and prominent: the shoulders were well made but not broad; the loins were very hollow; the hips narrow; the thighs full and feminine, and the calves of the legs slender. There was no beard, no hair in the axillæ nor on the pubes. The ears were rather oval, small, and had only a small lobule. The web between the fingers was more extensive than usual, and gradually increased in breadth from the index to the little finger, where it reached as far as the joint between the first and second phalanx. The epiphyses of the long bones were still unattached, but the wisdom-teeth were mature.

	Inches.
Height of body	65½
Spread of arms from tip to tip of middle fingers	66
From top of head to top of trochanter	29½
From top of trochanter to sole of foot	36
Breadth of shoulders	13
Breadth of waist	9½
Breadth of hips through trochanter	11½
Length of arm from acromion	30½
Length of thigh	18
Length of leg from top of tibia to sole	18
Length of hand	7½
Length of foot	9

The brain weighed 3 lbs. 2 oz. Av., which is about the average weight of an European brain. There are no weights of brains of Hottentots given in the tables of the comparative weights of the human brain. Dr. Morton gives the measurements of three Hottentot crania, the average capacity of which is 75 cubic inches. A cubic inch of brain is estimated to weigh 259.57 grains, and this multiplied by 75 would give as the whole weight about 2 lbs. 12 oz. Av.

The individual was unusually tall for a Hottentot, and measured five feet and five inches in height. A comparison of Hottentot and Bushman skeletons, and casts of bodies, contained in the museums of London and Paris, give an average height of four feet and six inches. While the height of the body just equalled the distance between the tips of the fingers, the arms being outspread, the legs were disproportionately long, so that the pubes was more than five inches above the centre of the whole height.

In the external configuration of the cranium proper there was nothing remarkable, except that the top was somewhat flattened, the

* From the Proceedings of the Boston Society of Natural History, April 2, 1862, and December 10, 1863.

forehead narrow, sloping outwards and backwards from a somewhat prominent ridge, corresponding with the obliterated frontal suture.

When held at arm's-length, and viewed from above, the zygomatic arches are just in sight; but the fossæ are nearly concealed. The measurements show that the cranium is not brachycephalic, as in the Mongolians, but decidedly elongated, as in the negroes.

The most striking features to be seen in the head are those found in the bones of the face, especially in the nasals, maxillaries, and malars.

The nasals are completely co-ossified with each other, no trace of a suture remaining. This was the more noticeable, as the individual was young, and the bones of the skeleton generally are immature; and has an interest in connection with the fact that the nasal bones are co-ossified at an early period in the monkeys, and before the completion of the first dentition in the gorillas and chimpanzees. These bones in the Hottentot are remarkable for their great breadth, especially at the upper part, which is the broadest portion of them. They do not recede from the outline of the frontal bone, which is continued, without interruption, to the middle of the nose, where the bones project very slightly forwards. In a transverse direction they are nearly flat, with only a scarcely discernible ridge at their line of union: they are consequently nearly in the same plane with the anterior edge of the upper ends of the maxillaries. The naso-frontal suture is horizontal for the distance of half an inch, is bent down at either end to become continuous with the fronto-maxillary suture, and is remarkable for its great length. The breadth of the root of the nose is dependent on the nasals, and not upon the breadth of the ascending part of the superior maxillary bones, as stated by Dr. Knox.*

Malar bones. These, with the outer portion of the maxillaries, are remarkably bulging and rounded. The portions of the edges of the orbits formed by them, instead of being somewhat sharp, as in other crania, are quite noticeable for their roundness. The zygomatic arches do not differ from those of ordinary crania in their proportion outward.

Maxillary bones. The edges of the ascending portions of the *upper jaw*, where they form the border of the nares, project very little beyond the level of the face, and are bent inwards, instead of being directed forwards. It is in consequence of this, and the flatness of the nasal bones, that the middle portion of the face is so slightly prominent. The alveolar borders are remarkably prominent, forming a somewhat pointed arch; the space occupied by the incisor teeth being narrow, and the lateral incisors facing more outwards than forwards. No trace of an intermaxillary suture could be detected.

* Quoted by Prichard, "Researches into the Phys. History of Man", vol. i, p. 313. London: 1851.

The outline of the alveolar portion of the *lower jaw* corresponds with that of the upper; the symphysis is remarkably high, and the chin strikingly pointed and prominent. The height of the bone diminishes rapidly backwards, and the angles are not prominent. This description agrees with that of Cuvier, as regards the prominence of the jaw; and differs from that of Blumenbach, who asserts that the jaw does not project at all.

The orbits are quadrangular; the transverse diameter considerably the longest.

Interior of the cranium. The most striking feature here is the narrowness and the diminutive size of the fossæ for the lodgment of the anterior cerebral lobes. The orbitular plates of the frontal bones rise higher above the cribriform plate of the ethmoid bone, and make the olfactory fossa deeper than in ordinary crania: they ascend rapidly on each side, thus projecting into the cavity of the head at the expense of the space usually occupied by the anterior lobes of the brain.

The foramen magnum was rather under than over the average size; and, in this respect, differs from Cuvier's description of the same part in the Hottentot Venus, in which he says that it is proportionally larger than in other heads, and, "according to the views of Sömmering, would indicate an inferior nature."

The capacity of the cranium was measured by Dr. J. C. White, the Curator of Comparative Anatomy, and found to be eighty-two cubic inches.

Measurements of the Cranium.

Circumference of cranium	20.75
From one auditory meatus to the other, over vertex.....	12.50
Longest diameter of cranium outside	7.45
Greatest transverse diameter outside	5.10
From anterior edge of foramen magnum to alveoli	3.85
From anterior edge of foramen magnum to occiput	3.65
Length of cranium and face from alveoli to occiput	7.50
Breadth across malar bones	4.35
Breadth across zygomatic arches	5.30
Transverse diameter of orbit.....	1.68
Vertical diameter of orbit	1.32
Interorbital space	1.00
Length of nasal bones .....	.97
Transverse diameter, above .....	.63
Transverse diameter, middle.....	.41
Transverse diameter, lower portion .....	.53
Height of the symphysis of the lower jaw, exclusive of teeth	1.64
Breadth of lower jaw, through angles	3.55
Longitudinal diameter of cranium, inside	6.90
Transverse diameter of cranium, inside	5.18
Height of cranium, inside	4.62
Greatest breadth of anterior cerebral fossa	4.00
Greatest breadth of cerebellar fossa.....	4.37
Length of foramen magnum	1.48
Breadth of foramen magnum	1.16

Pelvis.—This is very remarkable for its diminutive size, and, when seen in front, for its square form. From the table of measurements, it will be seen that the breadth of it is but little in excess over the height. While, in ordinary skeletons of Europeans, the former dimension exceeds the latter by between two and three inches, in this Hottentot it is only by 0.33 of an inch. The height of the crests of the ilia above the base of the sacrum is also greater than in the common pelvis: for although the pelvis of the Hottentot is so small, yet the cristæ are 1.45 of an inch above the sacrum; while, in two average pelvises of white men, they were only from 1.20 to 1.25 of an inch.

The *sacrum* is very straight, and projects more backwards than usual; and the base of it is very narrow. In Caucasians, the sacrum without the coccyx forms nearly an equilateral triangle, the vertical diameter being slightly the largest. In the Hottentot, the vertical diameter is four inches; while the transverse is only 3.27 of an inch.

The anterior spinous processes of the *ilia* project almost directly forward, even in a much more marked degree than is common in the Caucasian pelvis; the iliac bones seem compressed from side to side: all of which gives to these parts a nearly vertical wall. The diameters of the brim do not differ materially in their relative size from the same in European skeletons; it being understood that these are liable to considerable variations. In the texture of the bones, the pelvis presents neither that massiveness nor the roughness which has been said to characterise this part in the Hottentots.

The resemblances of this Hottentot pelvis to that of the apes are trifling in comparison with the differences; these last being so great, that no one would hesitate in the slightest degree as to whether the pelvis in question belonged to the human family or not. The resemblances which really exist, with the exception of those belonging to the sacrum, are only shown by a close comparison of measurements.

The pelvis of the most anthropoid animals—viz., of the chimpanzee and gorilla—is characterised in a most marked degree, as differing from that of man by its relatively as well as absolutely greater length; by having the crests of the ilia in planes more nearly transverse; by having the brim of the pelvis in the form of an elongated oval, with the diameter from before backwards much the longest; by having the plane of the brim of the pelvis so inclined towards the vertebral column as to make with this last a much more open angle; in having the ischia longer, as shown by the space which separates the cotyloid cavity from the tuberosity,—the tuberosities longer, their extreme points more widely separated; in the extension of the rough surface of the tuberosity for the attachment of the muscles, as far as the symphysis; and in the greater extent of the union of the bones of the pubes with each other at the symphysis.

The sacrum of the anthropoids is also quite marked, in having its length greater in proportion to the breadth of its base.

The most striking approximation of the Hottentot pelvis to that of the anthropoids is to be found in the sacrum; for while in the Caucasian the longitudinal diameter of the bone exceeds the transverse by only 0.10 of an inch, as in E², and is even less by 0.10, as in E¹, of the following table, in the Hottentot it is longest by 0.73, in the gorilla by 0.84, and in the chimpanzee by 0.85 of an inch. If we take into consideration the straightness of it, it will be seen, that, in the respects mentioned, it comes nearer to that of the anthropoids than of the Caucasians; but in its size, in proportion to the whole pelvis, it differs very much from the apes, and much more closely resembles the same part in man.

Measurements of the Pelvis in two Europeans, a Hottentot, a Chimpanzee, and a Gorilla.

	E. ¹	E. ²	H.	C.	G.
Height of pelvis	8.50	7.50	7.17	11.00	15.10
Breadth across ilia	11.50	10.00	7.50	9.80	17.70
Breadth across middle of posterior edge of the acetabulum	7.40	6.90	6.50	5.82	8.70
Breadth of ilia through superior spinous processes	6.13	6.00	5.16	4.58	9.53
From spine of pubes to tuberosities of ischia	4.80	4.50	4.00	4.68	6.85
Antero-posterior diameter of brim .	3.80	4.20	3.35	6.10	8.00
Transverse diameter of brim.....	5.00	4.45	3.85	4.00	6.10
Length of sacrum without coccyx...	4.30	4.20	4.00	3.75	5.54
Breadth of sacrum	4.40	4.10	3.27	2.90	3.70
Height of crest of ilia above the base of the sacrum	1.25	1.20	1.54	2.20	3.20

Limbs.—The bones of the upper limbs present, in a somewhat marked degree, a difference in the length of corresponding bones on the right and left sides, as will be seen by the accompanying table of measurements. The difference between the lengths of the ulna and humerus, though somewhat less than in the average, is, nevertheless, not uncommon in European skeletons. The humerus is perforated at its lower end, on one side by a very small opening, and on the other has only a thin plate between the olecranon and coronoid fossæ. Of seven skeletons of pure negroes which we have examined, the humerus was perforated on *both* sides in three, on *one* side in one, and on *neither* side in three.

The thigh-bones offered nothing unusual, either as to the shaft or neck. The tibia are remarkable for their length in proportion to that of the femora. When the two bones are placed side by side, the lower ends of both on the same level, the tibia reaches as high as the middle of the neck of the femur; while in the skeleton of the neck of a European it only reaches as far as the lesser trochanter. The upper

end of the tibia is quite small, and its protuberance scarcely rises above the surface: the shaft forms an equilateral triangle; and, instead of having the anterior edge quite sharp and prominent as in Europeans, it is rounded.

The os calcis is more slender than in ordinary skeletons, and is particularly remarkable for having the tuberosity and neck only slightly exceeding the rest of the bone in their vertical diameter.

Measurements of Bones of Limbs.

	E.	H.	G.	Ch.
Length of right humerus	13.10	12.45	19.00	11.70
Length of left humerus	12.90	12.00	"	"
Length of right ulna	10.40	10.30	15.20	10.60
Length of left ulna	10.30	10.00	"	"
Length of right clavicle	5.40	5.00		
Length of left clavicle	5.57	5.35		
Length of femur	18.00	17.20	15.70	11.65
Length of tibia	15.00	15.00	13.00	9.55
Length of astragalus	3.17	3.05	4.05	
Height of tuberosity of os calcis	2.00	1.62	1.85	
Height of neck	1.75	1.38	1.15	
Height at posterior edge of upper articular ridge.....	2.18	1.56	1.50	

Mr. C. J. Sprague inquired whether this individual might not be considered as a somewhat gigantic representative of his race, and whether variations in height were as common among savage as among civilised races.

Dr. Wyman replied that the range of variation in height, as far as known, was much the greatest in the latter. O'Brien, the Irish giant, whose skeleton is preserved in the Hunterian Museum in London, was eight feet and four inches in height; while Borvasky, the Polish dwarf, was less than three feet. No such difference as this is known among the savage races. Wild and domesticated animals of the same species offer similar differences.

Prof. Daniel Wilson remarked that the cranium of this Hottentot appeared to be very fairly developed; and, in speaking of the great disparity between the lower races of men and the anthropoid apes, noticed that the distinctions in the cranium of the higher and lower races of men partook much more of facial than of cerebral character.

BRAIN AND MIND.*

PROFESSOR WAITZ, in his *Introduction to Anthropology*, sadly complains that philosophy was going out of fashion in fatherland. There can, indeed, be no doubt that *a priori* philosophy is now under a cloud in Germany—the very country where it has received its most elaborate form. The modern German school sneers at speculative philosophy and looks upon a metaphysician as a sort of dealer in old curiosities.

We should be sorry to see the study of metaphysics altogether neglected; for we think that both the *a priori* and *a posteriori* methods applied to the elucidation of mental phenomena may well exist side by side and derive benefit from each other. Indeed, we very much doubt whether any person is fully competent to deal with “the mechanism of thought”, unless his studies have extended to both pure and experimental psychology. What has hitherto retarded the progress of mental, may be fairly ascribed to the fact that the philosophers knew little of physiology, while the physiologists disdained the study of philosophy.

The object our author had in view in writing the treatise bearing the above title was, as we gather from his preface, “to draw down psychology from the airy regions of philosophy and to place it upon the solid foundation of exact science; for a system of psychology not based upon physiology rests only upon the tottering foundation of personal opinions, fantastic dreams, and dogmatic prejudices.”

There are but few persons who at the present day deny that the brain is the material organ of the mind, and that mental phenomena are closely connected with the functions of the nervous system; whence it follows, that no exposition of psychology can be complete in which cerebral physiology does not enter as a prominent feature. “If,” says our author, “the functions of the brain and its parts were perfectly known to us, we should possess a knowledge of the fundamental faculties of the mind; but, unfortunately, the physiology of the brain† has hitherto yielded such scanty results, that but few of its materials can serve for a foundation of physiological psychology” (p. ix).

This poverty of materials does not, however, deter our author from making another attempt to place psychology upon “its natural soil”, viz., physiology.

* Gehirn und Geist, Entwurf einer physiologischen Psychology für denkende Leser aller Stände, von Dr. Fh. Piderit.

† A succinct sketch of the present state of cerebral physiology appeared in the third number of the *Anthropological Review*.

"Two methods," says Dr. Piderit, "have been tried to trace the fundamental powers which manifest themselves in the ever varying mental phenomena.

"The philosophers tried speculation, the physiologists performed experiments on the organ of the mind. As neither of them succeeded in their efforts, I have tried another way—that of analogy. By comparing the brain with the spinal cord, I infer from similarity of structure, identity of function, and I assume that similar forces act in the brain as in the spinal cord. So long as physiological facts are wanting, we must rest satisfied with physiological probabilities, and if these are sufficiently explanatory they must be accepted until refuted by facts" (p. 41).

After giving a description of the development of the nervous centres from the so-called primitive groove, and shewing how the anterior portion of the groove dilates into three vesicals indicating the positions of the cerebellum, the mesencephalon, and the cerebrum, and proving that brain and spinal cord originate from the same elements, the author looks upon the brain only as a higher development of the primitive mass, and assumes that the fundamental forces of both are identical.

As the activity of the white substance of the spinal cord is partly perceptive and centripetal, and partly motor and centrifugal; so is it with the white substance of the brain. The sum of the afferent brain nerves he calls the organ of perception (*Vorstellung's organ*—representative or conceptive organ); the sum of the motor brain-nerves he terms the organ of the will. In the brain he observes the perceptive and motor nerves do not seem to be separated as in the spinal cord, but intimately interwoven. And just as the grey matter of the spinal cord establishes a reflex action between the perceptive and motor nerves, so the grey matter of the brain establishes a reflex action between the perceptive and motor nerves; but the influence of the organ of perception upon that of the will does not merely give rise to voluntary motions, but may be reflected back upon the organ of perception thereby causing it better to retain the perceptions and to produce thought. In short, mental activity is the result of the reciprocal action between the organ of perception and the will. "The perceptive capacity is the female element, the power of the will is the impregnating male element of the mind, and the ideas are the children of this mental act of generation" (p. 81).

It certainly seems a little strange, that an author who sets out by repudiating speculation and with the avowed aim of giving to psychology a more solid foundation, finishes by propounding a scheme of psychology resting not upon physiological facts, but simply upon "*analogy*". Moreover, the fundamental principle by which Dr. Piderit attempts to explain "the mechanism of thought" is not so

new as our author imagines. That reflex action is going on within the brain, as it is within the spinal cord, has long been assumed both by continental and English physiologists and applied by them to the elucidation of mental phenomena.

In 1844, Dr. Laycock read before the British Association a paper "On the Reflex Function of the Brain", from which we extract one of the opening passages.—

"Four years have elapsed since I published my opinion, supported by such arguments as I could then state, that the brain, although the organ of consciousness, was subject to the laws of reflex action, and that in this respect it did not differ from the other ganglia of the nervous system. I was led to this opinion by the general principle, *that the ganglia within the cranium being a continuation of the spinal cord, must necessarily be regulated as to shew reaction on external agencies by laws identical with those governing the functions of the spinal ganglia.*"

Many other authors might be cited to shew that the doctrine of the reflex action of the brain, as regards the evolution of perception and thought, has been long advocated. But whilst we cannot say that Dr. Piderit has added anything to our knowledge of cerebral physiology, we readily admit that his work contains a good deal of matter which will be novel and interesting to such readers as have not previously thought on the subject he discusses.

PRE-HISTORIC TIMES.*

MR. (now Sir John) LUBBOCK'S *Pre-Historic Times* is a collection of facts and inferences bearing on primitive archæology, and the probable antiquity and early condition of mankind on the earth. Papers on the "Danish Shell-Mounds," the "Swiss Lake-Dwellings," etc., which have appeared in the *Natural History Review*, and *Lectures on Archæology*, delivered at the Royal Institution, are incorporated in it with a quantity of new matter; and the whole forms a body of clear information, and discreet and moderate argument, on a number of obscure but highly interesting problems of our most ancient history.

Before giving some account of the contents of the work, we must, however, take notice of a passage which, of all things in it, we like the least. This is a note which, placed as it is conspicuously at the end of the preface, is sure to catch the reader's eye. "NOTE. In

* *Prehistoric Times*, as illustrated by Ancient Remains, and the Manners and Customs of Modern Savages. By John Lubbock, F.R.S., etc., etc. Williams and Norgate: 1865.

his celebrated work on the *Antiquity of Man*, Sir Charles Lyell has made much use of my earlier articles in the *Natural History Review*, frequently, indeed, extracting whole sentences *verbatim*, or nearly so. But as he has in these cases omitted to mention the source from which his quotations were derived, my readers might naturally think that I had taken very unjustifiable liberties with the work of the eminent geologist. A reference to the respective dates will, however, protect me from any such inference. The statement made by Sir Charles Lyell, in a note to page 11 of his work, that my article on the 'Danish Shell-Mounds' was published *after his sheets were written*, is an inadvertence, regretted, I have reason to believe, as much by its author as it is by me." This note, of course, has the effect of bringing prominently forward a charge against Sir Charles Lyell of having "taken very unjustifiable liberties with the work" of Sir John Lubbock. Now of course a man's writings are his own, and their author feels naturally indignant at any part of them being quoted without full acknowledgment. But there is a distinction to be drawn between purely and professedly original articles, and papers like those in question, which are rather of the nature of reviews. This distinction Sir John Lubbock seems to us to overlook, and we think he damages his own scientific position by being ready to defend his ownership of these articles with such sharp literary weapons.

It is quite natural that a scientific man should fight for his property in the new theories he has started,—the new discoveries he has made,—the new or newly-arranged facts which he has brought forward,—and with this feeling it is quite possible to sympathise, even when we think both facts and theories unsound. For instance, there was published a few years ago a clever book called the *Genesis of the Earth and Man*, taking up a half-theological half-ethnographical line of argument, which we venture to describe as a mare's nest. It seems to have been in part an ancient nest, dating from the seventeenth century; but the nineteenth century builder perhaps rediscovered it, at any rate brought new sticks and did new work to it, and so far made good his title that when the author of another book was found, last year, sitting in it without proper acknowledgment, most people who read the correspondence which ensued in the *Athenæum* were glad to see that Mr. R. S. Poole, of the *Genesis of the Earth and Man*, had ignominiously turned out Dr. McCausland of *Adam and the Adamite*, and established his right to sit in his own nest on his own eggs, even though the nest was a mare's, and the eggs mostly addle.

With Sir John Lubbock, however, the case is just the converse of this. He is by no means an incubator over mare's nests. Few

students of the science of man have had such opportunities of amassing and sifting facts, and of using, comparing, and criticising the best opinions of the best workers in primitive archæology; and his earlier papers, as well as the present work which embodies them, together with a mass of more original matter, are distinguished both by the extensive range of facts collected, and the excellent judgment with which these facts are discussed. But their author naturally could not be making independent discoveries all over Europe, and has had of course to depend on the researches, and more or less to reproduce the opinions, of the men who have given years of their lives to special investigations; such as (among scores of others) Morlot, Troyon, and Keller, for the Lake Habitations; Steenstrup and Worsaae for Scandinavian Antiquities; Boucher de Perthes, Prestwich, Falconer, and Evans, for the Drift-beds; Lartet and Christy for the Perigord Caverns. If Sir Charles Lyell or others have taken from Sir John Lubbock, without acknowledgment, any of the original discoveries and arguments on which his permanent reputation must after all depend, we hope full justice will be done him; but the value of these particular papers in the *Natural History Review* seems to us to lie less in original work than in discriminating reproduction and criticism, which hardly gives the sort of copyright required to justify so severe an attack on Sir Charles Lyell.

In his first chapter, Sir John Lubbock divides the domain of prehistoric archæology, not with the northern antiquaries, into three ages, of stone, bronze, and iron, but into four:—I. The Palæolithic, or Unground Stone Age of the Drift, “when man shared the possessions of Europe with the mammoth, the cave-bear, the woolly-haired rhinoceros, and other extinct animals. II. The Neolithic, or Polished-Stone Age. III. The Bronze Age. IV. The Iron Age. The division of the stone age into two periods characterised by the want and presence of ground-stone implements, so as not to bring the men of the drift into too close companionship with the makers of the high-class polished implements of ancient Europe and modern America and Polynesia, was, we fancy, first propounded by Sir J. Lubbock. Like the famous division into the ages of stone, bronze, and iron, this subdivision is a help in systematising, or at least classifying our knowledge. That the northern antiquaries and others have sometimes pushed it too far, and built too much theory upon it, does not destroy its use and value. Those who accept the fourfold division now before us merely as a classification of facts, with a clear notion that what has happened in one part of the world has not necessarily happened in every other; that, for instance, the bronze age is not known in Africa; that the stone age has been followed

directly by the iron age in New Zealand, as in many other places; that the use of stone implements may be contemporaneous with a copious use of bronze, as in ancient Peru and Mexico; and that the bronze and iron ages must not be turned into distinct chronological periods, seeing that they differ by many thousands of years in different parts of the world,—anyone who takes the theory of Ages, with these and other necessary restrictions, will find it a valuable help. When Sir John Lubbock comes to fight the question of a bronze age in Europe with Mr. Wright, the well-known antiquary, who resists the division in question, and seems to think we have little evidence of an age in Europe when stone was used, while bronze was unknown, or of an age when only stone and bronze were used, while iron was unknown, the classification seems strong and substantial enough to stand against Mr. Wright's attacks.

Turning to the often-debated question of the visits of the Phœnicians to England in quest of tin, Sir John Lubbock examines the arguments of the late Sir G. C. Lewis, and seems to us, who speak with little special knowledge of the matter, to show that there is more probability in the old fashioned notions of Phœnicians in England than the able, but somewhat too negatively-minded, predecessor of Mr. Gladstone was willing to admit. Sir G. C. Lewis did so great a good to English archæologists by forcing them to defend such positions as were tenable, while they abandoned weaker lines, that he must be numbered among our most useful writers, even where he was wrong; and this may be the case here, as it undoubtedly was in his attempt to cut down Egyptology, root and branch, with one slashing blow. Yet the friends of a cause often do more to damage it than its enemies; and it must be admitted that Sir John Lubbock, in mentioning the arguments which have been advanced by Prof. Nilsson as to Phœnicians in the north of Europe, makes us almost think that we had rather disbelieve in these ancient visitors, even against some sort of evidence, with Sir George Lewis, than believe in them with the learned Scandinavian antiquary, who derives the name of the Baltic from the god Baal, and considers "that the use of war-chariots, the practice of reaping close to the ear, and a certain method of fishing, are all evidences of Phœnician intercourse."

Sir John Lubbock gives us a valuable digest of information as to megalithic structures, such as Stonehenge, Abury, and Carnac in Brittany, and the tumuli, cromlechs, and kistvaens, which are so interesting to the archæologist, associated as they are with the burial of the dead, and the interment of objects which have to us served a historical purpose so widely different from what the mourners contemplated.

The curious suggestion at p. 88, which accounts for the character

of the chambered tumuli of Scandinavia, we mention without offering any opinion on it. These tumuli are "large mounds, containing a passage formed by great blocks of stone, almost always opening towards the south or east,—never to the north,—and leading into a great central chamber, round which the dead sit. At Goldhavn, for instance, in the year 1830, a grave (if so it can be called) of this kind was opened, and numerous skeletons were found, sitting on a low seat round the walls, each with his weapons and ornaments by his side. Now, the dwellings used by Arctic nations—the 'winter-houses' of the Esquimaux and Greenlanders the 'Yurts' of the Siberians—correspond closely with these 'Ganggraben' or 'Passage graves'. The Siberian Yurt, for instance, as described by Erman, consists of a central chamber, sunk a little in the ground, and, in the absence of great stones, formed of timber, while earth is heaped up on the roof and against the sides, reducing it to the form of a mound. The opening is on the south, and a small hole for a window is sometimes left on the east side. Instead of glass, a plate of ice is used; it is at first a foot thick, and four or five generally last through the winter. The fireplace is opposite the entrance; and round the sides of the room, against the walls, 'the floor is raised for a width of about six feet, and on this elevated part the inmates slept at night, and sat at work by day. Captain Cook gives a very similar description of the winter habitations used by the Tschutki in the extreme north-east of Asia. . . . These dwellings appear, then, to agree very closely with the 'Ganggraben'; indeed, it is possible that in some cases ruined dwellings of this kind have been mistaken for sepulchral tumuli; for some mounds have been examined which contained broken implements, pottery, ashes, etc., but no human bones; in short, numerous indications of life, but no trace of death. We know, also, that several savage tribes have a superstitious reluctance to use anything which has belonged to a dead person; in some cases this applies to his house, which is either deserted or used as a grave. . . . Under these circumstances, there seems much probability in the view advocated by Professor Nilsson, the venerable archæologist of Sweden, that these 'Ganggraben' are a copy, a development, or an adaptation, of the dwelling-house; that the ancient inhabitants of Scandinavia, unable to imagine 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 life they had valued most; with ladies their ornaments, with warriors their weapons. They buried the house with its owner, and the grave was literally the dwelling of the dead. When a great man died, he was placed on 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."

In the fifth chapter of his work, Sir John Lubbock gives us a *résumé* of the investigations of the Swiss antiquaries in the lake-dwellings of their country, together with details from North Italy, England, and Scotland, etc., throwing light on the nature of these dwellings, which, far from being at all abnormal in their character, are similar to the houses on piles inhabited by "water-dwellers" at the present day; as for instance, in New Guinea. From the earliest time of the discovery of remains of pile-houses in the Swiss lakes, the passage in which Herodotus describes the fishermen of Lake Prasias as inhabiting such dwellings has been prominent in the discussion of similar sites in Europe. Sir John Lubbock adds an interesting remark: "I have been informed by a friend who lives at Salonica, that the fishermen of Lake Prasias still inhabit wooden cottages built over the water, as in the time of Herodotus."

Chapter VI treats of the Danish shell-mounds, with their remains of bones, rude pottery, stone implements, etc. The rude tribes who have left these memorials of their presence in Northern Europe are considered by Sir John Lubbock to have been men of small stature and round heads, living in a condition comparable with that of the modern natives of Tierra del Fuego, whose life, a wretched one, as it seems to us, has been so graphically described by Fitzroy and Darwin. He holds the Danish mounds to be very ancient, and thus classes their makers as to their period in the history of civilisation. "On the whole, the evidence appears to show that the Danish shell-mounds represent a definite period in the history of that country, and are probably referable to the early part of the neolithic stone age, when the art of polishing flint implements was known, but before it had reached its greatest development."

Chapter VII gives an account of North American archæology, including details as to the "mound-builders" of the Mississippi Valley, and a description of the curious mounds of Wisconsin, which form "gigantic basso-relievos", representing men, buffaloes, elks, bears, otters, wolves, racoons, birds, serpents, lizards, turtles, frogs, etc. The original sources of our knowledge of these interesting archæological fields are principally the publications of the Smithsonian Institution of Washington.

Chapter VIII gives an account of the researches in limestone caverns, such as Kent's Hole at Torquay, the Dordogne caves of Central France, the Sicilian caverns, etc., which have brought into view a race (or races) of "cave-men" living at a remote period in

Europe in company with the cave-bear, cave-tiger, mammoth, woolly-haired rhinoceros, reindeer, aurochs, etc. The evidence is thus summed up:—

“On the whole, therefore, though we cannot as yet determine what variety or varieties of men then existed, we find in the bone-caves sufficient evidence that man was coeval in Europe with the great group of quaternary mammalia. We see, indeed, that the presence, in bone-caves, of ancient implements and human remains, associated with those of extinct mammalia, is no rare or exceptional phenomenon. Nor if we look at the question from a scientific point of view, is there anything in this that ought to excite our astonishment. Since the period at which these caves were filled up, the changes which have taken place have resulted rather in the extinction than in the creation of species. The stag, horse, bear, dog; in short, all our existing forms of mammalia, were already in existence, and there would have been in reality more just cause for surprise if man alone had been unrepresented.”

Sir J. Lubbock then proceeds to discuss in two chapters the question of the antiquity of the earliest appearance of man on the earth, going carefully over the usual topics, the flint implements in the drift, the immense period necessary for the excavation of the Somme Valley, the probable length of time required, on the hypothesis of an original unity of human race and language, for the division of the species and of the language into such varied forms, M. Morlot's calculations as to the time required for building up the cone of the Tinière, Mr. Leonard Horner's computation of the time necessary for the rise in the Egyptian soil in human times, etc. His conclusion is, as might be expected, that the antiquity of man on the earth is very great indeed, though he wisely abstains from committing himself to definite figures. His last sentences relating to this subject are very suggestive:—

“It is true, that few of our existing species or even genera have as yet been found in miocene strata; but if man constitutes a separate family of mammalia, as he does in the opinion of the highest authorities, then, according to all palæontological analogies, he must have had representatives in miocene times. We need not, however, expect to find 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.”

As a means of helping us to realise the early history of our race in general, Sir John Lubbock devotes three chapters to collecting from various sources an account of the state of civilisation of modern savage tribes, such as the Hottentots, Veddahs, Polynesians, Esquimaux, North American Indians, etc., and of the general condition of arts and knowledge among such races. Such accounts are of great ser-

vice for the explanation of ancient remains, and the re-construction of a picture of human life at remotely ancient periods. We notice an account of Hottentot iron-working, which is unsatisfactory. The way in which, in South Africa, iron is reduced from the ore in a furnace by means of skin bellows, and then forged into weapons, etc., has been often described; but Sir John Lubbock is unfortunate in quoting an account from Kolbe, which not only ignores the bellows, but talks of the iron being melted. The good Dutch missionary must have been talking of what he did not understand; for no savage can melt iron; and if he could, it would be merely spoilt for his purpose of forging. Again, it is a common legend, myth, or hypothesis, that the art of fire-making was discovered by the rubbing together, naturally or artificially, of two pieces of wood. If we must have a theory at all as to the origin of the art of producing fire, we think we had rather keep to this old one, which, though imaginary, is at any rate plausible enough, than adopt instead of it the following suggestion:—"In making flint implements sparks would be produced; in polishing them it would not fail to be observed that they became hot; and in this way it is easy to see how the two methods of obtaining fire may have originated." Now, it is true enough that flints struck together throw out sparks; but they are useless sparks for such purposes as this theory requires, as may be seen by trying to set any ordinary material or tinder on fire by knocking a couple of flints together.

Lastly, our author attempts to look not only back, but forward, into the history of man. He regards our race as having developed itself by slow degrees from a very rude and savage state into its present condition, in which different tribes or peoples stand at very different stages of progression from their original state. He favours the opinion of the unity of the human race, and, fortified with the immense length of time which the recent discoveries entitle him to claim, feels able to consider the Caucasian, the Negro, the Red Indian, as derived by the operation of natural selection from one primitive type. In treating of this subject, he makes especial reference to Mr. A. R. Wallace's "admirable memoir" in the *Journal of the Anthropol. Society* of May 1864. The same causes which, in Sir John Lubbock's opinion, have so vastly increased the happiness and glory of mankind since their first appearance on earth, promise, he thinks, to go on making us wiser, better, and happier. He is a thorough believer in "civilisation", and looks down on the "free and noble savage" as the representative of a long past period of development. Science is to make us not only more comfortable, but more virtuous; as we grow wiser, we shall also grow better; when fully convinced that "suffering is the inevitable consequence of sin, as surely as night follows day", we are to be wise

and leave off sinning. "The future happiness of our race, which poets hardly ventured to hope for, science boldly predicts. Utopia, which we have long looked upon as synonymous with an evident impossibility, which we have ungratefully regarded as 'too good to be true', turns out, on the contrary, to be the necessary consequence of natural laws, and once more we find that the simple truth exceeds the most brilliant flights of the imagination."

We have one little problem to propose to Sir John Lubbock. Granted that the *Somme* has been at work for twenty thousand years in cutting its way down to its present bed; query, where will it have got down to by the time when these things shall have come to pass?

THE PSYCHONOMY OF THE HAND.*

Most of the older sciences commenced as superstitions. Chemistry was long practised as alchemy, and astronomy was first studied as astrology. It would almost seem that the human mind in early ages was incapable of beholding the sublime and beautiful form of pure truth; so the heavenly visitant was veiled for a season in the gaudier robes of idealised error. It was thus that the study of the hand commenced with palmistry, in its stellar relationships a branch of astrology, and still practised with a certain amount of professional success by the gypsies. And it is as a partial revival of one of the older Magian studies, by which the present age is distinguished, that it has undergone a resurrection within the last few years.

We are accustomed to think of Paris as the centre of frivolity and fashion, of intellectual activity, and political excitement. But this is by no means an exhaustive catalogue of its manifold missions. In addition, it is a favourite seat of the occult, whose devotees seem to have made this renowned capital their especial abode. Here Mesmer proclaimed that mysterious mode of healing which still bears his name. Here Cagliostro shone with unwonted brilliancy, and attained to the culminating point of his strange and devious career. And here Levi (Alphonso, Louis Constant) still continues to publish his wondrous tomes of cabalistic lore. And of this great master of the occult, M. Desbarrolles is the favourite pupil, the one of whom he speaks in the

* The *Psychonomy of the Hand*, according to MM. D'Arpentigny and Desbarrolles. By Richard Beamish, F.R.S., etc. London: Frederick Pitman, 20, Paternoster Row.

highest terms, and to whom he awards that mysterious praise, which can only be fully appreciated by the thoroughly initiated.

M. D'Arpentigny belongs to another school, and has pursued the humble path of laborious observation and careful analysis. But, however able his work may be from his own stand-point, it is necessarily imperfect from ours. The truth is, the psychonomy of the hand can be but part of the larger whole of corporeal psychonomy, of which phrenology, physiognomy, and chiromy are but subordinate branches. That there is a connection between the mind and the body, whether the relationship be one of cause and effect, or of otherwise necessary coexistence, has been believed to a certain extent in all ages, and is practically acted upon by nearly all persons. We cannot help instinctively judging of people by their looks, though it does not follow that our judgment is always, or even generally correct. Our failures, however, only prove our individual incapacity. They do not demonstrate the non-existence of psychonomy, nor even invalidate the conclusions of its more competent professors—if such are to be found.

If psychonomy be possible, it must depend for the accuracy of its conclusions upon the existence of some harmonic relationship between the inner machinery of mind and the outer mechanism of body, or, to speak anatomically and physiologically, on some law of congruity between the development and functional power of the nervous system, as a prime motor, and the structure and disposition of the bones and muscles, as its more immediate instruments. Granting, then, for the sake of argument, that the science does exist, and it becomes at once obvious that its predictions will be more generally accurate in the pure than the mixed races. For, however harsh the verdict may seem, it is nevertheless quite true physiologically, that all hybrids are monstrosities, in whose production the higher laws of nature have been violated and her finer harmonies disturbed. And this superiority of the pure races, as subject matter for their operation, is candidly admitted by the authors of the work before us. Though they say, and perhaps very justly, that when the race is mixed the hand will bear traces of the impurity. Thus contemplated, then, it is obvious that the subject has a direct bearing on anthropology, of which rightly treated, it may ultimately become an important province. Its application, indeed, to individuals, with which, however, it necessarily begins, will ever be more or less empirical, till it has been mastered in its principles, and both tested and applied racially. If there be any truth in it, if hand and character go together, then beyond question hand and type go together, and there is a negro, a Mongolian, and a Caucasian hand, as there is a negro, a Mongolian, and a Caucasian

cranium, together with all the sub-varieties into which these great races, more especially the latter, are known to be divided. Nor do the authors of the work before us deny this, but speak with confidence of the Celtic, Egyptian, and Hindoo hand, as readily distinguishable by a practised observer.

And of course, if races and individuals are thus forcibly characterised by their chirognomic peculiarities, necessarily the sexes will be similarly stamped by their respective specialities. The strength of the man and the refinement of the woman, the practicality of the former and the spirituality of the latter, the reasoning faculty of the one and the intuitional power of the other, will be unmistakably impressed on their organisation, not simply in the contour of the head and the expression of the face, but also in the size, shape, and general quality of the hand. And our authors do not hesitate to affirm that it is so. And in this we think even the simplest observer will not fail to bear them out.

The following is a succinct narrative of the manner in which the attention of M. D'Arpentigny was first directed to the hand as an index of character, and from it we may perhaps obtain a somewhat interesting glimpse of his own:—

“While a very young man, M. D'Arpentigny resided principally in the country. In his immediate neighbourhood lived a rich and intellectual *Seigneur*, who had a strong predilection for the exact sciences, and more particularly for mechanics. Geometricians and mechanics were therefore amongst his most constant visitors and guests. His wife, on the contrary, was a passionate lover of the fine arts, and only received artists as her guests. As a consequence, the husband had his reception days, and the wife hers. M. D'Arpentigny, who was neither mechanician nor artist, and who therefore ranged himself under neither banner, attended indiscriminately the *réunions* of both husband and wife. Of his own hand, M. D'Arpentigny was somewhat vain. This vanity naturally led him to institute comparisons with other hands, often to his own advantage. He soon observed that the fingers of the arithmeticians and mechanics presented a knotty appearance at the joints, while those of the artists did not possess that form. In a word, the members of these societies seemed to him to differ quite as much from one another in the form of their hands, as they did in the constitution of their minds and in the nature of their social habits. The repeated confirmation of his observations very soon led him to divide men into two categories—those of the smooth and those of the knotty fingers. Connected with the smooth fingers, he observed an impressibility, caprice, spontaneity, and intuition, with a sort of momentary inspiration, which took the place of calculation, and a faculty which gave the power of judging at first sight. In this class he placed the artists. The knotty fingers, on the contrary, he observed to be connected with reflection and order, aptitude

for numbers, and an appreciation of the exact sciences. In this category he placed mathematicians, agriculturists, architects, engineers, and navigators; all, in short, who were led to the application of acquired knowledge."

A very fair beginning, it must be confessed, for the young Frenchman, and one that, followed as it has been persistently for so many years, could scarcely fail to lead him to some interesting conclusions, if not to some really important discoveries.

In his *Chirognomy*, M. D'Arpentigny, according to the editorial arrangement, treats of his subject matter in the following order:—The elementary hand, the labour hand, the useful hand, the philosophic hand, the artistic hand, the psychical hand, the mixed hand, and the female hand. From the elementary to the psychical, there is a gradually ascending series, which perhaps we may characterise as the hands of the savage, the labourer, the artisan, the thinker, the artist, and the poet (more especially as saint and prophet). Thus it may be said, that at one extremity humanity grasps the earth, at the other it lays hold on heaven. And it is a fact, that the elementary hand approaches nearest to the anterior extremity of the gorilla, while the psychical hand is at the farthest possible remove from it, the remainder being intermediate links of this stupendous chain. Now, granting that all this is not a beautiful hypothesis, the day-dream of an idealistic, and no doubt fine-handed Frenchman, it is obvious that we have here a province of inquiry, in which anthropologists cannot but feel profoundly interested, and which is certainly deserving of far more attention than it has yet received. But to be of advantage to us, it must come under the domain of minds more rigidly scientific yet more widely cultured, than that of the author of either of the works with which Mr. Beamish has made us acquainted.

Let us for a moment glance at what such an investigation, as that to which we have been alluding, really implies, what a scientific system of chirognomy imperatively demands. Through comparative anatomy, we should effect a survey, involving a carefully conducted examination of the extremities of all animate types, from the fins of fishes, through the feet of quadrupeds, up to the hand of man, not of course forgetting his specialisation, as the only true *bimanous* creature yet in existence. In such an investigation it would be most desirable to compare the development of the extremities with that of the brain and nervous system generally, and if we mistake not, it would be found that the one is generally proportionate to the other. The harmonic laws of organisation, the profound congruity everywhere observable in Nature's types would seem to imply this. In such a survey, the apparently exceptional instances, such as that of the horse, would

of course have to be accounted for, and if for a time inexplicable, would serve as indications of the imperfection of our knowledge. In all such inquiries, we may remark, that the hereditarily transmitted intelligence of long domesticated animals is likely to prove a disturbing element, and should at first be eliminated by taking only the wild species, such as the zebra in the genus *Equus*, and the wolf in the genus *Canis*. From the data thus obtained, we might proceed to an examination of the various races of men with whom true chiromnomy would begin. From race we might proceed to diversity of temperament and structure in the same race, and ultimately we might descend to individual specialities, where the grander generalisations of science would be applied practically. Now, it need scarcely be said that the work before us does not profess anything of this kind. It is simply a digest of the empirical knowledge and hypothetical notions of two acute and observant Frenchmen who do not commence at the beginning, and who certainly have not arrived at the termination of such an investigation, and whose inquiries, however suggestive, are assuredly far from exhaustive.

The Psychonomy of the Hand, we may say, is edited and translated, rather than written, by Mr. Beamish, already somewhat favourably known to the reading public by his life of Sir Marc Isambard Brunel. It consists for the most part of a series of well-arranged extracts from the writings of M. Desbarrolles on chiromancy, and M. D'Arpentigny on chiromnomy; the text being illustrated by numerous tracings of hands, many of them of living celebrities, collected by the editor during the last twenty years. Perhaps in the incipient stage of such an inquiry, it was quite proper to give us the experience even of M. Desbarrolles, notwithstanding the rather questionable form and phraseology in which it is embodied. A firm believer in astrology, magic, and palmistry, he has not hesitated to speak of the mound of Jupiter, the plane of Mars, the ring of Venus, and the line of life, with a seriousness to which the world has been a stranger for nearly two centuries. And however we may differ from him, or, rather, however ignorant we may be of these recondite matters, we yet know how to respect the strength of conviction, and to honour the moral courage which can enable a well educated man to openly and avowedly express his faith in such mysteries, amidst the science and the scepticism of the nineteenth century. Happily, however, for the reader, M. Desbarrolles is not simply a professor of astrological palmistry, but also, like M. D'Arpentigny, a most acute observer of the hand as an index of character. It is this which gives value to his remarks and suggestions, and renders them supplementary to the more scientific notices which the latter has embodied in his *Chiromnomy*.

The work of M. Desbarrolles is divided into four parts. The first embraces "Physiology of the Hand", and consists of extracts from the writings of Sir Charles Bell, and Drs. Gall, Spurzheim, Collinge, and Professor Huxley; the object being to show that the human hand is indicative of the same superiority as the human brain, and in the delicacy and complexity of its nervous structure, and the consequent fineness of the sense of touch, accurately corresponds to this higher portion of the organism, of which it is so apt and appropriate an extremity. This, as already observed, is only another instance of that law of harmonic relationship which governs the development of all normally constituted structures, whether vegetable, animal, intellectual, or, we may add, cosmic.

The second part embraces the physiology of the hand, as indicative of character, according to the principles of MM. D'Arpentigny and Desbarrolles, from which it appears that the palm is the animal, and the fingers and thumb the human portion of the hand, the anterior extremity of brutes consisting almost entirely of palm. But if long fingers be so essentially human, what shall we say to the lengthy digits of some of the quadrumana? But it is, perhaps, scarcely fair to press a nascent science with apparent exceptions, which a profounder knowledge may hereafter prevail to harmonise with principles whose application is yet of necessity partial and imperfect. The palm is, however, of great importance in determining character; for it seems that "two individuals endowed with similar intellectual qualities, but differing in the development of their palms, will produce widely different results." To which our reply would be that, if there is anything in the science, two individuals so differenced in their palms, could not be correlated in their faculties. We can quite understand, however, that a thick and coarse palm indicates grossness and sensuality, but when hollow and firm, mental vigour. We can also quite comprehend the general applicability of the rule, that slender and pointed fingers attach to poets and artists, the square and spatulous to mechanics and mathematicians. But alas! for the unfortunate chiromnist, if he should chance to be himself of the *square* type, and so prone to method and induction, to rule and order; for it seems that, in the dreadfully hybrid populations of Western Europe, "one finger may be pointed, while another is spatulous or square—marking the anomalous and even contradictory train of ideas by which the mind is sometimes influenced"! This, it appears from the editorial comment, is a difficulty which M. D'Arpentigny has altogether overlooked; his system assuming a uniformity which nature, labouring under the difficulties of hybridity, cannot always produce. From this we should infer that M. D'Arpentigny is himself of the pointed

and artistic—that is, intuitional and idealistic—type, and so quite capable, upon due occasion, of dispensing with an inconvenient *fact*, as being simply a failure in nature's more sublime intention. Monstrosities are not for *art*, and perhaps ought to be accounted unworthy even of science, more especially of chiromnomy!

It seems, however, that the fingers are utterly insignificant when compared with the thumb; for "if it be acknowledged that the superiority of the animal is in the hand, the superiority of the hand is in the thumb." "Idiots, whose lives are altogether under the dominion of instinct, have very small and ill-developed thumbs." "Generally a small thumb is the index of vacillation and irresolution. The large thumb, on the contrary, is the index of a strong will, and little general sympathy." "Again, should spatulous fingers—the indices of action—be joined to a short, imperfectly formed thumb, the action becomes uncertain. Much will be attempted, but little will be accomplished." These are certainly rather sweeping conclusions to be based on such slender premises. But M. Desbarrolles goes yet further than M. D'Arpentigny, and enters confidently into the minutest detail of indication afforded even by the separate phalanges. It seems the first phalanx is the index of the will. "If it exceed the second in length and power, the desire will be for domination, amounting to tyranny." If of moderate length and very broad, it indicates prejudice. "The second phalanx is the index of logical acumen. If long and strong, logic and reason prevail over impulse and will. But should the first phalanx be short and weak, the individual hesitates to act. The root of the thumb is the seat of sensual (sexual) love; if very thick and long, of brutal passion." "It is an ascertained fact that debauchees and unfortunate and degraded females have the root of the thumb largely developed, and the first two phalanges short and feeble." Truly, if these things be so, it is certainly time that anthropologists should make themselves acquainted with such "ascertained facts", and proceed to investigate the laws on which they depend.

The reader will probably think that we have already had detail enough, and in the predication of character far more, indeed, than the premises warrant. But what will he say when we inform him that M. Desbarrolles enters, with equal confidence, into the minutest specialities of each of the fingers, with their respective indications as to ability and disposition. Thus, for example, he tells us that the second, or middle finger, is *supposed*, next to the thumb, to exhibit, more than any other finger, the strength or weakness of the character. If the first phalanx be pointed, it is indicative of vanity. The second phalanx indicates a love of science; the third marks the love of earthly things; and so on, down to the little finger, which it ap-

pears, "is the index of abstract science and of numbers"! After this we must not be astonished to find M. Desbarrolles entering with equal fervour into all the mysteries of palmistry, with which, however, we will not farther afflict the much-enduring reader.

We have given this subject more attention than the work under consideration deserves, because we think that the hand has hitherto been unwisely neglected as an index of race. Let us begin by observing its connexion with temperament. Is not the psychical hand an accompaniment of the almost purely nervous temperament? And is not the useful hand, with its hard elastic palm, and knotty fingers with their square tips, a characteristic of the fibrous? The negro hand is, we presume, generally elementary. But what are we to say to the small extremities of the Mongol? It is obvious that we have yet much to learn in this direction. We want more facts. We have not yet the data which would warrant even a plausible hypothesis. Let us commence by the confession of our ignorance, by the admission of our incompetency. Let us encourage travellers, or residents in foreign countries, and among alien races, to procure us tracings, and where possible, even casts of the hands and feet of all the distinctly marked types. And let us compare these not only with each other, but also with the individual varieties and the several temperaments existing among ourselves. Let us thus endeavour to discover if there be ethnic characteristics attaching to the extremities as well as the cranium; and if so, let us endeavour to define these, and if possible, ascertain the law on which they depend. In accomplishing this, we need not despise the labours of such careful observers as M. D'Arpentigny, although we shall, perhaps, be wise to hold our judgment in suspense as to his minute predication of character from such slender indications. Let us first settle the great question of the racial hand, and then we shall be the better prepared to descend into the details of individual speciality.

ANTHROPOLOGY AND THE BRITISH ASSOCIATION.

For the last two years it has been our duty to comment on the position of anthropology in the "British Association for the Advancement of Science." We are sorry that our language must necessarily be different this year from what it has been on other occasions. We deeply regret this; but our duty to the public compels us to speak without reserve. If a body, though assuming a name expressly indicating as its object "the advancement of science," yet does all in its power to stay that advancement, we think it is the duty of public journalists to expose such practices. We visited Birmingham expecting to be able to give a full report of all the anthropological papers read, never anticipating that this meeting would end without an acknowledgment of the existence of anthropological science. The first thing, however, we heard on our arrival at Birmingham was that influence was being brought to bear upon the local committee by "the authorities" to induce them to throw out the motion for a special section for anthropological science which was to be made at the meeting of the general committee.

Early on the day fixed for the decision of this point, a mysterious body known by the name of the Council of the British Association had held a meeting and resolved to oppose this motion. This organisation deputed Sir R. Murchison to announce this decision, and in justice to him we must say he did so with all becoming pomp and dignity.

We, however, somewhat anticipate the course of proceedings. After the ordinary business of the general committee had been transacted,

Dr. HUNT moved, in pursuance to notice given by Mr. Carter Blake at Bath last year, in his unavoidable absence, that a separate section be set apart for anthropology. In moving the resolution, Dr. Hunt went into his reasons for so doing at some length, premising his remarks by urging that his motion was not brought forward in any spirit of rivalry or antagonism to any other society having a different name, and that it was simply brought forward from a desire that anthropology, or the science of man, might be discussed on its merits, and in a calm scientific spirit. The same thing which he was now bringing forward was advocated some twenty years ago by the late lamented Dr. Prichard, but at his death, in 1848, ethnology—as a part of the science of man was then called—lost its chief supporter, and it was added to geography, which had been taken from geology. From this time geography was so popular that ethnology had had no chance, and any member wishing to read a paper upon it had been compelled to wait until almost the close of the section, when the author was requested to state the objects of his paper, or simply read the title. Since the death of Dr. Prichard, the science of man had

been making progress through the whole world, with the exception of the British Association, where it could never make progress so long as it was connected with geography. With regard to the offer kindly made to cut them up and send them to other sections, he did not agree with it, because no science could make satisfactory progress if its harmony and unity were destroyed by being sent piecemeal into a variety of sections. The anthropologists had forty-two papers to submit; sixteen being upon historical anthropology, which was a part of the science of archæology; others upon descriptive anthropology, and the remainder upon comparative anthropology, by some called ethnology, and in order to bring these papers forward they wanted a section, let it be called by whatever name they thought proper. For the information of those not acquainted with the science, he remarked that there were societies already established in Paris, Madrid, and New York; an anthropological journal had just been started in Germany, and societies were about to be established in St. Petersburg, Canada, Melbourne, Calcutta, and Lahore, in addition to which, applications were recently received in London for the formation of societies in Manchester, Glasgow, and other flourishing cities of the kingdom. He had heard that the motion which he had made was likely to be defeated by local influence, but he hoped this would not be the case, inasmuch as the matter was not one of local but of world-wide importance. He did not think the objection, that by passing his resolution the number of sections would be increased beyond what could be accommodated, ought to influence the meeting to negative the proposition, because arrangements could easily be made by which this difficulty could be obviated. It had been suggested that Palæontologists ought to have a special section, and to this he replied that there was not a special Palæontological Society in London, but that this subject formed a part of the work of the Geological Society. In conclusion, he trusted that the British Association was not too old to adapt itself to the wants of the time, and trusted that the general committee would pass the resolution, and thus do something for the progress of the science of man.

Rear-Admiral Sir EDWARD BELCHER seconded the motion, not so much because he understood anthropology, as because he wished all classes of the scientific community to have fair play.

Sir RODERICK MURCHISON said, as the representative of the council, he was authorised to move a direct negative to the resolution which had been moved by Dr. Hunt. He had as profound a reverence for the science of man as Dr. Hunt or any of his associates; but from the foundation of the British Association it had been found necessary to restrict their sections to seven. There were many reasons for this, and amongst others it was necessary because there were in England towns and cities, deserving by their importance of the patronage of the British Association, which could not derive the advantage of it, because they could not accommodate a large number of sections. Another reason was, that this was the first proposal that had been made during thirty-four years to create an entirely new section, and he feared that if the request were acceded to there were other sciences that would at once put in similar claims, and great

difficulties would result. Some years ago, agriculturists wanted a section; but the success which had attended the establishment of an exhibition of fat bulls and cows, and agricultural implements, showed that they did right in refusing to receive them. An offer to include phrenology had been made and declined. He therefore thought, as an old president of the Association, that they would not do well to depart from their fundamental rules, and recommended the members of the Anthropological Society, if they wanted to push forward their science, to hold a separate and distinct conference of their own. Sir Roderick concluded by saying that Professor Owen, who was a great authority on the science, had expressed an opinion that a new section was not necessary, and that the Anthropologists had better hold a congress.

Mr. W. R. GROVE, Q.C., observed, as an old member of the Association, and one who attended various sections from the beginning, he might be permitted to say a few words on the subject, not in opposition to the claims of anthropologists, but on the general question of the expediency or non-expediency of increasing the number of sections. He would not say one word in depreciation of the science so ably advocated by Dr. Hunt. It was a question of whether a body like the British Association could be managed with too large a number of subdivisions. He did not deny that any new science had claims upon the Association, but whether it was advisable that it should be represented by a separate section. He illustrated his remarks by the science of electricity, the which it was a matter of opinion whether it belonged more to the chemical than to the physical. If anthropology was to have a section, why should not the claims of electricians also receive the same attention? but he never heard that they complained that they had not a separate section. He thought the claims of the former were more allied to other bodies, and it was not advisable that a separate section should be allotted to it. He submitted that it should not be done without due deliberation, and would lead to extreme danger if settled otherwise. Were the Association subdivided in the manner proposed, the attendance of members at the several sections would be much scattered, till finally not more than ten members might be found attending each section. The question, however, would find its level by fair discussion, although he thought there was nothing in anthropology which could not be adequately represented by the ethnological or physiological sections.

Mr. THOMAS TATE thought anthropology worthy of a place in a separate section of the British Association. He dilated on the great good the Association was doing, and inquired if there was no means of multiplying the sections. It had not been tried, and therefore it could not be said to be impracticable. He had no hesitation in believing that if the council were earnest in their desire, the ways and means might yet be found. Anthropology was a science which claimed the attention of the whole civilised world, and should therefore most certainly be countenanced by the British Association. Science had increased vastly during the last thirty-five years, and the science of anthropology was increasing very fast. There were no less than forty-four papers which the Society were desirous of laying

before the Association; and yet those important papers could not find a place in any one of the present sections. In conclusion, he did hope the Association would grant a distinct section for the study of the science in question.

Dr. E. PERCEVAL WRIGHT rose to move an amendment. A great number of papers referred to he should be sorry to lose, for it was always a matter of difficulty to draw distinctions between the value of one science and the value of another, and for that reason he should like every possible information to be received on a subject claiming so much attention. He thought that it might very well be incorporated in section D. In that section they had not the number of papers they ought to have. He thought by that arrangement both sections D and E, the latter treating on geography and ethnology, would be improved thereby, although, for the sake of not giving cause for complaint to existing members of sections D and E, he would substitute the word ethnology for anthropology. He moved, "That sub-section D be henceforth devoted to human physiology and ethnology." He substituted the last word also because he thought it a better word than the other.

Mr. A. R. WALLACE seconded the amendment.

Mr. CRAWFURD hoped it would not be fancied that there was any hostility between himself and Dr. Hunt, who was at one time honorary secretary of a society to which he (Mr. Crawford) was president. He held in his hand the Anniversary Address of the President of the Anthropological Society, which consisted of thirty-two pages of letterpress, eighteen of which were devoted to a consideration of the three titles, ethnography, ethnology, and anthropology, and the preference was given to the latter, for reasons which he could not see. Anthropology was a term of vast antiquity, first used in the first year of the sixteenth century, in the year 1501—very properly, in his opinion, at the fag-end of the dark ages—it was, to his taste, an ugly polysyllable—by a man named Hundt, who, it was possible, might have been an ancestor of Dr. Hunt in the twelfth generation, and who was also called *Magnus Canis—Anglicè*, "Big Dog,"—and who wrote a work called *Anthropologia*. The word then consisted of six syllables. It was now reduced to five, or, commercially speaking, was 20 per cent. less. The word was still too long, for the world called the anthropologists anthropos, with a long accent on the last syllable. The whole of the word was, in his opinion, too long, and he recommended the meeting to negative resolution and amendment alike.

Dr. LEE, F.R.S., moved, as a further amendment, "That sub-section D be devoted to human physiology, ethnology, and anthropology."

Mr. C. CARTER BLAKE seconded this amendment.

Dr. ACLAND did not wish to support the amendment or the original motion. He hoped that all interested in the study of man would bring their quota of information through the medium of papers, without endeavouring to establish a distinct section.

Professor PHILLIPS observed that if the movers and seconders of the amendments would withdraw them, he thought he should have something to suggest which might be of service to all parties.

Dr. PERCEVAL WRIGHT thought it would be a rather dangerous precedent, and declined to withdraw his amendment, as also did Dr. Lee.

Professor PHILLIPS said then he might go on to say that the Association did not object to the introduction of new sciences, or branches of sciences treated in a new form. He, and all, wished that all subjects should be discussed with the greatest possible advantage to the progress of science. With respect to the formation of separate sections in addition to what they already had, he could not go so far as some of them did; there must be a limit put to the sections. He alluded to the science of statistics, which had undoubtedly a just claim, and which was, with economic science, comprised in one section. He did not think it was intended to propose general measures at the meeting. It was certainly their parliament, and they had to legislate for the good of the whole body, so to speak, and were desirous of doing justice to all; but he must be permitted to express an opinion that to pass a motion like Dr. Hunt's was rather premature, especially without further and more mature deliberation. The motion should have been first submitted to the sections' committee, then next referred to the committee of recommendations, and come before the general meeting of committee for confirmation or rejection. The Association had great confidence in those committees, and they reflected great credit on the Association. He should propose eventually, as endorsing a principle which had long been held in operation, a motion embodying the above views, which he thought might be of use in removing difficulties, "That in future all proposals for establishing new sections, or altering portions of sections, or for any other change in the constitutional or fundamental rules of the Association, be referred to the committee of recommendations for a report."

The CHAIRMAN said, if he understood the matter rightly, there was no desire to take it out of the power of the general committee to decide the question, but simply to refer it to the committee of recommendations as a preliminary step.

Dr. HUNT said he would not, after the strong expressions of some of the members of the committee of recommendations, consent to refer the motion to be decided by them, but he was willing to submit it to the decision of Lord Stanley, Sir Charles Lyell, and Professor Phillips.

Lord STANLEY said his attendance at the meetings had not been such as to warrant him in accepting such an office.

After some little further discussion, amidst loud cries of "vote,"

The CHAIRMAN (Sir Charles Lyell) referred to the strong feeling pervading the members against multiplying sections. He thought the matter required further consideration. For, as new sections were formed or subdivided, it became necessary to go to rich places,—important towns,—because small ones could not find the requisite accommodation for so large a body of visitors as the British Association, and a larger number of sections. There were parts of the country where there was no great wealth, such as Norwich, where there were a great number of students—isolated students of science—who, if they were brought together by the visit of the Association, might be numbered among them, and assist in the great work of scientific inquiry. In answer to the assistant-secretaries' inquiries as to

accommodation, they replied that it could not be found in their towns for so large a number of sections; and yet those places might have been visited with considerable advantage to the Association, and to the advancement of the interests of science. The discussion, however, would not be unattended with benefit, as it would doubtless induce all the sections to have such papers as those referred to, were they submitted to them again. They would, were they of sufficient merit, be read somewhere, as they ought to be. All those forty papers ought to be read in some place or other.

The CHAIRMAN, after a little confusion, then put Dr. Lee's amendment to the meeting, and about forty hands were held up in its favour, and about sixty against.

Dr. Wright's amendment was then put. About fifty hands were held up in favour, and sixty against.

Dr. Hunt's original motion then being put, the votes, as near as we could ascertain, were about fifty in favour, and about seventy against. Consequently it was also rejected.

Professor PHILLIPS then submitted his resolution to the meeting, which, being seconded by Mr. GALTON, was carried, only about half a dozen hands being held up against it.

Now the first question that is suggested by a perusal of the above report of Sir R. Murchison's speech is, by what authority the Council discussed this matter at all? When it was proposed to introduce the word Anthropology into Section E, this same gentleman then came forward, and, on behalf of the Council, moved a direct negative. We utterly protest against this interference on the part of the Council with matters which should be discussed and decided by the General Committee alone. Either the Council have entirely exceeded their powers in coming to any decision whatever on this point, or Sir R. Murchison has taken a most unwarrantable liberty in making the statement that he was "authorised by the Council." We heard of this decision of the Council before the meeting of the General Committee was held. We have reason to believe the influence of the Council was largely set in motion to deter independent members of the Association from voting for the recognition of anthropology. To vote against the decision of the Council, appeared to some persons something terrible.

We are glad, however, to be able to record that these fears did not affect a goodly number of the meeting, and in spite of all the influences brought to bear, one of the resolutions was nearly carried in one of the largest meetings of the general committee ever known. Sir R. Murchison professed to have a reverence for the science of man; but to judge from his comparison of anthropology with phrenology, he showed that his reverence is largely combined with imperfect knowledge of the nature of anthropological science. Perhaps, for the future, Sir R. Murchison will remember that phrenology is generally believed to be either a system or a theory, and that anthropology is a science and

advocates no especial system or theory. We think that the mover of the resolution was very much to blame for not having informed Sir Roderick that anthropology bore no resemblance to the exhibition of fat cattle and agricultural implements.

With regard to the two statements "that it had been found *necessary* to restrict their sections to seven", and "that they would not do well to depart from their *fundamental* rules", it unfortunately happens that it has not been found *necessary* to restrict the sections to seven in number, and that this is not one of the *fundamental* rules of the Association.

The other "reason" given, namely, "that this was the first proposal to create an entirely new section which had been made for the last thirty-four years", is equally unsupported by facts. In 1844 a proposal was made for a special section for ethnology, and although supported by such men as the late Sir Charles Malcolm and Dr. Prichard, it was opposed by the same parties who now so loudly boast of what they have done for the progress of science.

With regard to the assertion that Professor Owen had written to Sir R. Murchison, to the effect that he thought it would be best for anthropologists to hold a special congress, we are not in a position to contradict that assertion. It would, however, be interesting to know what Professor Owen really did write, not so much because his opinion upon this point is of any special value, as for the purpose of ascertaining upon what evidence this statement was made to the general committee.

We were informed by the delegates of the Anthropological Society that no communication of this nature had been made to the officers of that Society, and if Professor Owen wrote such a letter as that described by Sir R. Murchison without intimating his having done so to them, we have only to say that it redounds very little to his credit. We see Professor Owen's name on the list of Honorary Fellows of the Anthropological Society, and we should be very sorry to learn that he had intentionally done anything to injure the cause of anthropological science in this country. We trust that the official report of Mr. Blake will effectually exculpate Professor Owen from any blame in the matter.

We have little or nothing to add to the report of the other speakers. Towards the end of the discussion there appeared to be no little confusion. No chance of reply was given to Dr. Hunt, and another gentleman who rose to support the cause of the science of anthropology was cut short by the impatience of the meeting to come to a decision.

One thing not noticed in the foregoing report—but noticed by some of the London daily papers, was the fact that the mention of the word

anthropology seemed to excite the amusement of many in the audience. This is a very hopeful and satisfactory sign of the times. Not a word was said against the term anthropology by anyone except Mr. Crawford, who we much regretted to see was listened to with great impatience. Mr. Crawford, however, mistook the point under discussion, as Dr. Hunt expressly stated that he would not insist on the name, but wanted the *thing*—a special section for the science of man.

We now have to record what appears on its face as great a piece of cliqueism and jobbery on the part of a public body as was ever witnessed. Without a minute's notice, and at the end of the same meeting,

Professor PHILLIPS rose and said he was requested by the Council to propose "That, in future, all proposals for establishing new sections, altering the titles of existing ones, or making any other change in the constitutional forms and fundamental rules of the Association, be referred to the Recommendation Committee for a report." Professor Phillips explained that his resolution was not directed against any of the motions just negatived by the meeting, but was brought forward on broad grounds, and with a view to prevent hasty and perhaps faulty legislation.

Mr. PENGELLY asked if it was regular to propose such a motion without notice.

Professor PHILLIPS replied that such a privilege had never yet been denied to an officer of the Association.

At this time, Professor Phillips was, however, not an officer, and the unseemly haste with which this resolution was passed at the fag end of a long meeting was not calculated to impress the people of Birmingham with much respect for either the business habits or the wisdom of the general committee.

Notwithstanding Professor Phillips's disclaimer that this resolution was "not aimed against any of the resolutions just negatived", it reached our ears that a prominent member of the Council stated that the resolution was prepared specially with the intention of being the "coffin of the anthropologists."

Now this interference of the Council and of the Committee of Recommendation opens up a very serious question, and it is not difficult to predict that if such legislation is allowed discord will be introduced into the Association, and that when this takes place, it will soon lose its hold on the respect of the public.

The effect of this resolution will be to throw all responsibility of future legislation on this Council. Sooner or later, it will happen that a report will be brought up by the Committee of Recommendations which cannot be accepted by many of the members, and a division must necessarily ensue. If the division should be against the Council

or Committee of Recommendation, it will make them appear somewhat ridiculous in the eyes, not only of the Association, but of the whole scientific world. The Council, as a body, were quite strong and influential enough to have effectually prevented any hasty legislation, and with unity of action no new comer would have had a chance. The cause of anthropological science must be both good and strong, when it is necessary to have recourse to such legislation to oppose it. We feel ashamed to believe that men in position would so far be led away from their duty towards the cause of science as to act in such a manner as this; but grave suspicion now rests upon them.

We shall be very glad to hear that such is not the fact. We would not for an instant impute to the members of the Recommendation Committee a knowledge of the object of the proposers of this resolution. We are also quite ready to believe that Professor Phillips acted in good faith; and yet we fear that the confession of a prominent member of the Association is the real truth.

If these reports are true, and they have come to us on good authority, we say most distinctly that anyone capable of organising such opposition to the progress of the science of man, and of boasting that he had "made the coffin of the anthropologists", must indeed have sunk immeasurably in the scientific scale.

We should much like to know the cause of this desire to bury the anthropologists. It was currently reported that the freedom of discussion which has prevailed in the Anthropological Society had induced a fear lest something of the same sort might find its way into the new section. If this were done, they said, "We shall get the parsons about our ears". We heard, too, of some extraordinary remarks respecting the title of one of the papers which was to have been submitted to the Association. This paper was entitled, "On Monogeny and Polygeny", and anthropologists were told that such a paper would not be received, "as it would bring on a discussion on moral questions". This was repeated more than once, until at last it was found out that the words "monogeny and polygeny" were mistaken for "monogamy and polygamy". The title of this unfortunate paper, we believe, lost several votes with the General Committee. This fact may be sufficient to indicate to our foreign readers the amount of knowledge of anthropological literature possessed by some men of science in this country.

And now we come to the papers read in the different sections on anthropology. The delegates of the Anthropological Society took up altogether upwards of forty papers, and out of these Section E consented to receive five and Section D (zoology and botany) about twenty. A difficult question now arose, and the members of the Society in Birmingham met at Queen's College, and all agreed that it

would not be advisable to read papers on questions of general anthropology in a section devoted to zoology and botany.

About twenty of the papers in the charge of the delegates of the Anthropological Society were on early archæology, or, more correctly, on historical anthropology. These Sir R. Murchison stated did not come within the sphere of the British Association, and with the exception of Dr. Hunt's paper "On Zetland", they were all refused by both Section E and D. On the day before the section separated, two papers were read in Section E, "On the Discovery of Flint Instruments at Pressigny"; and one "On the Bronze Age". The authors of these papers of course did not agree with Sir R. Murchison.

We regret to state that we have never seen such a poor show of papers as those read on this occasion in Section E. The geographers had, it is true, one new paper which gave an interesting description of the ascent of the river Purús in South America. The rest of their papers were wholly insignificant, and most of them had been read before in London. Mr. Crawford read three papers, all of which had been previously read and fully discussed and reported in London. Papers also by the Rev. F. W. Farrar and Mr. Dunn were read to the Section, although they had both been read before in London.

The ethnologists were not so particular as the anthropologists; for they sent off a batch of their papers to Section D. We believe they sent there four papers, of which three at least had been read before in London—viz., Mr. Markham's, "On Arctic Highlanders"; Dr. Rae, "On the Esquimaux"; and Rev. — Thrupp, "On the Domestication of Animals".

Dr. Hunt called the attention of Section E to the fact of papers having been read before in London, but it will require many years to put an effective stop to this nuisance.

Mr. E. B. Tylor read a paper "On the Language of the Negroes of Surinam", which elicited from the Chairman the most satisfactory information for anthropologists, "That language is the easiest and surest test of race".

The papers by Dr. Charnock and Mr. Crawford, "On Cannibalism", elicited some extraordinary discussion, of which the following is a specimen:—

Professor RAWLINSON said there were many motives which led to cannibalism, and he thought hardly sufficient importance was given to them. Amongst these motives he alluded to those excited by angry passions, by revenge, or from motives of religion. He protested against the assumption that human beings were originally in that poor and destitute condition, and that they all rose from a state of barbarism. He held the very opposite opinion that they were created in a state of considerable civilisation, and that most of the races had

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declined, and that while many races had declined into absolute barbarism, some races had never declined. The Egyptians, Babylonians, and Jews had never declined. He thought there were some races of man who had no real liking and pleasure in eating human flesh.

Mr. THOMAS TATE did not believe there was anything in man to predispose him to cannibalism. He mentioned the case of the son of a New Zealand chief, who lived with him, and who said he had eaten human flesh, but it was after a battle only; but the same young man was addicted, when with the speaker, to eating candles.

Mr. CARTER BLAKE contended that the old Spanish law which allowed a son to be devoured rather than a fortress to be surrendered, was a genuine one, and really meant what the words implied.

Dr. JAMES HUNT observed that the fact of cannibalism having begun in the stone age was an effort of the imagination only. There was no evidence to support such a remark. He objected to the theory of all races having at one time lived in caves and trees. They were only now beginning to study the primitive history of man. The dogmatic assertions contained in Mr. Crawfurd's papers were the things which had brought science into contempt. There was neither time nor inclination to discuss the important questions under consideration, nor would there be until a special section was devoted to this subject in the British Association.

Mr. BYRNE said he could prove beyond dispute that six thousand years ago there were not six people in the world. It was published in a two-guinea book of his. The book was out of print. It was not for sale. He was not a bookseller; but the book was in the British Museum.

Mr. E. VIVIAN believed in the historical evidence of the origin of man; and also believed implicitly in the geological evidence. There had been, in the records of the past, traces of men of so extremely low type that they could have had nothing to do with Adam, and could not have degenerated from him. They could not be blended with the Caucasian race. With Adam there came in a race—a higher race of human beings; and the history of the world commenced with the well-authenticated sacred history, which so thoroughly fell in with all the facts that had been brought before them. The other races may have come from the *Quadrumana*.

Mr. KENNETH MACKENZIE protested against the manner in which the discussion was being conducted. The science of man was an inductive science. He was ashamed to see how an important science like anthropology was treated by the Association. He had heard of this before, but now he had seen the real state of affairs he was determined to attend the Association every year, and would protest against the present state of things even if he found no supporter.

Mr. CRAWFURD in his reply gave a lengthy criticism of Dr. Hunt's last address to the Anthropological Society. In replying on another of his papers, he gave the section a general *résumé* of the publications of the Anthropological Society, together with some critical remarks on the same.

Another original paper was read by Dr. Charnock, on the gypsies, and one by Mr. Carter Blake, on a skull from Louth; but as they will both be submitted to the Anthropological Society, we need say no more of them here. On reference to the file of the Birmingham papers, it will be seen that there is really nothing worth reprinting. The section was thinly attended, and a general languor prevailed in the discussion. An important paper by Mr. Mackintosh, on the Comparative Anthropology of England and Wales, was obliged to be received with silence for want of time. A paper by the Rev. Dunbar Heath was announced to be read on the last day, but there was no time for it. Section E needs only to proceed in this fashion for a few years, and it will no longer be even the ladies' section. As far as section E is concerned, we have no hesitation in asserting that this section should be known as the one set apart, not for the advancement, but for the conservation of the science and traditions of the past.

Some questions were asked why Dr. Hunt did not read his paper on Zetland, and the reply given was that he was quite willing to do so when the other papers in his charge, of a similar class, had been read. None of these papers would, however, be accepted.

And now we come to another phase in the history of this meeting. In the committee of section E, on Monday, a proposal was brought forward by Dr. Hunt that anthropology should either be recognised in section E, or that a special section should be appointed for anthropology and ethnology. After some discussion the proposal was lost. The next day, Mr. K. R. H. Mackenzie brought forward a motion to settle the dispute unfortunately existing between ethnologists and anthropologists. After some discussion, the words "Science of Man" were substituted for the word anthropology, and this resolution was passed without a single dissentient voice. Not one hand was held up against it. The following was the resolution: "That it is highly desirable to establish a section or sub-section for the discussion of the science of man; and it is moreover urged upon the consideration of the committee of recommendations to take such action in the matter as will effectually prevent the limited time of the section being wasted for the future."

This was at last some victory, and the disputes between ethnologists and anthropologists seemed about to close, and all likely to act harmoniously together for the common advancement of science. The section of ethnology had unanimously recommended that a "special section or sub-section should be devoted to the discussion of the science of man," and it was only reasonable to suppose that this recommendation would be acceded to. The resolution was sent in, the committee of recommendations met the same day, and it was

reported that they had agreed to the recommendation of section E, and that a special section would for the future be devoted to the science of man. Under these circumstances, the anthropologists felt that the matter no longer required special attention on their part, and they determined to accept without a word of complaint whatever might be the decision of the recommendation committee as to the name of the new section or sub-section. On the morning of the appointed day, they were again informed that the resolutions proposed by the committee would result in the appointment of a special department for anthropology in the biological section.

All this was believed. When Mr. Francis Galton read the report of the committee, there appeared to be some doubt as to the position in which the question was left; but when the President of the British Association rose, in the person of Professor Phillips, and assured anthropologists that the effect of these resolutions would be to give them all they required, it was thought advisable to ask no questions; and the general committee proceeded to the next business.

At the conclusion of the meeting, the delegates of the Anthropological Society went to Professor Phillips, and asked for further particulars. They were then told that it was not intended to remove ethnology from section E; but that anthropological papers could be sent to the biological section. We believe that these gentlemen at once protested against such an arrangement, and gave it as their opinion that the question was as far from settlement as ever, and that wherever ethnology was located there too must be anthropology.

We ourselves look upon the rejection of the recommendation of section E as one of the most disgraceful pieces of cliqueism ever known in the British Association. It is not alone an attack on anthropologists, but a direct insult to ethnologists. And why were the whole committee of section E to be thus insulted? At first sight it must appear that there could be no object in keeping ethnologists in section E against their will; but to those who do not know the real position which geographical science occupies in this country, it may be well to inform them that unaided by ethnology it could not supply enough papers for an entire section, or attract much attention on the part of the public. Ethnology is thus to be kept with geography, and used, as heretofore, solely as a convenience. This is a very pretty piece of jobbery; but we do not think it will be permitted to exist for any length of time by such a body as the British Association. Here we see the first fruits of the resolution so irregularly proposed by Professor Phillips.

It must be borne in mind that the general committee of the Association is of itself the governing body, and that their number is small

in comparison with the aggregate of members. This proposal for referring all resolutions to the committee of recommendation for a report did not emanate from an independent member of the general committee, but was proposed by a prominent member of the recommendation committee, and the general committee were asked to give the power to himself and his colleagues. Now, unless the British Association desire voluntarily to commit suicide, we should strongly urge them to give up this resolution, and once more permit the power of decision to revert to the general committee. We see nothing but danger to the best interests of the Association in attempting thus to keep all the power in the hands of a few.

The responsibility of the decision before rested with the committee, and as long as this was the case we should never have said a word against their decision. Now, however, the decision rests with men who have both publicly and privately expressed themselves averse to the claims of anthropology.

We hope that it will not be left to anthropologists to see that this resolution is rescinded; but we must urge on the officers and council the advisability of taking this step without further public exposure. At present the resolution is only a false step; but persistent adherence to conduct so contrary to all principles of good government and justice would be a crime. Englishmen are naturally jealous of any infringement of their liberty, and unless the British Association is to become an annual political meeting, where parties are to be arranged as liberals and conservatives, we can foresee nothing but harm likely to result from such power being given to any selected body. What would the council be obliged to do if the general committee refused to agree to their recommendation?

The next point is the probable future position of the science of man in the Association. A facetious contemporary remarks on this subject,* "Section D will include both ethnology and anthropology, while, as section E still retains ethnology attached to it, the science of man will have a home in section D, and a partial home, also, in section E."

The science of man is thus not only to be a convenience to section E, but, as we understand it, is to perform the same interesting function to section D. This section is for the future to be the grand Biological Section, with one head, and several tails if necessary. Papers are to be classified by this august body; and anthropological papers bearing on physiology will be sent to that department, and, if they cannot all be got rid of either in this way or by being read in the Biological Section, a special department will be formed. This is a pleasant and

* "Athenæum", September 16, 1865.

most encouraging picture! Had ethnology been included in this grand section, the injustice to anthropology would certainly have not appeared to be so glaring; but, by its exclusion, the whole proceeding savours strongly of jobbery. It pained us, indeed, to hear such a name as Sir R. Murchison's associated—upon credible authority—with such manœuvring. Many geologists, we believe, hold Sir Roderick in great respect, some from motives of expediency, others on account of his real merits. As a government official, Sir Roderick Murchison has a perfect right to treat his geological subordinates in any manner he likes: but he must remember that, although "the senior trustee", he has not yet been crowned emperor of the British Association, and that it is unbecoming of him to play an emperor's part until the coronation actually takes place.

We have looked back at the history of ethnology in connection with the British Association, and find that for some years there was a subsection of ethnology, and a special section for physiology. In the first twenty years of the existence of the Association, physical geography formed, very naturally and properly, a part of Section C, then known under the title of "Geology and Physical Geography". It would be most desirable to return to this arrangement; and we are glad to hear that, at an early opportunity, a proposal will be made to carry this into effect. It will, we believe, also be proposed that Section E shall be entirely devoted to the science of man. This is both a practicable and a desirable plan. Geography is too unimportant a science to fill an entire section. The only part of geography which is worthy of the name of science is physical geography; and this is without doubt a part of geology. By examining a record of the geographical papers read since 1850 in Section E, or the recent *Proceedings of the Geographical Society*, it will be soon evident that geologists need not fear that they will have a great accession of papers. A paper on physical geography in Section E, or in the Geographical Society, is in the present day a rare occurrence. Whatever may be the future of the Geographical Society, we think that the British Association will do well to get rid of those semi-sensation or hero-worship exhibitions, which have become too much associated in this country with the word geography.

In any case, the science of man should have a section in the British Association; and we think that not many years will elapse before this takes place. It is quite out of the question, in our opinion, for anthropologists to be included in the Biological Section, unless ethnology is so as well; and why not, also, economics and statistics? We, however, hold the principle of a large biological section to be a radical error. Science can only be advanced by special students meeting

together; and a biological section is a very grand, but, we anticipate, a most unpractical affair.

We repeat that anthropologists must be in company with ethnologists; for anthropologists hold ethnology to be a part of anthropology, while the ethnologists contend that there is no difference in the meaning of the two words. Both parties, however, are thoroughly agreed that they cannot be separated. Let us now urge them to coalesce and send back physical geography whence she came, and thus be able to take Section E as their natural inheritance.

We may expect to receive the denunciations of some one, if not more, of the members of the Association, for a suggestion of this kind; but, if we do not mistake, the British Association will not much longer quietly put up with the excessive amount of toadyism which has now been for some years introduced into its meetings.

The foregoing remarks we have been obliged to make, not so much as a matter of choice, but as one of stern duty.

We are far from wishing to say one word which could in any way lessen the respect which all scientific men ought to feel for the British Association. We have not the least cause of complaint against that body, or even against the General Committee, which Professor Phillips very properly the other day called "our little parliament". We only ask that the power of legislation shall be restored to this body.

We deeply regret to perceive that Professor Phillips did not seem prepared to act up to the principles which he enunciated at Newcastle, viz., that the Association had no fixed rules, but must adapt itself to the progress of science. This was an admirable sentiment, and it would have been well had it been adhered to. We are at a loss, too, to know how Professor Phillips could deliberately say at the last meeting that the alterations made in Section D would prove entirely satisfactory to anthropologists. A contemporary* remarks:—

"The British Association has met at Birmingham, and its first business has been to refuse its recognition to the science of anthropology. This we regret, not on account of anthropology, which can take very good care of itself, but for the impression it will create abroad as to the sectarian disposition of English men of science. The motion of Professor Phillips, whilst it explains the reason of the decision, goes, however, much further. It is settled that the doors of the Association are closed to all new comers. The circle its energies are to fill is complete. There is only one thing left—the title should be altered to that of 'The Association of *Exact, or Physical Science*', and no further misunderstanding or disappointment could possibly occur."

* "The Reader", September 9, 1865.

There can be no doubt that the proposal made by Professor Phillips, on behalf of the Council, is a severe blow, not only to anthropologists, but to all future proposals. As we said before, we are delighted to think that such legislation has become necessary. The next contest will take place either at the last meeting of the General Committee next year, or at the first meeting the following year. Fortunately, anthropologists in this country do not lack an audience to listen to their communications: this they have in London. It is not their especial wish to read any papers before the British Association. At Bath they withdrew all their papers; and only four out of forty-three were read at Birmingham, and these at the request of the Fellows of the Anthropological Society resident in that town.

One word, in conclusion, to anthropologists. The result of the Birmingham meeting of the British Association has done more than anything else to advance your cause. The press has looked on, and learnt somewhat of your position. Your cause is seen to be good; all that is now required is patience and unity of action. We heard of several gentlemen who had solicited to be proposed as Fellows of the Anthropological Society, simply that they might more effectually assist in fighting the battle of scientific progress against the "rest and be thankful" members of the Association, as well as against the clique who are fast making the British Association a family party, instead of doing all in their power to make this institution a national body.

With regard to the contemplated anthropological congress, the reasons for not holding it will doubtless be given to the Anthropological Society. We believe that invitations have already been received to hold a meeting next year, and we do not wish to prejudice the case by making any remarks. This is a question for the consideration of the council of the Anthropological Society, and we feel sure that this body will act in this matter for the benefit of science. They will, we trust, do this at their own time, and will not be influenced by any pressure from without. In our last number* we said:

"We should indeed feel ashamed of the obstinate *John Bullism* which alone can continue to exclude this science from a recognised position in our English national scientific congress; but now that the authorities are in full possession of our claims to their consideration, and our grounds for desiring an independent position in the Association, we cannot anticipate such a result. Should, however, so fatal a mistake be made by the ruling powers of the Association as to deny this position to anthropology, now so temperately urged upon their notice, let it not be thought that the anthropologists will be silenced and their science crushed under foot."

* P. 228.

It is three months since these words were written; now we have to acknowledge a defeat, but a defeat secured, however, in such a manner as really to be a victory. Anthropologists have met with much opposition, and this fresh onslaught on them will merely assist them in carrying out their objects. Up to this time they have been obliged to fight against unknown enemies in the Association; now they have become known, and this knowledge is of itself a relief. We feel quite confident that had not all the might and influence of the council been thrown into the scale, and something very like intimidation brought to bear as well, that a special section would have been carried by an enormous majority. We now beg to throw out the following suggestions for the consideration of our readers, with a view to return to the subject again on an early occasion.

1. That the council of the British Association had no right (morally or legally) to authorise any one to announce the decision to which they may have come, and that their attempt to prejudice the discussion of the case was both unfair and unconstitutional.

2. That the motion made by Professor Phillips was proposed without previous notice, and the passing of the same is therefore null and void.

3. That the recommendation sent up from section E was treated by the recommendation committee as no recommendation has ever been treated before.

4. That it is desirable that physical geography should be again sent to the geological section.

5. That section E should be especially devoted to the science of man.

These are briefly our views on the subject, which, however, may be modified by future events. We suppose this matter will be discussed at the first meeting of the Anthropological Society. We hope that all the fellows of the Society will work harmoniously together to gain the end they have in view, which is the same as that of the British Association and ourselves—the real advancement of science.

Miscellanea Anthropologica.

On some Ancient Skulls.

MY DEAR SIR,—The portions of skulls which I have the pleasure of submitting to your notice,* were obtained by me many years ago in the manner I will briefly relate. The largest portion of skull I procured from a labourer who found the skeleton in a barrow which he was engaged in levelling on the down near the race course at Blandford. I am unable to state the relative situation of the skeleton, or the position in which it lay, but the tumulus was decidedly Celtic, and the interment was probably of the same æra. It was accompanied with fragments of deer horn. I regret that the cranium is not entire, but there is enough of it remaining to shew that it belongs to the dolichocephalic type, and possesses an organisation not inferior to that of a more civilised race. The frontal bone presents the medial suture, which is not of very frequent occurrence in modern skulls, but which I have often remarked in Celtic crania. The same feature exists in one of the accompanying frontal bones, which I procured in the course of researches in the Romano-British Cemetery discovered by Mr. Medhurst at Jordan Hill, in the parish of Preston, near Weymouth, in 1844. The appropriation of this bone is more doubtful than that of the other; and it is hard to say whether it belonged to an individual of the indigenous race, or to one of the people by whom that race was subjugated, for their bodies were no doubt deposited here side by side. The third specimen was found by me in a bank by the roadside, in the parish of Gussage All Saints, Dorset, cropping out, as I believe, from the side of a tumulus which was intersected at the time the road was made. This I consider to be a Celtic specimen. The neighbourhood abounds with Celtic tumuli. The remaining specimen of a frontal bone I obtained from a quarryman in the Isle of Portland, who found it in company with other bones, both human and animal, in the progress of his work. I regret that I was merely fortunate enough to secure this imperfect frontal bone with a part of the jaw of the domestic (?) ox, which accompanied it. I was informed by this man that the mode adopted by the quarriers in search of stone, and which led to the discovery of these bones, was as follows. They sink a shaft from the surface to the upper stratum of stone above the "dirt bed", and then carry the excavation horizontally until they come to a "gully", as it is termed, which is indicated by a difference in the stratification; the "rubble" in such spots being interrupted by a conical space filled up with the material loosely thrown together as though by artificial means, or as drifted in from the surface. The "gully" is always found to extend to the depth of many feet into the subjacent beds of stone, forming large crevices or vertical spaces that offer a natural separation by which the quarrier is enabled to

* All these skulls are now deposited in the Museum of the Anthropological Society of London. [Editor.]

detach blocks of stone without the necessity of blasting it. In these "gulley" they have occasionally found human bones and animals promiscuously mingled together, and it was from one of such that the bones in question were procured. The frontal bone presents indications of great antiquity; it is very thick in structure; the frontal sinus of unusual prominence, and the whole organisation must be pronounced to be of a singularly low type, approaching to the lowest forms of Negro development. I do not hesitate to assign it to an individual of a *Pre-Celtic race*.

I have no further remarks to offer; I shall be happy if such as I have made should awaken any interest in these ancient relics.

I beg to remain, my dear Sir, very truly yours,

T. W. SMART, M.D.

To the Editor of the *Anthropological Review*.

Phrenology. We have received a letter from Mr. T. Symes Prideaux respecting a recent article on this subject in a contemporary. The following extract from Mr. Prideaux' letter will serve as an introduction to this communication:—

"In sending you the accompanying rejected communication, a few words of explanation seem necessary. At the outset of reading the curious production signed 'Ethnicus,' I imagined I had before me a burlesque, a piece of ironical satire or ignorant criticism; it at length dawned upon me that it was really a *bond fide* specimen of dulness unsurpassable of its class. Nothing, however, was further from my thoughts than taking any notice of it; in fact, it seemed to me by far too ridiculous and contemptible to deserve any reply. Before many days had elapsed, however, I was reminded that I had, in the first number, stood sponsor for the *ability and impartiality* with which this periodical should be conducted."

Mr. Prideaux' communication was consequently declined. This seems to be so subversive of all rules of fair play that, contrary to our usual practice, we feel it our duty to give Mr. Prideaux' letter insertion in our columns. The following is Mr. Prideaux' communication to our contemporary printed at length.

"Your last number contains a short article, entitled 'Phrenology, what is it?' by 'Ethnicus,' which I am sorry to see admitted to a place in its pages, the production being such a mere farrago of crude undigested notions, misconception, misstatement and twaddle as to be altogether undeserving of notice in a scientific point of view.

"The writer appears to labour under the delusion that his ideas of what might, could, would, should, or ought to be the arrangements of nature, are to be accepted in preference to the answers obtained by the more troublesome and roundabout method of interrogating her by reiterated observations. One hardly knows whether to be more astonished at the complacent presumption or the want of perception of causation and logical dependency indicated by such a frame of mind. A man of the highest original genius, Dr. Gall, whose mental fabric, both intellectually and morally, was on a scale of strength and grandeur far surpassing that of average mortals—

the founder of the anatomy of the brain—an observer by instinct, and one of the most industrious, patient, cautious, and conscientious of observers, after long years of study and investigation, came to the conclusion that there *was* a connection between the appearance of the eyes and the talent for philology. ‘Ethnicus,’ however—give ear, all people!!—for reasons which he does not vouchsafe, or possibly for none at all, *does not think it probable* that the ability to acquire languages should have any relationship with (what he is pleased to term) goggle-eyes.

“I remember, as a schoolboy, a story in *Murray’s Reader*, entitled ‘Eyes and no eyes, or the art of seeing,’ designed to impress children with the value of observing, which I have since many times thought a large portion of the grown-up world might study with advantage. Now, the *ipse dixit* of the adult Mr. No-eyes, as to what exists and what is probable, is simply a repetition of what he has been told and taught, and consequently, oftentimes, of the errors and prejudices of his teachers and associates. For him there is no progress, and were the world solely made up of these amiable conservatives, thought would stagnate, and opinion, reduced to one dead level, lose all vitality. There are persons so obtuse as to pronounce that the flint implements of the drift bear no impress of the hand of man. Others, again, who decide that it is so unlikely, if not impossible, that rocks many thousands of feet above the level of the sea should ever have been submerged, that they prefer, as the more probable alternative, to regard the fossil shells and fish they contain as freaks of nature—mere experimental productions!—rather than to admit that they have ever had any living existence as denizens of the ocean. Such cases are doubtless often curious, as showing that considerable cleverness in the ordinary practical details and business of life may coexist with the reasoning powers and judgment in so rudimentary a state as to present the rigidity of a petrification to new ideas conflicting with early prejudices, but we do not find that these conjectural philosophers, however self-satisfied of their own infallibility, carry much weight with the public at large, who fortunately have a laudable appetite for facts.

“Phrenology is alleged by its disciples to be established by the fact that there is an invariable connection between function and development, and can only be disproved by counter facts refuting this position. Instead, then, of favouring us with his suppositions and opinions, let ‘Ethnicus’ produce one single portrait of a great lexicographer with small sunken eyes, or in other words, without the *indications* described by Dr. Gall as invariably attendant on the large development of the convolutions seated in the middle and posterior portion of the roof of the orbit (constituting, I presume, the ‘goggle-eyes’ with which ‘Ethnicus’ makes merry), and he will have established a claim to respectful attention which all the witty verbiage in the world employed in expounding his own or other people’s speculative notions of the probable in nature—or what they think *may* or *ought* to be—will not confer. The statement of the traveller that water became solid during the cold of winter in the land of his birth

was rejected as utterly improbable by the king of Siam; and the old woman who regarded her son's account of flying fish as an impudent attempt to impose on her home-bred simplicity, readily swallowed his story of having fished up in the Red Sea one of the wheels of Pharaoh's chariot attached to the fluke of his anchor. To offer opinions as a reply to facts, mere conjectural suppositions as an answer to arguments founded on observation, is to trifle with the time and trespass on the patience of the public, and betray at the same time the unscientific character of the mind of the offender. 'Ethnicus' sadly wanted a friend at his elbow to have impressed upon him the grand aphorism with which Bacon opens the greatest of his works—*'Homo naturæ minister et interpres tantum facit et intelligit, quantum de naturæ ordine, re vel mente observaverit; nec amplius scit aut potest.'*

"My own conviction, I do not hesitate to say *knowledge*, of the truth of phrenology is based on observation, prosecuted throughout my life from the age of fifteen; and, having full reliance in the armour of truth, I fear not to throw down my glove and offer to break a lance in its defence with any antagonist who shall enter the lists in a philosophic spirit armed with facts, but I altogether decline to waste my time in dissecting a heap of rubbish, the only palpable fact about which is that the chiffonier who raked it together knew nothing of the value of the materials.

"T. SYMES PRIDEAUX."

Popular Lectures on Anthropology. We are authorised to announce that several anthropologists in this country have united in the determination to give lectures on the Science of Man to the various institutions throughout the country. It is not intended at present to issue any prospectus, but communications from Secretaries of Mechanics' Institutions, Natural History, and Philosophical Societies will receive immediate attention, if addressed "Secretary of the Anthropological Lecturing Club, 4, St. Martin's Place, W.C."—Gentlemen willing to unite in this object are also requested to communicate by letter, as above.

Anthropological Society. The first meeting of this Society will be held on November 14th, when Mr. Blake will give an official account of the rejection of anthropology by the British Association. Dr. Hunt and Mr. Ralph Tate will describe their recent explorations in the Zetland Islands. On December 5th Dr. Charnock's paper on Cannibalism will be read, followed by short papers by Mr. Bollaert, Mr. H. G. Atkinson, Dr. John Shortt, and Dr. Hyde Clarke. The next meeting will be on December 19th, when it is expected the Rev. Dunbar Heath's paper on the Anthropoid Origin of European Races will be read. The anniversary meeting will take place at four o'clock, on Tuesday, January 2nd. At six o'clock, on the same day, the Fellows of the Society and their friends will dine together at St. James's Hall. Tickets, 25s. each, may be obtained on application to Mr. C. C. Blake, 4, St. Martin's Place, W.C.

The first session of the Anthropological Society of Spain will begin some time this month.

An active movement is at length on foot amongst archæological students in connection with the ante-Columbian period of American

history. Some gentlemen interested in the subject in Paris a considerable time ago formed a *Comité d'Archéologie Américaine de France*, and in the month of August visited London with a view of conferring with English students upon the contrivance of some similar institution in London. Under the presidency of Dr. Martin de Moussey, and the vice-presidency of W. Bollaert, Esq., a meeting was held at 9, York Place, Baker Street, on the evening of the 17th of August. Among the gentlemen present were M. Charles de Labarthe, Secretary M. Léon de Rosny, Mr. Burke, the Rev. W. G. Cookesley, Mr. Trübner, Mr. Kenneth R. H. Mackenzie, and MM. Camille, Edward, Defleuve Blanc, etc. The presence of three Japanese gentlemen added to the interest of the meeting. After an opening address from the President explaining the objects of the conference, Mr. Bollaert replied on behalf of the English gentlemen present. He expressed himself in terms of warm approbation, on the activity displayed by the anthropologists and archæologists of France in the promotion of the allied sciences now placed under the first term, and urged several precedents for the establishment of some species of organisation for the special study of ante-Columbian archæology. He also alluded to the labours of Baron Humboldt and of MM. Brasseur de Bourbourg, Aubin, and other French archæologists to whom the science was so much indebted. In the name of English archæologists, he begged to convey their thanks to the French gentlemen who had undertaken this journey. M. de Labarthe read a paper on the method of study pursued in the *Comité*, upon which M. de Rosny, in an eloquent speech, commented at considerable length. After a few words from Mr. Trübner, Mr. Burke said that he regretted in the special subject of American archæology to have so little to show. He had foreseen some seventeen years since, the immense importance that American questions would assume, and he was glad to see in that meeting a fulfilment of his prophecy. He urged upon the consideration of the meeting that a remote civilisation coming from Europe might have had considerable influence in the construction of the gigantic Peruvian walls, and cited other facts inferentially pointing to these conclusions. An animated discussion then took place, in which M. de Rosny, Mr. Mackenzie, and Mr. Bollaert took part. Mr. Mackenzie pointed to the possible probability of the autochthonous races of America having been subjected to influences from Ava and Polynesia, adducing some striking similarities in customs and worships. Mr. Bollaert said: Believing in the polygenistic theory, he was decidedly opposed to the theory of a peopling of the New World from the Old. All that the Peruvians had done was done by themselves. All that was found there, was peculiar to themselves. He had with his own eyes examined these remains and could not agree that there were traces of foreign influence. The man of the New World is entirely *sui generis*; in fact, an entirely distinct species. Mr. Trübner read a paper by Mr. Catlin, on some singular Religious Ceremonies observed among the Mandan tribe of Red Skins; and after some further discussion the meeting concluded.

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OF LONDON.

EDITED BY THE ASSISTANT SECRETARY.

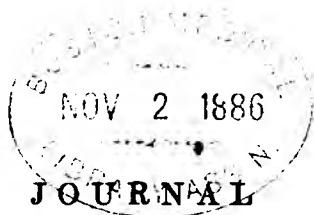


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OF THE

ANTHROPOLOGICAL SOCIETY OF LONDON.

TUESDAY, NOV. 1st, 1864.

THE PRESIDENT, DR. JAMES HUNT, F.S.A., F.R.S.L., IN THE CHAIR.

THE minutes of the preceding meeting of 8th June having been read and confirmed—

The names of the following gentlemen who had been elected Fellows of the Society since the last meeting were announced :—Viscount Milton, F.R.G.S.; J. Campbell, Esq.; Governor Freeman; J. Dowie, Esq.; B. Baker, Esq.; J. W. Conrad Cox, Esq.; Sir E. J. Eyre; George W. Marshall; Major J. W. Willoughby Osborne; J. H. Skene, Esq., H.M. Consul at Aleppo; C. Treasure Jones, Esq., H.M. Consul, Shanghai; W. Taylor, Esq.; W. S. Mitchell, Esq.; A. Mackintosh Shaw, Esq.; D. B. Robertson, Esq., H.M. Consul, Canton; Samuel Laing, Esq.; C. F. Ash, Esq.; R. Thin, Esq.; Dr. P. M. Duncan; Colonel J. Holland; R. B. N. Walker, Esq.

Honorary Fellows.—Prof. C. G. Carus, of Dresden; Prof. Carl Vogt, of Geneva.

Corresponding Members.—Dr. Ludwig Büchner, Darmstadt; Prof. His, of Basle; Prof. Moleschott, of Turin; Prof. Burmeister, of Buenos Ayres.

Local Secretaries in Great Britain.—Prof. W. King, Galway; Rev. W. Monk, Bedfordshire.

Local Secretaries abroad.—Rev. H. Callaway, Natal; Captain Brome, Gibraltar; G. W. Brown, Esq., Queensland; Dr. Alfred von Kremer, Leipzig; Dr. Theodor Bilharz, Cairo; Dr. Retzius, Stockholm; Dr. Edwin Lee, Nice.

The following presents were announced, and thanks were voted for the same :—Journal of United Service Institution (by the Institution). Journal of Asiatic Society of Bengal, No. 1, 1864 (the Society). *Crania Germanica* (Prof. A. Ecker). *Anatomy of the Negro Eunuch* (Ditto). *Proceedings of the Society of Antiquaries*, vol. ii, Nos. 2, 3, 4, 5 (the Society). Waitz, *Anthropologie der Naturvölker*, part 4, th. 2 (Dr. Ludwig Beck). *Narrative of the Cretan War of Independence*, by Dr. Ioannides (the Author). *Proceedings of the*
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Royal Society, vol. xviii, No. 65 (the Society). *Memoire sur le Bassin considéré dans les races Humaines* (Dr. Joulin). *Schriften der Königlich-Physika-ökonomischer Gesellschaft zu Königsberg* (the Society). *Schlagintweit's Buddhism in Thibet* (Mr. Digby Wyatt, through Dr. Thurnam). Boudin, *Etudes Anthropologiques* (G. Witt, Esq., F.R.S.). *The Voyage of the Novara*, by Dr. Karl Scherzer (the Author). *La Stirpe Ligure in Italia ne' tempi Antichi e ne' Moderni*, by Giustiniano Nicolucci; a large series of Medical pamphlets on Medical and other subjects (Mr. T. Bendyshe). *Proceedings of the Royal Society*, vol. xiii, No. 67 (the Society). *Akademie der Wissenschaften*; the parts completing the volume for 1863 (the Society). *Transactions of the Royal Danish Academy*, 1862-3 (the Academy). *The Dublin Quarterly Journal of Science* (Dr. R. Tenison). *Du Croisement des Familles* (Dr. Boudin). *Sur le Taille et le Poids de l'Homme*, parts 1 and 2 (Ditto). *Jobert, sur l'état sanitaire de l'Armée* (Ditto). *Des Unions Consanguins* (Ditto). *Sur l'Ethnogenée Egyptienne* (Dr. Perier). *Sur divers Sujets Anthropologiques* (Ditto). *Sur l'herédité des Anomales* (Ditto). *Sur les Croisements ethniques* (Ditto). *Fragments ethnologiques* (Ditto). Franklin, *Polar Sea* (a Member). Sir John Ross, *North-West Passage* (a Member). Franklin, *Arctic Expedition* (A Member). Parry, *First and Second Voyage to the North Pole* (A Member). *Burton's Mission to Dahome* (the Author.).

Mr. CARTER BLAKE then read the following

Report on the Anthropological Papers, read at the Bath Meeting of the British Association for the Advancement of Science, September, 1864. By C. CARTER BLAKE, F.G.S., F.A.S.L., Foreign Associate of the Anthropological Society of Paris.

I now have the honour to report to the Anthropological Society of London the results of a mission, which I undertook at Bath, in pursuance of the order of the Council.

Conformably with the instructions I received, I proceeded to Bath on Tuesday, September 13th, and sought an early interview with the Assistant-General-Secretary, to whom I handed the names of the following gentlemen, who acted as official delegates of the Society:—Captain Richard F. Burton, V.P.A.S.L.; George D. Gibb, Esq., M.D., M.A., LL.D., F.G.S.; and J. King Watts, Esq., F.R.G.S.

I at the same time stated that Dr. Hunt was prevented by ill-health from attending, and I informed the authorities officially that I was deputed by the Anthropological Society to act on his behalf by moving the resolution which stood in his name respecting the recognition of Anthropology in Section E.

These preliminaries having been arranged, I attended in my place at the meeting of the General Committee on the 14th of September, when I formally submitted the motion, "That Section E for the future include Geography, Ethnology, and Anthropology." I supported this proposition with all the energy I could exert; and it was seconded by my friend, Captain Bedford Pim, R.N., the eminent

Arctic voyager. This proposition met with an amendment, moving the direct negative, proposed by Sir Roderick Murchison, K.C.B., and seconded by Dr. J. Edward Gray, F.R.S. To the arguments which were brought forward on this occasion I shall not here allude, inasmuch as Fellows of the Society will have an opportunity of reading a detailed report in the current number of the *Anthropological Review*. It will suffice here to judge of results, and to record the fact that the proposition with which I was charged was rejected by an enormous majority, a large section of the audience declining to vote on either side.

If this resolution had been carried at the meeting of the General Committee, it would have been my duty to submit to the Committee of Section E a large number of papers bearing especially upon anthropological topics, which I had in my possession.

The adverse decision of the General Committee, however, gave me no alternative than to obey the instructions with which I was charged. I shall here quote a paragraph for these instructions, to show the Society that in the course which I took at Bath I was actuated by no personal feeling, nor, to my knowledge, did I transgress or exceed my written orders:—"Should, however, the Committee of the Association decline to recognise Anthropology, either in Section E, or in some other suitable manner, you must return the papers to the Society's rooms."

I contend that no other course was left for me; and while I have no desire to shift the *onus* of responsibility from myself, I must here frankly avow that it gave me great pleasure to carry out such clear and lucid instructions, conceived in the most sincere spirit for the advancement of our science. I would here also state, that in the difficult and hazardous task before me, I derived great assistance from the friendly advice and earnest co-operation of our excellent vice-president, Captain Richard F. Burton.

All the papers relating to anthropology with which I was charged were accordingly withdrawn. I am, however, happy to say that every one will be laid before the Anthropological Society of London during the present session of the Society, so that no injury to the science will be sustained by the step I took.

I shall now offer an analytical table of the papers read.

Anthropological papers read :

A. Brought up by delegates of the Anthropological Society (withdrawn).

B. From independent sources. Rev. F. W. Farrar, on the Fixity of the Types of Man.

Ethnological papers read :

A. Brought up by delegates of the Ethnological Society. John Crawford, on the Supposed Stone, Bronze, and Iron Ages of Society; (Ditto) on the Fecundity of Human Hybrids, or Crosses; (Ditto) on the Early Migration of Man; (Ditto) on the Sources of the Supply of Tin for the Bronze Weapons of Antiquity.

B. From independent sources (so far as known): Vambéry on the Turcoman Tribes of Central Asia. Khanikoff on the Ethnology of

the Iranian Race. Burton, Ethnology of Dahome. R. S. Poole, Ethnic Relations of the Egyptian Race. Bird, on the Human Bones found in tumuli in the Cotswold hills. Wallace, Progress of Civilisation in Northern Celebes. Showers on the Meenas of Central India. Bastian, on the Ethnology of Cambodia. Harley on the Poisoned Arrows of Savage Man. Alexander on the Maories of New Zealand. Prideaux on the Principles of Ethnology. Hyde Clarke, The Iberians in Asia Minor. The Duke of Roussillon on the Scythians. W. Martin Wood on the Hairy Men of Jesso.

Summary of above results :

Anthropological papers sent by the Anthropological Society and read	...	0
Anthropological paper from independent source	... ..	1
Total Anthropological papers read	... ..	1
Ethnological papers sent by Ethnological Society and read (all of which had been previously read in London)	... ..	4
Ethnological papers from independent sources, so far as known	... ..	14
Total Ethnological papers read	... ..	18

The significant fact of the number of papers submitted to the British Association from a sister society which had been previously read in London, is one which it has been already my duty to comment upon, in the report which I laid before you last year* on the papers read at Newcastle. Although the constant iteration of this disagreeable fact may be tedious, the case still remains, that even if the science of anthropology were to be recognised at the British Association, great inconvenience must arise by reason of the practice which extensively prevails of reading papers in the country, which have been sufficiently canvassed before a London audience.

The number of papers which would have been submitted from the Anthropological Society, and which were withdrawn from being read at Bath this year, has, as will be observed, had its due influence on the total number of the papers relating to the Science of Man read.

Few of the papers read have such an important scientific bearing as to entitle them for notice in an annual scientific report. Amongst those few which deserve especial remark, the important paper by the Rev. F. W. Farrar calls for attention. The author applied his observations especially to "Fixity of Type," and reviewed the popular theories on the subject. He agreed to a great extent with the views of Nott and Gliddon, and his paper is doubtless one of the most philosophical memoirs on the much-vexed subject on which he has treated.

Dr. Crisp read a paper on the "Intelligence of *Quadrumanus*," in which the opinions were put forth that the anthropoid apes were not entitled to be placed in the elevated position assigned to them by some anatomists; and further advocating, on grounds which were not stated in the paper, the separate classification of the human family. The paper elicited a smart and lively discussion, in which the bounds

* Journal of the Anthropological Society of London, vol. ii, p. i.

of scientific decorum were perhaps a little transgressed by several of the combatants.

Professor Phillips, in Section C, brought forward a paper, in which he called especial attention to the views of M. Morlot, who has so closely investigated the rate of deposition of the mound of "La Tinière, and exhibited portions of a human bone, which he had himself obtained from this ancient deposit.

Papers were read by Mr. Crawford on the supposed "Stone, Bronze, and Iron Ages of Society," on the supposed "Infecundity of Human Hybrids or Crosses," on the "Early Migrations of Man," and on the "Source of the Tin used by the Nations of Antiquity." No new scientific facts were elicited by these papers, which had already been submitted to a London audience.

Dr. George D. Gibb read two highly important papers; one on "The various Forms assumed by the Glottis," and one on "The Larynx of the Negro." The latter will shortly be submitted to our Society.

Mr. Stuart Poole's paper on the Egyptian Race, and many others, would demand a careful epitome. But your reporter has not here the opportunity of commenting on these papers in detail.

It must also be stated, that the exceedingly careless way in which the local journals published abstracts of the papers read, and the absence of any authoritative or accurate record of the proceedings in the London scientific press, have placed great and almost insurmountable difficulties in the way of preparing a report on the Anthropological papers read. This difficulty was further increased by the fact, that no delegate nor fellow of the Anthropological Society occupied any official position in connexion with Section E.

It now remains with the Anthropological Society to direct in what way a further attempt should be made to ensure the due representation of their science before the British Association. As many of the fellows are doubtless aware, the council instructed me to give notice of the following motion for next year, "That a separate Section shall be created, entitled Section H, to be devoted to Anthropology," It will be my duty to endeavour to press this motion; but I would here appeal to anthropologists most deliberately, and entreat them, when the time comes, that they may have an opportunity of supporting this proposition, to unite, not merely with their voices, but with votes, earnestly and faithfully to support the objects of our science.

There may exist some who may be deterred by the dread of being for a few years in a minority from venturing to express their opinions; but I hope such individuals will cast a glance back at the history of geology and astronomy, and bear in mind that the advancement of anthropology in England will not be attained by timidity, but must be ensured by self-sacrifice.

English anthropologists have now especial need of active union and co-operation, and those who may feel a tendency to shrink from the difficulties with which a young, though vigorous science is beset, may never efficiently advance our real progress.

I have only to conclude this brief report with the expression of my

thanks to the Council for their renewed selection of me as Commissioner for 1864; and my regret that some more worthy member of the Society was not deputed to carry out the task which it was my duty unsuccessfully to undertake.

The PRESIDENT proposed the thanks of the meeting to Mr. Blake for the report. He thought it was hardly necessary to say anything on the subject, as the report clearly stated the facts. He was a party in drawing up the instructions to Mr. Blake, and he felt it would be undignified for the Society not to state explicitly, that unless they were distinctly recognised by the British Association, they could not take part in their proceedings; as they would otherwise be appearing under false colours. It would be known from the report that the Society had been denied recognition, and it would be for them to consider at the proper time what further steps should be taken in the matter. He believed Mr. Blake had carried out the instructions given to him faithfully and ably; and what he had done had met with the entire approbation of the Council.

Mr. REDDIE observed that having tried unsuccessfully one experiment to obtain recognition at the annual meeting of the British Association, he suggested that at the next meeting at Birmingham, another course should be adopted. He understood that the question would be discussed at the annual meeting of the Society, therefore he should not say anything further at present. It was an important question, open to difference of opinion, and he would merely add, that he thought another course of proceeding might be more judicious.

The PRESIDENT said that at the annual meeting, to be held on the 3rd of January, when the report of the Council would be presented, it would state what had been done on the matter and what was proposed to be done in future, and that would be the proper time to discuss the question. He would not now detain the meeting longer, for he was sure they were anxious to hear the paper which had been promised by their Vice-President, Captain Burton, and he had much pleasure in calling on him to fulfil that promise.

Captain BURTON then read his paper: *Notes on Certain Matters connected with the Dahomans*. [This paper is inserted in the first volume of Memoirs.]

The PRESIDENT said it was usual when papers had been read to propose a vote of thanks to the authors, and he felt sure that in doing so on the present occasion, it was not a formal vote of thanks, but a real expression of pleasure for the information and instruction they had received.

The thanks having been given,

Mr. BOUVERIE PUSEY said he desired, before the discussion of the subject by those who knew much more about it than himself, to ask Captain Burton one question. He said in his paper that the negro was being gradually absorbed into the negroid: now, he wished to know whether in Captain Burton's opinion the lower race would be really improved, or whether he meant that they would be "improved from the face of the earth"?

Governor FREEMAN (of Lagos) having been called upon by the President to address the meeting, said all the information he could give on the subject would be meagre and poor, as he had not had the same opportunities of investigation as Captain Burton. He entirely agreed with him, however, in his general account of the condition of the negroes, especially in his representation that they were being evidently overpowered by a superior race. All along the western coast of Africa the Moslem were gradually progressing. The only converts to Mohammedanism were the only negroes who were really improvable. They were, he regretted to say, superior men to the so-called Christian negroes. The only men among them who had any dignity and self-respect were the Mohammedan negroes, and they extended as far down the coast as Lagos; the course of proselytism extending southward across Africa, from west to east. The increase of Moslems in Lagos was not rapid, but even in that town there was a great number; and the country to the north of it was entirely overcome by them. There could be no doubt of their rapid increase southwards, but he must leave it to Captain Burton and others to explain the cause. The Moslem converts had been employed at Lagos as armed police, and they were found much more efficient than the West Indian regiments. On one occasion that armed police force was sent thirty-five miles into the interior, and they walked that distance in one day, which the West Indian soldiers would have required three days to accomplish. These negro police did not require the preparation of a regular commissariat, but without shoes or stockings they marched at once, and being accustomed to the country, they could do much more than the West Indian soldiers.

Mr. CARTER BLAKE observed that some parts of the paper treated on questions that had not been previously brought before the attention of English anthropologists, and he hoped Captain Burton would give some further details. He thought it desirable, for the objects of science, that those topics alluded to should be fully discussed. The rite of circumcision, though very ancient, was one about which very little was known. It was practised by the early Jews, by the Moslem, and by different races of mankind; but the distinctions between the various methods of the operation were unknown to most Englishmen. Captain Burton had told them that the rite differs in many respects among the natives of Africa, and it would be instructive to know the points of difference; how, for example, the practice adopted by the Mohammedans in Africa differs from that of the Hebrew race. Captain Burton ought not to be afraid to give full details. He should not shrink from telling them the whole story. After he had told them the story, and it had been printed in the Journal of the Society, they could always do as the Abbé Domenech did when he published his *Livre des Sauvages*, paste down the leaves which contained the narrative.

Mr. REDDIE said it would be a matter of great interest if Captain Burton, or Governor Freeman, would tell the meeting how the Mohammedans in Africa manage to be so successful in making proselytes. He should like to know their *modus operandi* now, as the former

mode adopted by the followers of Mohammed in making converts would not now be tolerated. How they took the first steps in converting the brutalised and degraded races of Africans. It would be useful to know the plan the Moslems adopted, so that when known the Christian missionaries might follow the same course. How it was, for instance, they overcame the superstitious prejudices of the negro, when our missionaries are totally unable to produce the like result. How they succeeded in reaching their minds; whether it was not owing to the exercise of formal discipline, the absence of which is a great want in Christian missionary efforts among the lower races.

Mr. Ross (late Secretary to the Government of the Gold Coast) observed, that though he was unacquainted with the country spoken of by Captain Burton, he could speak to the fact of the extensive conversion of the negroes by the Mohammedans in other parts of Africa; and he fully agreed with him in regard to the benefits the African race had received by their exertions. The reason why they succeeded better than the missionaries was, that they settled down in the native villages as head-men, and they began by educating the people, to which object they at first restricted themselves.

Mr. CHAMBERS inquired how far the Mohammedans, who converted the natives, differed from the pure negroes; and whether the influence they acquired over the Africans is not to be attributed, in a great degree, to their being nearly related to them as a half-caste race.

Mr. ROBERTS made some remarks in reference to the allusion in the paper to the "Arabian Nights Entertainments." He said that he had read the work in several languages, and that it contained a great variety of interesting anthropological information, which was omitted in the English editions, as not being considered proper for general reading. The anthropological value of the "Arabian Nights" was, consequently, not known in England.

Dr. SEEMANN said the work was published in German in its original state without mutilation, but it was afterwards withdrawn from circulation.

Mr. S. SHARP remarked that as it appeared from the paper that the practice of circumcision was prevalent in all parts of Africa, and was not a religious rite, it seemed most probable that it originated from a sanitary cause, and not from a religious motive.

The PRESIDENT said he was anxious to know more particularly the division between the negro and the negroid, and the lands to which Captain Burton confined the pure negro race. It was most satisfactory to find that the Anthropological Society had become, as the author of the paper observed, the refuge for destitute truth, if in that capacity they were to receive such valuable papers as the one that had been read that night. It was evident that Captain Burton had more to communicate on the subject he had noticed, and that it was his modesty prevented him from giving them further particulars. It was a misfortune that these things were not made known to scientific men. When the author of a scientific work adverted to them he put his observations into Latin or Greek, that they might not be generally understood; and even when he adopted that precaution, if

the meaning became known to the publisher, the author was taken to task, and the passages objected to were withdrawn. The term degraded had been applied to the negroes, as indicating that they had sunk into a lower state from a superior condition. He should be glad to have Captain Burton's opinion as to the negro race having been degraded. They seemed to him (the President) to be in a very natural state. Whether the Moslem be superior or inferior to the Christian religion in its adaptability to the civilisation of the African race was a question he would not then consider, but he would take the facts as stated by Captain Burton. With regard to the "Arabian Nights," it appeared evident from what had been stated that the original work contained much matter of anthropological interest, and it would be conferring a great boon on science if their Vice-President would give the public a genuine edition. He had done many things for the benefit of science and truth, and that would add one more laurel and glory to his name.

Mr. REDDIE remarked, that the *Anthropological Review* described the original tribes of negroes as a degraded race.

The PRESIDENT said he was not responsible for what had appeared in the *Anthropological Review*.

Mr. SAMUEL SHARP observed that if circumcision were a sanitary measure, the adoption of it by the negro race was a sign of improvement.

Mr. BOUVERIE PUSEY, adverting to the alleged origin of the rite of circumcision, said the Egyptians practised it before they went into Syria, and they did not learn it from the Jews.

Mr. CARTER BLAKE inquired whether it was Mr. Pusey's opinion, or whether he had any authority for the statement, that the Jews learned the rite in Egypt.

Mr. BOUVERIE PUSEY. It was only a conjecture.

Mr. ROSS asked whether the negroes in the mountainous regions to the north of Dahomey are different from the Dahomans?

Captain BURTON replied that there could be no doubt of the superiority of the tribes of the Kong mountains, but the extent of their territory had been greatly misrepresented in recent maps. He noticed also other inaccuracies in late maps of Africa, in which mountain ranges had been extended far beyond their actual limits, being altogether apocryphal.

Mr. PEACOCK wished to know whether the Mohammedanism of Africa is the same as that of Europe, or whether it assumes there a different form?

Captain BURTON then rose to reply to the several questions which had been put to him in the course of the evening. Commencing with the question asked by Mr. Bouverie Pusey, whether he thought the pure negro would be improved or exterminated, he said he considered the improvement of the negro was effected by an intermixture of northern blood, which produced a negroid. As to the pure negroes, he believed that to say they would be "improved off the face of the earth" would be nearest the truth. With respect to the circumstances of circumcision, on which subject Mr. Blake asked for more detailed

information, it would be impossible on that occasion to enter into the whole question; it would occupy three hours. The rite was practised by the Jews and by the Arabs long before the age of Mohammed; and though the Koran contains no especial order about it, it has ever been held a *Sunnat* or Practice of the Prophet, whom every true believer is expected to imitate. There were many ways in which it is practised. It is generally done in early youth, but sometimes the operation is performed when at a more advanced age. He stated the circumstances in which the extraordinary operation called *El Salkh*, or the Flaying, has been done publicly on youths and boys with extreme cruelty and suffering. The boy is placed on a hill, holding a spear in his hand. The operating barber begins by making with a common *Jambiyah*, or dagger, a cut below the navel, then long incisions on the thighs; after which the prepuce is drawn down and removed, whilst the skin of the abdomen is peeled off with the dagger. The wounded part remains throughout life of a grey colour, and no pecten ever grows upon it. Thus wounded and bleeding profusely, the boy is ordered to walk, until he falls down exhausted; the distance he is able to walk being considered a test of his valour. The wounds are then treated with turmeric and salt. The practice varies among every race of Africans. The rite of circumcision did not originate with the Jews, and it is practised among Central African and completely savage tribes, who never had any communication with that nation. It had been asked by Mr. Reddie by what means the Mohammedans were so successful in making converts now that proselytism can no longer be carried on by the sword. They do so by preparing the natives for civilisation; they extend their influence from west to east and from east to west across the whole of Africa, principally by commerce; though, in some instances, the Moslems lose money in their zeal for making converts. In reference to the use of the term "degraded," as applied to the negro, he used it not with reference to the etymological derivation of the word, indicating the fall from a superior condition, but with the general meaning that they were in a very low state. It had been asked how the Moslems overcame the strong prejudices of the negroes; but as regarded their fetish worship, that difficulty was in a great measure overcome by the Mohammedan religion, which did not disdain to incorporate with itself a certain amount of fetish or natural religion; and there are also no specialities of faith to comprehend, which the negro is no more capable of understanding than he is of the squaring of the circle, or of solving any other complex problem. The explanation given by Mr. Ross of the facility with the Mohammedans to make converts is quite correct. The Moslems are negroes, or are mixed with negro blood. A pure Moslem is almost unknown in Africa, and is considered a being of a superior order. With regard to the "*Arabian Nights*," the only true edition of that work now obtainable is the Cairene edition. Captain Burton ridiculed the squeamishness of those who allow "*Rabelais*," "*Petronius Arbiter*," and other works of that character, to be published, and yet object to the "*Arabian Nights*," which book, in its original state, is valuable as an anthropological study. In no European language is it at present

complete. As to the cause which induces the practice of circumcision, it arises from sanitary precautions, owing to the peculiar fleshy structure of the penis in negroes; amongst barbarians it is not in any way religious. Dr. Hunt had asked for a more accurate definition of the terms negro and negroid; but, in fact, they were undefinable. There are no known limits to the degrees in which the one mingles with the other. It is impossible to define them either by specific characters, or by the parts of Africa they occupy. The Caffres are distinctly negroids, though not connected with the Moham-medans. Neither had they been converted to Christianity. So far, indeed, from being converted, they seem to have changed the opinions of an eminent personage now in this country. The earliest distinction between the negro and negroid consisted not in external features, but in the smell. That was the best test, and the difference was occasioned by a different development of the sebaceous glands. Captain Burton concluded by adverting to the little attention which had yet been paid by travellers to the question of the reproduction of species. It was, he said, a subject that he had yet had no opportunity to sufficiently investigate; but he hoped to return to it again, and he should be glad at some further opportunity to bring the results of his observations to the "Refuge of Destitute Truth," where his present communications had been so favourably received.

The PRESIDENT proposed the thanks of the meeting to H. J. C. Beavan, Esq., for his excellent translation of the work of Pouchet on "The Plurality of Human Races," which had been delivered to the Fellows. For the opinions expressed the Society were not responsible; but the work had been edited in a very able manner.

The thanks having been voted, the meeting then adjourned.

TUESDAY, NOV. 15TH.

THE PRESIDENT, DR. JAMES HUNT, F.S.A., IN THE CHAIR.

The minutes of the preceding meeting were read and confirmed.

The names of the following Fellows elected were announced:—G. Dibley, Esq.; Major Freme; H. Brookes; Commander Windus.

Local Secretaries of the Society.—Dr. T. Callaway, Algiers; the Rev. W. S. Symonds, Tewkesbury; G. St. Clair, Esq., F.G.S., Banbury; G. Jasper Nicholls, Esq., Oude; R. Beverley Cole, Esq., San Francisco.

The following presents were announced, and thanks were voted for the same:—"London Hospital Reports", presented by Dr. Hughlings Jackson; "Bulletin of the Academy of St. Petersburg", by the Academy; on the Romano-British Cemetery at Hardham", by W. Boyd Dawkins, Esq., B.A., F.G.S.; "The American Phrenological Journal", by the Editors; "L'Homme fossile",—by Dr. Garrigou, by the author.

The PRESIDENT, after proposing the thanks of the meeting to the donors of the books to the library of the Society, called on Mr. Pritchard to read a paper *On Viti and its Inhabitants*. [The paper is inserted in the first volume of Memoirs.]

Dr. SEEMANN said he considered the paper they had heard was one of the most important that had been communicated to the Society, and he was able, from personal acquaintance with the island, to corroborate many of Mr. Pritchard's statements. A great many things connected with the inhabitants of the Fiji islands had only appeared to him in their true light since he arrived in England. For instance, the Andaman islanders shewed that in many particulars they are similar to the Fijians. The first account of the Andaman islanders was that given in "Sinbad the Sailor", which narrative, though generally regarded only as a fiction, contained many correct statements. The Andaman canoes were similar to those used by the Fijians, especially in the outrigger. Dr. Seemann remarked on the curious legends of the islanders, of which Mr. Pritchard had given an account, especially those relating to their own origin. It was interesting to notice that, in so many legends, the original progenitors of man were placed under or near sacred trees. It was a curious circumstance that, in these legendary cosmogonies, there was always a serpent, in which symbol he considered there was a deep meaning. The supreme god of Fiji (Degei) had the shape of a serpent. The Fiji islanders appear to have possessed the knowledge of the process of printing on cloth made from the bark of the paper mulberry-tree, and they might have communicated their thoughts by printing. This would not have been difficult if reduced to the simplest form. The Peruvians, for instance, communicated their ideas by a system of knots, and the inhabitants of the Sandwich Islands adopted a similar system. If ideas were reduced to a series of dots such dots might be readily printed.

Mr. REDDIE observed that the traditions of these islanders were very remarkable, and he considered it extraordinary that the people should be able to preserve them and repeat them to travellers. Such a preservation of our Christian legends could not be expected even in London among the common people. As to the frequent occurrence of the serpent in those legends, it was a very curious fact. They were going to hear a paper from Mr. Bollaert about the astronomy of the red man, and it was most likely they would hear from him something more about serpents. In the constellations of the heavens, which had been traced to the most ancient peoples on the face of the earth, the serpent was one of the most common emblems, and was to be found in several parts of both hemispheres of the celestial globe. It was interesting to find also the same symbols conspicuous among the legends of the inhabitants of the Fiji islands, and it appeared they had a common ancient origin. Such beautiful traditions could not be inventions of the present Fijians. Even in civilised London, not one out of ten would be capable of inventing such beautiful stories. The question was, whether they were not traditions of a people superior to those who now inhabited those islands, thus showing that the present inhabitants had deteriorated. The invention of

such legends, in more ancient times, at all events tended to prove that their inventors must have been greatly superior to improved baboons. It would be interesting to know something of the present literary qualifications of the people, and how far such traditions are retained among the inhabitants generally.

Mr. CONRAD COX enquired whether the word *snipe*, which occurred so often in the legends, had any other meaning than that of the bird, to account for its frequent introduction.

The PRESIDENT desired to add his testimony to the great value of the paper. Mr. Pritchard had lived among the people of those islands fifteen years, and the amount of original information he had communicated respecting them, especially their legends, was extremely interesting. As to the original distinctions of the races, that was merely a surmise. He should like to know on what evidence Mr. Pritchard founded the opinion that they were mixed races: and he wished to know also the numbers of the people. The most important part of the paper, he considered, was that about the migrations of the inhabitants. It was stated that several tribes had been blown away from one part of the Pacific to another. It would be important to know whether those statements were founded on historical facts or on traditions only. The discussion on the paper had not been so long as the matter deserved, but the paper would shortly be printed and placed in the hands of the Fellows, when the facts and traditions would be read at leisure, and would add exceedingly to their knowledge of the subject. The account of the migrations of these people threw more light on the early migrations of man than had been thrown on it by any communication ever before presented to a scientific Society.

Dr. SEEMANN made some observations on the storing up of local traditions among the people of this country, and observed that a great deal of curious information might be collected by those who chose to make it their business to do so.

Mr. ROBERTS said there was a little geology mixed up with this subject, on which he would make a few remarks. There was scarcely any doubt that formerly there was a large continent in the Pacific, and that the numerous groups of islands there are the remains of that submerged land, projecting above the level of the ocean. It was possible, therefore, that the people now inhabiting those islands retained the recollection of the legends of those who occupied that continent. The physical character of some of the islands confirmed the opinion that they constituted portions of a submerged land. The largest of them, for example, was encircled entirely by mountains, which would not have been the case had it been raised from the sea, and could only be accounted for on the supposition that it constituted the higher portion of the mountainous region of a submerged continent. The most natural interpretation of the legends of these people was, that they have clung to the old legends prevalent among the people of that continent.

Sir W. LOGAN, having been called on by the President, said he was not able to form an opinion on the interesting facts communicated

in the paper; the subject was new to him, and he felt much gratified with the instruction he had received.

Mr. PRITCHARD then replied to the questions and observations of the previous speakers. With respect to the remarks of Dr. Seemann, regarding printing, he said the kind of printing the Dr. referred to is the printing of patterns *on the native cloth*, and not letter printing. The inhabitants had no written language, but communicated with each other by means of sticks. Thus, when a chief sends a message to another chief, he gives a separate stick to the messenger for every idea of which the message is composed. The messenger, when he arrives in the presence of the chief to whom he is sent, delivers each stick separately, and mentions the idea or sentiment connected with each, until the whole are delivered. As to the date of the traditions, there can be no doubt of their antiquity. Different natives, without the possibility of collusion, narrate the same traditions in almost the same words. The missionaries discountenance the old traditions, and also any new stories. It is not easy to collect these traditions from the inhabitants, for it is necessary to be master of the language to do so, and those who are not thoroughly acquainted with it sometimes are imposed on, especially by runaway sailors, who know the language very imperfectly, and invent strange stories, which they represent to have heard from the natives. To learn their legends and traditions correctly, it is necessary to live amongst the natives, as he had done; and to gain an influence over the native mind, it is necessary to learn their mode of reasoning when certain data are placed before them. With respect to the snipe, its name in the respective groups has *strictly* no other signification than the bird, though sometimes it might imply only the *noise* made by the bird. The natives have decidedly the impression that they were originally separate races, and that there was a time when there was no intermixture of Samoans, Tongans, and Fijians. The evidence of intermixture is strongest on the east of Fiji. When the natives go out in their canoes, they take cocoa nuts with them for food; and they are very expert in catching sharks, which they eat. It is the practice of the men when blown to sea in their canoe, if they observe a shark (and they are numerous in those regions), for one of them to hold his naked leg in the water to tempt the shark to bite, taking good care to snatch the leg away in time. After this trick has been played several times the fish becomes angry, and snatches at anything thrown to him. They then entice him near the canoe by throwing over a cocoa nut, and contrive, as he snaps at it, to put a noose over his head, by which they drag him into the canoe. The natives thus contrive to live at sea for several weeks. The accounts of the former migrations are historical, so far as they form the literature of the islanders, who look on them as facts which occurred many years ago. The later migrations are known to all the natives, and there are many more than those mentioned in the paper. With regard to the geological question raised by Mr. Roberts, it is opposed to the fact that new islands have been thrown up from the ocean in this region. He himself knew an island that had been raised where, only a short time before, the

sea had been sounded without finding bottom. The reef is about three miles in circumference, and the island about thirty feet high, and a quarter of a mile long; and it is volcanic. The natives mention one that was partially submerged. In close proximity are two active volcanos. The islands are, in fact, increasing in some places and diminishing in others, by the united action of the sea and volcanic agency.

The PRESIDENT proposed the thanks of the meeting to Dr. Seemann, who had been the means of inducing Mr. Pritchard to contribute the valuable paper they had heard, to come there to read it, and to answer the questions which had been put to him. The next paper, by Mr. Bollaert, *On the Astronomy of the New World*, was very elaborate, so much so, indeed, that it could not have been read entire in one evening; the author would, therefore, merely indicate the contents; and the paper itself would appear in the next number of the Society's *Memoirs*.

Mr. BOLLAERT gave a sketch of the paper, and exhibited various drawings in illustration of it. [Mr. Bollaert's paper is inserted in the first volume of *Memoirs*.]

The PRESIDENT observed that the discussion of the subject had better be deferred until the *Memoirs* containing it were published; and a fitting opportunity would soon occur, for some other papers bearing on the subject would be read at no distant date. He then called on Mr. Collingwood to read the following paper, communicated by Dr. Barnard Davis:—*The Neanderthal Skull: its Formation considered Anatomically*. [Inserted in the first volume of *Memoirs*.]

Mr. C. CARTER BLAKE said he felt considerable diffidence in speaking on the subject once more, since, on the 16th of February last, he laid before a meeting of the Society the evidence then possessed respecting the characteristics and probable antiquity of the Neanderthal skull. He begged to call to mind that he then stated the several theories that had been propounded. One of those theories, advocated by Professor Huxley, was that it resembled the skulls of existing Australians. Another theory was, that the skull represented a distinct species—Professor King said, a distinct genus of mankind. In the opinion of Dr. Pruner Bey, it was merely the skull of a powerfully organised Celt, somewhat resembling the skull of a modern Irishman with low mental organisation. An anonymous writer in the *Medical Times and Gazette*, to whom they were indebted for a most satisfactory theory, expressed the opinion that it was the skull of an individual who had been affected with idiocy and rickets. They had also had more theories since he had the honour to read his paper in February. Dr. Gibb, in a paper read during the last session, suggested that the thickening of the skull was compatible with the theory that the individual was an example of hypertrophic deformation. Professor Mayer of Bonn, in a recent excellent Memoir, took a very different view of the origin of the skull, and instead of ascribing to it great antiquity, conceived that the Neanderthal skull, which had been found in a cave, covered with two feet of mud, was possibly that of one of the Cossacks who came from Russia in 1814. The last

thory he should notice—and certainly the most absurd one—was one which gave the Neanderthal skull still more essentially an abnormal character, for it supposed it to be that of an extinct race who formed the missing link between man and the lower animals. There were other characters in which the Neanderthal skull was supposed to differ, first of all from man in an abnormal condition; and, secondly, from healthy man: and it had been pronounced to be a wonderful pathological conformation. That evening, however, the mythological period was past; they had had the skull taken out of the domain of theory, and once more placed upon the substantial ground of plain anatomical facts, from which those who were desirous of eliciting popular notoriety had warped it. He confessed he felt some gratification at that result, as it had been his duty, in a publication printed in 1861, to protest against the supposition that the Neanderthal skull possessed any race character, on grounds which he then thought sufficient, and he now found that Dr. Davis fully corroborated his opinion. He would now proceed to criticise the statements in Dr. Davis's paper. Dr. Davis alluded to various conditions under which the sagittal suture is ossified, but he did not seem to have remarked especially on the statement of Pruner Bey, that the depression or *rainure* of the parietal bone, along the suture, is a characteristic mark of the Celtic race; and that it is to be found in the skulls dug from many Celtic burying places. Pruner Bey thought this was a sure test that the skull was truly a Celtic skull. Then as to the union of the suture. At the next meeting of the Society, when some Celtic remains from the Shetland islands would be exhibited, a case would be seen in which the coronal and sagittal sutures were obliterated, and other abnormal conditions were manifested; and he placed on the table the skull of a negro, in which the same conditions, as to the closing of the sutures in early life, was seen, though not accompanied by the elongation which had produced the peculiar conformation of the Neanderthal skull. In the negro, brought from Annabom, the suture was entirely closed; the whole skull then became merely a bony box, capable of comparison with the Neanderthal skull. As to the frontal sinus, Dr. Davis said that, in that particular, the Neanderthal skull was suggestive of the skull of a gorilla. He (Mr. Blake) must, however, dissent from him in that respect, for the size of the supraciliary ridge was no true indication of the size of the frontal sinus. The fact is, that in the gorilla, which has a very large supraciliary arch, the frontal sinus is often large; while in the chimpanzee there is no frontal sinus, though the supraciliary ridge is present. As to the relation of the frontal sinus of the Neanderthal skull with that of man, no conclusion could be drawn from that peculiarity; for the frontal sinus is liable to great variation. On this point Blumenbach observes:—"Ast sinus frontales, tam quod ad magnitudinem et extensionem, quam quod ad figuram, mirum quantum in diversis capitibus variant. * * * in aliis ad anteriora magis protuberantes, ut arcus superciliares sub fronte ipsa multum exstarent." In fact, no positive rule on the subject could be laid down. Next, as to the lateral sinuses. Professor Schaaffhausen, of Bonn, who had the skull in his possession, says that on the closest

inspection of the interior, there is no evidence of the lateral venous sinus, and there is no reason to assume that he is wrong. He (Mr. Blake) believed that Prof. Schaafhausen was right, that in the interior surface there is no evidence of the sinus, and that in the work *Man's Place in Nature*, by Professor Huxley, the assertion to the contrary is wrong. Again, attention had been drawn to the curious state of the limb bones found with the skull, by Professor Mayer of Bonn. A great difference was observed between the bones of the anterior and the posterior limbs; those of one side being much longer than the other. Dr. Davis had shown that the conditions of the Neanderthal skull were compatible with a diseased modern skull: there was no accompanying evidence, such as flint implements, to show that it had any claim to antiquity; and as to the physiological evidence, it proved that the individual to whom it belonged was in an abnormal condition, being "lop-sided". In conclusion, he considered the skull to be an abnormal instance of an accidental conformation; and he thought it very unfortunate that the transmutationists should have taken up the case as an illustration of the theory of the genetic derivation of man from beast.

The PRESIDENT said the impression produced on his mind by the reproduction of the subject was an unpleasant one. For the last two years it had been placed before them from time to time, yet only now they had got on the right track to the discovery of its real meaning. He was sorry the skull itself was not before them, for the cast presented was evidently a most imperfect representation of the original. They had been told to-night that the Neanderthal skull was merely an abnormal skull, without any race character; nor was there any gentleman present to support the opinion that it belonged to any special race of man. That there was no skull of exactly the same kind he could readily believe. The conjectures respecting the skull had been most unfortunate, but they had led to the acquirement of valuable information respecting synostosis. The different laws affecting synostosis have been thus laid down by Dr. Lucae:—

1. Synostosis of the frontal suture shortens the forehead: if it takes place on the top the forehead becomes flat; if on the side, it becomes narrow.
2. Synostosis of the lambdoid suture shortens the occiput, rendering it low on the apex, and narrow on the side.
3. Synostosis of the sagittal suture renders the cranium narrow at the top.
4. In case of synostosis of the wings of the sphenoid with the frontal bone, the forehead becomes narrow and low.
5. Synostosis of the temporal squama renders the skull narrow and low in the middle.
6. Synostosis of the sutures at the base has not been well observed, as on the whole it occurs more rarely; still the occipital squama frequently synostoses with the mastoid portion, when the skull becomes narrow in the mastoid diameter. An early synostosis of the suture between the sphenoid bone and the occipital renders the skull short.
7. Partial synostosis of the suture is the cause of asymmetric cranial forms.

As regards the premature closure of the sutures, Dr. Lucae observes, it may arise primarily from a morbid condition of the bones, or from an unequal development of the brain. After the closure of the suture is once effected, the growth of the skull in that direction

is in the highest degree obstructed, and the development of the brain, if possible, takes another direction for its growth. If the sutures close on the superior surface of the cranium the expansion shows itself at the base. On the other hand, synostosis at the base produces disproportionate expansions on the roof. Synostosis of the occipital or frontal cranial region produces expansions in opposite directions. Synostoses frequently appear in several and opposite spots, when by compensation the most peculiar forms arise. The earlier such a synostosis takes place, the more are the cranial proportions disturbed; the later it appears the effects are less. On the whole, premature synostosis obstructs the development of the brain, for the compensation is rarely sufficient; hence the cranial capacity is generally lessened. Whilst some are of opinion that on the closure of the usual sutures the expansion of the cranium ceases, Kölliker shows, in his microscopic anatomy, that, in children for instance, after the closure of the frontal suture, the frontal bones, and especially the space between the frontal eminences, increases considerably. By the deposits of the periosteum externally, and the resorption internally, the cranial capacity may increase, as well as the cranial surface, after the closure of the sutures. Huschke's researches show that the cranium may increase up to the sixtieth year, after the sutures have in most cases become obliterated. The opinion, however, that the cranial capacity increases whilst the external deposition becomes less, by which the cranial bones in old age become thinner, is erroneous; as the contrary is the rule. In most cases the cranial bones in aged persons will be found thick, and if the skull on the whole is lighter, it is to be ascribed to the facial bones, which in old age are generally in a state of atrophy; which is not the case as regards the cranial bones. The known effects of synostosis, the President observed, thus completely disposed of the theories of idiocy and of race character, to account for the condition of the Neanderthal skull. The remarks founded on drawings and engravings were calculated to mislead, for no opinion could be safely ventured from examination of such a cast as they had before them. The possessor of the skull was to blame for having allowed such imperfect representations of the original to be circulated without calling attention to their great inaccuracy. He (the President) hoped that when the subject was again discussed they would have the skull itself before them. As the author of the paper did not refer to the other bones, it was unnecessary to say anything about them. If they admitted the theory that had been put forth and supported that night, it would be necessary to burn a great many of the books that had been published about the Neanderthal skull. Not only the work of Professor Huxley, but several others, would be considerably damaged if they accepted Dr. Davis's explanation of the cause of the formation of the Neanderthal skull, which had been made a great point of by one school of transmutationists, and to deprive it of that character would be a most serious blow to their theory. He suggested that it was useless further to discuss the matter with such a cast and such imperfect information as they yet possessed. He hoped they would soon have the original skull and bones before them, and then they might bury them once for all.

Professor SOLLY expressed the gratification he felt at having learned so much from the paper and the discussion; and he thought the meeting were greatly indebted to Mr. Carter Blake for the distinct and lucid manner in which he had placed the subject before them.

Mr. HIGGINS said there was one point dwelt upon by Dr. Davis that seemed to be disposed of by subsequent considerations. Dr. Davis laid much stress on the frontal sinus and the superciliary ridges, but the anatomical character was accounted for by the disease of rickets, with which it appeared the individual had been afflicted. Again, Mr. Blake had said that a certain conformation of the Neanderthal skull was characteristic of the Celts; but there was on the table a negro skull, exhibiting the same character, which was not Celtic.

Mr. CARTER BLAKE replied that the character in question, termed by Pruner Bey the *rainure* along the sagittal suture, was decidedly found in Celts, but it could no doubt be found in the skulls of many negroes and Esquimaux, and also among the Dyaks. He did not mean that it was characteristic of the Celt as distinguished from mankind in general, but as distinct from the skulls of the Saxons or Romans, with which they were usually compared.

The meeting then adjourned.

DECEMBER 6TH, 1864.

DR. JAMES HUNT, F.S.A., PRESIDENT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed. The names of the following members elected since the last meeting were announced:—H. J. Johnson, Esq.; Samuel Burton, Esq.; T. Lampray, Esq.; H. Braddon, Esq.; Dr. Balthazar Foster; F. D. Davies, Esq.; A. McArthur, Esq.; F. R. Spry, Esq.; Colonel Richards; Rev. J. Mould; J. P. S. C. Nicholson, Esq.

The following list of presents were read, and thanks were voted for the same:—The Siberian Overland Route, by A. Michie (the Author). Nemesius, *περι φυσικης ανθρωπου* (Rev. M. P. Clifford, D.D.). L'Etude de la Haute Antiquité (M. Morlot). Catalogues of Vrolik's Library, (Dr. Barnard Davis). Amusements philosophiques sur le langage des Bêtes (Mr. Bendyshe). Bulletins de l'Academie Royale des Sciences de Belgique (that Academy). The Nile Basin, by Captain R. F. Burton (the Author). Journey to Mequinez (Mr. Bendyshe). Notice des Travaux de Dr. Guyon (Mr. Bendyshe). Gospel Paganism (the Author). Arrowsmith's Map of South America (W. Bollaert, Esq.). Government Map of Bolivia (Ditto). Antiquities and Ethnology of South America (Ditto). Journal of Royal Geographical Society, complete set, 1844-1863 (Ditto). Proceedings of the same, 1860-1862 (Ditto). Presidential Addresses to the same, 1837-1861 (Ditto). Transactions of Aborigines' Friend Protection Society (Ditto). Mano, sur l'Orient (Ditto).

The following paper was read:—

On some ancient Shell-mounds and Graves, in Caithness. By SAMUEL LAING, Esq., F.G.S., F.A.S.L.

A VISIT to Caithness, during the past autumn, gave me an opportunity of examining some of the ancient shell-mounds and remains of aboriginal dwellings, which are numerous in that county, and in the Orkneys; and of obtaining a series of very perfect skulls and other parts of human skeletons, from a burying-place apparently of the same period.

The subject is one of considerable interest, owing to the discoveries which have been made in the "Kjökkenmöddings" of Denmark. It has been clearly established that these Danish refuse heaps belong to a period of very remote antiquity. Their position at the bottom of deep peat-mosses; on the lowest, or fir, platform of the three series of forest vegetation which have succeeded one another in Denmark; the presence of oyster and other marine shells, which have ceased to exist in the brackish waters of the Baltic; the absence of domestic animals, metals, and of all implements except rude forms of stone and bone; all lead to the conclusion that these refuse heaps belong to the earliest of the three periods of stone, bronze, and iron, which are so well distinguished in Scandinavia.

It may further be said, with confidence, that they belong to an early stage of the stone period, and are considerably more ancient than the Lake dwellings of Switzerland of the same period.

In fact, as far as present information extends, they mark the transition between geological and historical man, showing us the earliest known instance of a race living in an existing country, under variations of climate and physical geography not great enough to take them out of the recent, or existing epoch; and connected in a continued sequence through the later stone, the bronze, and the iron ages, with the period of regular history.

The researches of Danish antiquaries have thrown a flood of light on this remote period, and the discoveries of the Borreby and other skulls have invested it with fresh interest, as showing the type which probably prevailed among this aboriginal population.

Under these circumstances it becomes important to ascertain whether Britain, and especially the North of Scotland, whose antiquities present so many analogies to those of Scandinavia, contain remains of a similar nature. The existence of shell-mounds on the shores of the Murray Firth has been recently ascertained, and Mr. Lubbock, in the *Natural History Review* of July 1863, gives a very interesting account of some which he visited in the neighbourhood of Elgin. The result, however, of the few researches which have been made into the Scottish shell-mounds has been to leave the subject in great uncertainty. Mr. Lubbock succeeded only in finding shells, with fragments of bones, of oxen, sheep, and pigs, and three small implements of bone. He remarks that the absence of pottery, and of implements either of flint, stone, or metal, is most "puzzling"; and he mentions that a bronze pin was shown him, said to have come

from one of the mounds, the fashion of which showed it probably to be of quite recent date, or about A.D. 800 or 900.

Since the date of Mr. Lubbock's paper, Mr. Roberts has described in the *Anthropological Review* of February 1864, the result of his exploration of some shell-mounds, with associated cairns, at Bennet Hill, near Burghhead. Two of the cairns covered rude stone kists, in one of which was found a complete skeleton, with a cranium of a decidedly brachycephalic type, of which a minute description is given by Mr. Busk. In the shell-mound nearest to the kist, were found fragments of very rude pottery, and some flint arrow-heads.

Various incidental notices of refuse heaps of shells and bones are scattered throughout the numerous accounts of ancient tumuli, burghs, and Picts' houses; but these are generally unsatisfactory and lead to contradictory results.

Hugh Miller mentions bronze articles as being found along with rude implements of bone and flint, in shell-mounds, near Cromarty.

Mr. Petrie gives several instances of bronze, and even iron, having been found in apparent association with stone and bone, in Orkney, although he adds his own opinion, that the former are probably of later date.

Mr. Rhind found bronze articles, 'along' with shells, bones, and rude implements of stone and bones, in the chambered cairns of Kettleburn, in Caithness.

The result, therefore, hitherto has been to leave the age of these refuse heaps altogether uncertain. They may be of any age, from that of the Danish "Kjökkenmöddings", to the historical or even the Christian period.

The same uncertainty attaches to a considerable extent to the type of the human race associated with these remains.

In Scandinavia it seems to be established that the earliest or stone race had small round heads, of a type resembling that of the modern Laplanders or Esquimaux; and that they were succeeded by a long and narrow headed race, who may be considered generally to coincide with the bronze period; the existing or historical race coming in with that of iron. In Great Britain and Ireland, on the other hand, the general opinion seems to be that a long headed race was the earliest, and that it was succeeded by a round headed one, which in its turn gave place to the historical race who were found in possession of the islands at the Roman invasion.

It cannot be said, however, as regards Britain, that these positions are established with anything like certainty. It is an open question, whether any definite separation of a stone, bronze, and iron period can be made out; and even if it were, there are many instances, like that which has been quoted of the Burghhead kist, where skulls of the short headed type have been found in graves apparently of the oldest period.

These questions can only be solved by an accumulation of facts, recorded with scrupulous accuracy. The refuse heaps afford by far the best chance of ascertaining the habits and conditions of life of the pre-historic populations; but they require even more than the ancient

tombs and dwellings, the most accurate and systematic investigation, not only to give us truth, but to escape giving us error.

The shell-mound, or midden, is of itself a formation of no particular period. I have seen many a "Kjökkenmödding" accumulating at the back door of an Orkney cottage, where limpets were largely used for bait. It must be remembered also that the same mound has frequently been used over and over again for a succession of habitations.

There are many reasons why this must be the case, such as convenience of situation, access to the shore, drainage, supply of stones for building, and a richer soil and greener pasture; all of which are afforded to the new settler by the old ruined mound. In point of fact, very many cottages in Orkney and Caithness now stand on, or immediately adjoining to, old mounds; and a slight excavation, such as a child might make in sport, might readily bring together the contents of the recent and ancient middens, and place a halfpenny of Queen Victoria in juxtaposition with a stone celt or flint arrow. In my own limited explorations I have seen three or four instances which have taught me the necessity of extreme caution, and of attaching no weight whatever to the discovery of any article in connection with an old mound or building, which has not been found in some original undisturbed stratum, and its situation accurately noted at the time by a competent observer.

In one case, a modern metal button was thrown up by the spade amidst the débris of an ancient shell-midden. On investigation it was clearly proved to have been torn off the waistcoat of one of the workmen on the preceding day, and amidst a storm of wind and rain blown into and apparently incorporated with the refuse heap. Again, I heard of coins of William and Anne being found in one of the stone kists containing skeletons, or, according to another account, in one of the ancient mounds. On inquiry, it turned out that these coins were really found within a foot of the surface, when a field road had been cut through the outer corner of another low mound on the sea-shore, in a spot which must always have been inhabited or near some habitation.

And, finally, the coin of Elizabeth, which I now produce, was found in digging the foundation of a barn in Orkney, at about a foot below the surface, in a spot closely adjoining to a mound or Picts' house, some of the débris of which are at a level several feet higher than the site of the coin; so that if this estate were thrown into a large sheep farm, and the buildings removed, a century hence this coin might have been found in a green mound of shapeless ruins, at a level distinctly below stone hammers and teeth of "*Bos longifrons*."

I dwell at some length on these instances, because I am convinced that nothing but error can result from attaching any weight to the evidence of simple juxtaposition in the same mound, refuse heap, or building, without accurate observation of the whole circumstances of each discovery; and, above all, that no reliance whatever is to be placed on anything which is found within two or three feet of the surface, in soil which is recent, or which may possibly have been disturbed.

In all the discoveries which I now proceed to describe, I have

been most careful to make a note and rough section on the spot, and I can answer personally for the accuracy of every detail which is given in this paper.

With this preface I proceed to record the facts which I have to lay before the Society.

The vicinity of Keiss Castle, on the shore of Sinclair's Bay, eight miles north of Wick, where I resided for some weeks during the past autumn, is peculiarly rich in remains of antiquity.

Within a range of about two miles, beginning from the south, there are :—

1. Two large mounds, popularly known as the "Birkle Hills", in the sandy links near the Westerburn.

2. A long "Burial mound", containing numerous stone cists and skeletons, about a mile and a half north of the former, where the links end, and the first houses of Keiss begin.

3. A large green mound, a little to the north of the harbour of Keiss, which I shall designate as the "Harbour mound", and immediately adjoining to it a smaller mound and some traces of ancient dwellings. These are about half a mile north of the Burial mound.

4. About a quarter of a mile inland from the "Harbour mound", close to the present churchyard, are two low, irregular, green mounds, one of which has been partly cut through by the road from Wick to Huna, disclosing a mass of shells. This I call the "Churchyard mound."

5. About three miles inland from Keiss, in the midst of an expanse of heather, is a small green spot with some grey stones scattered over it, which contains the remains of ancient dwellings. This I call the "Moorland mound."

There are many other mounds in this part of the country, but I confine myself to those which I have examined personally. My time being limited, and subject to many interruptions, I could not complete the exploration of all of those I have mentioned, so as to disclose thoroughly their structure and contents, and was obliged to confine myself to those which promised the most immediate results for the special object I had in view, which was not so much the elucidation of architectural structure, as the collection of facts bearing on the composition of the refuse heaps, and on the type and age of the race whose graves were unexpectedly disclosed while pursuing the former branch of research.

I begin with the "Burial mound", as the most important and interesting. At the point where the sandy links end, and the sand of the sea shore changes into rock, a long, low, irregular mound of sand, overgrown with green turf, extends for about three hundred yards parallel to the beach on its natural terrace, which is here composed of a raised beach of sand and shingle. The mound has, probably, continued for 400 or 500 yards further north over the space now occupied by cottages, gardens, and farm-yards, as kists and skeletons are said to have been found up to the point where the cliff of boulder clay rises near the harbour. In this case the mound has been nearly half a mile long.

Its shape is so far obliterated that it is not easy to assign its precise breadth and height, and, unless to an antiquarian eye—sharpened by the knowledge that kists had been found, the existence of a mound at all would escape notice. To this circumstance it is probably owing that the graves had in no instance been previously opened, and the skeletons lay quite undisturbed.

The maximum breadth, however, may be taken roughly at eighty to ninety yards, and the height at ten feet above the natural soil or raised beach, which is itself about ten feet above the highest level of present high water mark.

The appearance of the mound, with the position of the graves explored, are shown by the accompanying sketch and sections.

The fact of this mound containing graves was disclosed by the road, shown in the section, being cut through it about twenty years ago. Hearing of this, I made several cross sections, in search of kists, with the following results.

Kists were found in every instance with wonderful regularity at about fifteen feet apart, in the central line of the mound. They were all undisturbed and contained human skeletons, and were all of the same structure, consisting of walls of unhewn flag stones from the beach, with no floor, but covered with large flat stones. The accompanying sketch gives the best idea of these kists, which were precisely of the same pattern, except that the chief's kist was larger, and built with stones somewhat more massive, and carefully fitted. The kists generally lay north and south, or at a slight angle to the direction of the mound and sea-shore, which was north-east and south-west. The skeletons were all laid at full length, except one, in which the head and legs seem to have been partially crumpled up, but this may have arisen from subsequent displacement by pressure.

The skeletons lay in no particular direction, the heads being generally towards the south, but in some cases to the north. Nor were they laid in any particular position, most of them reclining on the right side, but one laying flat on its back, and others with their faces almost downwards. The bones were in various states of decomposition, according to local accidents giving more or less access to air and water. In two kists the skeletons had almost disappeared, or crumbled to pieces on being exposed to the air. In five instances they are nearly or quite perfect, but had lost much of their animal matter, and adhered strongly to the tongue.

The skeletons lay in a layer of clean sand, about six inches thick, laid on the natural soil, and above each kist was a small cairn or pile of stones from the beach, from one to three feet high, and above this, one to three feet of sand, covered with a fine grassy turf. In one instance the kists lay in a double tier, one over the other.

The kists were generally filled with clean sea-sand, in which the body seemed to have been packed, though others contained nothing but the skeleton, or stones and sand which had fallen in through the roof.

There were no traces whatever of dwellings, of the action of fire, or of refuse heaps, in connection with the graves or burial mound;

a few of the kists only containing some shells, which may have been placed there as food for the deceased.

We may consider this burial mound, therefore, as a pure, unadulterated place of interment, which has never been disturbed, or used for any other purpose, and in which we have a series of probably sixty or seventy graves, taking the mound at 300 yards in length, or of 200, if it extended, as there is every reason to believe, for half a mile. The number and regularity of the kists preclude the idea of a hurried interment of bodies slain in battle; and some of the skeletons being of women, confirms the supposition that it was the regular burying place of a surrounding population.

I proceed to describe the articles found in the kists with the human skeletons, which is the point of real importance in determining their age.

In no instance was there a vestige of hair, integument, clothing, wooden coffin, urn, pottery, or, in fact, of anything whatever having been buried with the body, with the following exceptions.

In one kist the lower jaw of a dog was found. In two others were found stone weapons and implements, under the following circumstances:—Disappointed at finding nothing to identify the age in any of the first nine or ten kists opened, I considered that if any chief of superior rank were buried, it would probably be in the centre of the mound, and his grave would be the most likely place to discover relics. Accordingly, I had two trenches cut across the mound as nearly as possible at its centre, observing the rule which had hitherto been found to prevail, of an interval of fifteen feet between each grave. The result is shown in the section. The northernmost trench disclosed the kist No. 7, in which lay the skeleton of a man much taller than any of the others previously opened, being upwards of six feet in height, while those previously found did not exceed five feet to five feet four inches; and by his side, in the clean sea-sand which filled the cist, was the heart-shaped stone hammer or celt now produced, and marked "Kist No. 7", with the accompanying limpet and other shells. It is of sand-stone, 5 inches long, $3\frac{1}{2}$ inches broad, and about 1 inch thick, and bears evident marks of having been used at the smaller end.

The other trench hit upon the corner of a circular wall which we at first took for the wall of a small burg or round tower, but on examination it proved to be an inclosing wall, 18 feet in inner diameter, and 9 inches to 1 foot thick, of a cairn of stones, which as we approached the centre became large, and were disposed with some care. On removing the cairn, was disclosed a stone kist of large dimensions, built and roofed over with massive flat stones, shown in the accompanying sketch and section.

The dimensions of the kist were:—length, 6 feet 7 inches; width at head, 1 foot 10 inches; width at foot, 1 foot 9 inches; depth, 1 foot 10 inches.

It contained the skeleton of a man who must have been about 6 feet in height, and of very massive proportions. He lay with his head to the south, in the usual attitude, on his right side; and in

the clean sand by his side, about where the left hand reached to, were a series of 12 stone weapons, now produced, and which may be safely said to be among the very rudest ever used by man.

They comprise,—one which may have been a battle-axe, three which may have been spear-heads, one arrow-head, six knives or cutting instruments, and one which seems to be the fragment of a broken celt or hammer.

In addition to these, there were laid under the head, or close to it, the oval sandstone disc and knife, and the smooth oval stone, apparently intended for a hammer, which are also produced. This makes in all fifteen stone weapons or implements found in the chief's kist.

There were further found among the stones in the cairn covering the chief's kist, five stone articles, viz.,—

1. A sandstone block, 13 inches in diameter, with two circular holes about two inches deep, on opposite sides, but not pierced through.

2. A thin plate, 18 inches by 14, rudely chipped to an oval or circular form.

3. A similar round plate, about 7 inches by 6.

4. A broken wrought circular stone, with a circular hole in the centre.

5. A small granite stone from the beach, apparently used as a hammer, 2½ inches by 1½.

Several other stones were found, of very regular oval form, which may have been celts or hammers, but natural stones of this description are so common on the beach that I made a rule of rejecting everything which did not bear unequivocal marks of having been wrought or used by man.

I proceed now to the other mounds, and begin with the Churchyard mound, as affording the simplest state of facts, and the closest analogy to the Danish Kjökkenmöddings.

In this case, as shown in the accompanying section B, a great mass of shells, at least five feet deep, and covering an area of several hundred square yards, rests on the natural soil, and is itself covered by the foundation of a massive building, which in its turn has all but disappeared, and been converted into a low and shapeless green mound, affording excellent pasture.

I am inclined to think that the old building may have been a burg, or circular tower, like that presently to be described, on the shore; but even the ruins have almost disappeared, having doubtless been used as a quarry for building adjoining houses and stone walls; and nothing remains but the massive pavement or floor of large flat stones, three to four inches thick, and just enough of structure in one place to show that the principle of overlapping stones was used as a substitute for the arch.

However, the important fact remains, that this foundation is superimposed on the shell-mound as clearly as any secondary is on a primary formation in geology; and that the refuse heap cannot have accumulated about the building, but must have existed before it.

This heap is composed mainly of periwinkle shells, differing in this respect from the others nearer the shore, in which limpets pre-

dominate. There are, however, mixed with it several limpet shells, and a few of the other species found on the shore, and a considerable number of animal bones and teeth, almost all of which are chipped up into small fragments.

The relics found in this heap, principally towards the middle and lower strata, consist of chipped flints, and very rude stone and bone implements and pottery. There are specially two bone arrow-heads, and about eighteen skewers or pins of fragments of bone and horn, worked roughly to a point, which may be appealed to confidently as a proof of the absence of metals, and extreme rudeness of the race by which they were used. They are, in fact, the *ne plus ultra* of rudeness in bone, as the weapons found in the kist are of a like rudeness in implements of stone.

In the centre of the mass, at the point marked * in the section, was found a human tooth, with a small portion of the jaw, which is important in connection with a similar discovery in another mound. Wood ashes and charcoal were common in this mound, and the shells and bones appeared to have been generally subjected to the action of fire.

The animal bones were less abundant and more generally chipped into small pieces than those found in the other mounds. It seemed as if four-fifths of the food of the people by whom this most ancient midden had been accumulated, had consisted of periwinkles, and as if animal bones had been a delicacy, from which every particle of marrow was extracted by breaking them up.

The next mound I shall describe is the Harbour mound, which afforded the greatest number of relics, and showed most clearly the architectural structure of these ancient dwellings. At first sight it consisted of a very irregular grassy mound, with some loose stones lying about, and showing faint traces of a low outer circular wall or rampart. On excavating, a great mass of cyclopean building and shell-midden was disclosed, with floors or pavements at different levels, which will be best explained by the accompanying sketches, ground plan, and sections.

It is clear that this building had been of the class of burg or circular tower, common in Caithness and Orkney. I doubt, however, whether it ever had the bee-hive shape, as no sign of convergence appears in any of the circular walls, one of which remained standing in parts to the height of twelve feet. It seems rather as if the passages only, between the circular walls, had been covered in, and used as dwellings in bad weather or winter, the inner circle, which is twenty-four feet in diameter, remaining open.

The whole upper part of the building, however, has fallen in, and a great part of it, including nearly all the circular walls on the northern side, removed for building purposes. No vestige of timber was found, though there was abundance of wood charcoal in the lower strata, apparently of a small scrubby underwood of birch and hazel.

The remarkable fact in this mound is, that it indicated successive occupation, and adaptation of the older parts of the building by newer inhabitants. The primitive part of the structure seemed to

be the second or middle circular wall, which was by far the most massively built, and went down to a lower pavement of large flags, resting on a layer of flat beach stones, laid on the natural rock. The space for five feet above this level was filled up with a midden, or accumulation of shells, bones, ashes, &c. Then came a second pavement of large flag-stones, on a level with which are the foundations of the two other—or inner and outer circular walls. Above this was another midden, 1½ feet deep, and then an upper pavement, forming the floor of the inner circle. This, again, was covered by a midden of its own, mixed with a mass of stones and rubbish which had fallen in and choked up the building. There were thus three distinct middens, separated by superimposed pavements, which without expressing any theory, and simply as a convenient mode of representing the facts, I may call the primary, secondary, and tertiary middens.

Outside the walls these middens were of course less distinct, there being no pavements to separate them, but it was evident that as the refuse had accumulated at each stage on the floors inside, it had accumulated still more rapidly on the outside at certain spots where it had been commonly thrown out; and thus the same distinction of a primary, secondary, and tertiary midden must approximately apply nearly to the same levels of the outside strata.

In addition to the evidence from superposition of pavements, there is clear proof of successive occupation, from other sources. The doorways of the inner and second circular walls do not correspond. The former has two entrances, as shown on the ground plan, nearly opposite to each other, or east and west. The other has one very massive doorway only, to the south-west. On coming up to this doorway in exploring the passage, between the two circular walls, it presented the appearance of a fire-place and chimney, rudely constructed with loose rubbly stones, overlapping one another, as shown in the accompanying sketch.

On removing these, the solid massive doorway of the second wall appeared, which had obviously been converted from the entrance of a strong fort into a chimney.

Just outside this doorway was a massive stone staircase of eleven steps, leading down to the level of the second pavement.

I am particular in stating these facts, as they have an important bearing on this other fact, that the class of relics found in the upper and lower middens were essentially distinct. Among the various relics now exhibited from this and the other mounds, there is no exception to the rule, that the rude forms of bone and pottery are exclusively confined to the two lower middens, while the few instances of metallic objects, finer pottery, and well wrought bone implements are as exclusively confined to the upper one. The same rule applies generally to the stone implements, but these are more intermixed, as might be expected of heavy objects where so much of the original building has fallen in, or been quarried and disturbed.

The skulls, and animal teeth and bones, were of the same character throughout, and very abundant, so that many cart loads might be

taken, in addition to what had been already taken—as I was told—to manure the land. The larger bones had generally been broken to extract the marrow; but not into such small fragments as in the “Churchyard mound”, though the same rule seemed to apply here to some extent, that the bones were broken into smaller pieces in the lower strata. The large deer’s horns especially seemed to be most abundant towards the top. The shells are principally limpet, a mass of which, cemented by oxide of iron, is produced as a specimen.

Wood charcoal and ashes were common in the lower middens, while higher up the ashes seemed to be of peat.

The relics found in this mound consisted—1. Of the rude stone implements, chipped flints, rude implements of bone and horn, and coarse, hand-made pottery, which correspond entirely in character with these found in the “Churchyard” middens and burial mound. 2. Of the bronze implement and metal object, apparently the two blades of a pair of scissors rusted together, which were found in the upper midden, at or near the spot marked A in the section, with some thinner and finer pottery. This seems to have been a combination of bronze and iron to form a small pair of shears, such as might be used for clipping sheep. It is probably comparatively recent, and a relic of the last occupants of the dwellings by whom the chimney and fireplace were constructed.

In the secondary midden, B, at the spot marked *, in the midst of a mass of limpet shells, and broken jaws, teeth, and bones of animals, I found the fragment of the human lower jaw now produced. It is that of a child about six years of age, the permanent teeth being formed, but not having yet displaced the milk teeth. No trace of any other human bone was found with it, and coupling it with the fact of another isolated fragment of human jaw having been found in another midden, both under circumstances precisely similar to those of the deer, pigs, and oxen by which they were surrounded, it raises a strong presumption that these aboriginal savages were occasionally cannibals.

The fact is the more remarkable, as the extensive researches in the Danish Kjökkenmöddings have failed to discover any trace of human bones, whence Lyell infers, in his *Antiquity of Man*, that the primeval Danes were not cannibals.

The next mounds to be described are the Birkle Hills.

These are two mounds situated on the Wester links, large enough to be taken—as their name implies—for small natural hills, as shown by the accompanying sketch D. They stand amidst the hillocks of blown sand, about 200 yards from the sea-shore, on the raised beach of sand and flat shingle stones, which can here be traced distinctly for some distance. The larger mound is roughly conical, about 40 feet high, and 120 yards in circumference at the base. The lower mound commences about 100 yards north-east of the other, and is a long, irregular mound, which may be taken roughly at 30 feet high, 100 yards long, and 30 yards wide. The surface of both mounds is of sand, covered with small stones from the adjacent raised beach, and, in the case of the smaller mound especially, with a vast number of

limpet and periwinkle shells, and animal teeth and bones. Traces of small cairns of massive stones remain on the summits of both mounds and round their base, but these seem all to have been opened, and disclosed no structure or relics. At the base of the smaller mound, on the side next the sea, was a stone kist, exactly like those of the Burial mound, the head stone of which just projected above the sand. It had been opened—I believe a few years ago, by a medical man now in India—but the skeleton, with the exception of the skull, which was wanting, had been replaced in the kist, and the lower jaw is now produced. The remains of three or four other kists of similar construction lay scattered about the base of the small mound; and on the west side of the large mound one was found containing some small fragments of human bones, with some skulls and portions of animal bones, but these latter may have fallen into the kist from the surrounding soil.

The most important point about these kists is, that they serve to connect the mounds on the links with the Burial mound, the age of which is defined by the implements found in the chief's kist. The kists are of precisely the same size and construction, except that some of them at the Birkle Hills seem to have had two memorial pillars or small standing stones, about three feet in height, one on each side of the head stone of the kist.

As regards the structure of these mounds, I had no time to investigate it thoroughly. The larger mound shows traces of Cyclopean architecture, and I am disposed to think it is of the same class as the other large conical mounds of Caithness, viz, consisting of concentric circular walls with cells or chambers in the interspaces between the walls. I am somewhat doubtful, however, of its having been a fort or dwelling, from the circumstance that, with the exception of a few shells and bones scattered sparingly over the surface, no trace of any midden or refuse heap was seen.

The smaller mound, on the other hand, was completely covered with shells, teeth, and bones, and in excavating, considerable masses of midden were disclosed. Everywhere, also, the action of fire was apparent, and several of the cairns seemed to be the remains of small circular ovens or fire-places which had been used for roasting the animals whose bones lay around them.

The only instance of complete structure disclosed was at the top of the small mound, as shown by the accompanying sketch, plan, and section *E*.

A very massive stone closed the entrance on the east side next the sea. From this a passage, enclosed on each side by upright flag-stones, about two feet long by one and a half deep, descended by a gentle decline for six feet. It then became horizontal for about eight feet, widening out from three to five feet, and taking a turn from nearly north-west to west, in which direction a similar ascending passage emerged on the west side of the mound. Between the upright flags were placed, in several instances, oblong stones about three feet high, similar to the memorial stones of the kists. The stones were all unhewn, and must have been brought from the beach from a distance of at

least two miles. They were built with some care, stones being placed in some cases to fill interstices and break joint. There was no trace of a roof, but the pavement was carefully fitted.

Refuse of shells, bones, animal matter, and charcoal, had accumulated on this floor to the depth of about nine inches, and when the pavement was taken up it showed a few inches of similar refuse below on which the flags had been laid.

The refuse matter and pavement all showed signs of fire, which became more intense in the central chamber where the bones were all charred and many of the stones split by heat.

The west end of the passage was not closed, but was partially ruined, and outside it was a considerable midden of the usual shells and bones.

The relics found were:—1. In the lower midden, two small whorls of stone and one of bone; the latter is worth noticing. It is made of the ball of a femur, and from its lightness and hemispherical form seems to negative the idea that it could ever have been used for the purpose of spinning. Some pieces of flint which have been artificially chipped. A broken sandstone block six inches by four, which has exactly resembled a ship's block, having a deep groove running round it with a notch at one end for the purpose of attachment. I have seen a stone exactly similar, though smaller, in the collection of Mr. George Petrie, which was found at Grain, near Kirkwall, in Orkney, in cutting a road near the site of a ruined Pict's house. A stone hammer or oval beach stone, showing signs of pounding at the end.

2. In the upper strata of the outside midden were found the bone skewer and particularly well-fashioned bone pin now produced. Above these, in the clean sand about two feet below the surface of the mound, was found the large iron nail, much corroded, and some small fragments of rusted iron now produced. On the surface of the mound were found, amidst the numerous shells and bones and ordinary beach stones, some flint pebbles and splinters of flint, two small pieces of chalk much weatherworn, part of a belemnite, bits of rock crystal, and large iron pyrites, one or two rusty nails, apparently recent, one of them sticking in a piece of wood; some fragments of light vegetable matter, probably highly dried peat, and a large lump, not waterworn, of black magnetic iron ore, with one or two small pieces of the same slightly fused.

There were, however, no extensive deposits of slag or trace of iron furnaces; and what is singular, considering the extent and varied nature of the débris exposed and turned over, not a trace was found of pottery. In fact the small proportion of relics found in these as compared with the other mounds leads to the supposition that they may not have been regular dwellings, but rather places of worship or sacrifice, when the neighbouring tribes met to regale themselves with rude banquets. Further excavations however, would be necessary to disclose the structure of these mounds, as to which, all that can be said with any certainty is that they are probably of the same period as the burial mound and the lower strata of the other mounds.

The remaining, or "Moorland," mound is of a different character, and falls rather within the class of Pre-historic dwellings described by the Rev. Mr. Joass in Mr. Roberts's paper. The dwelling explored, however, is not circular, but nearly square, with an entrance passage as shown by the subjoined sketch and plan F.

The walls are made of large flags set on edge, there was no trace of any roof, but the floor was paved with flat stones, over which were a few inches to a foot of shells, bones, and ashes. The shells were principally periwinkles, though the distance from the shore was about three miles, and there were several large fish bones. The other bones were principally of deer, pigs, and birds. Along the wall on each side of the principal room was a row of square boulder stones, forming a bench or bed. The inner end was divided by two large upright flagstones into three compartments. The fire-place had been on the stone floor near the passage or doorway.

The relics found on clearing out the floor of this dwelling were,

Some fragments of pottery, apparently wheel made, and newer than that of the other mounds, one of the pieces having a coarse blue glaze.

A sandstone hammer or oval beach stone, used at the end.

Two small stone whorls.

Several smooth round pebbles from the beach, which I take to be sling stones.

A piece of porphyry polished on one side.

From the nature of the pottery, I do not consider this dwelling or cluster of dwellings in the middle of the moor, as of the same antiquity as the mounds near the shore.

Having now completed the description of the different mounds, I proceed to state the leading results which I think may be taken as established.

1. The burial mound, with its kists and skeletons, is unquestionably of the early stone period. It is impossible to imagine that a people who had any knowledge of metals, or who were even acquainted with the well-fashioned celts, arrow-heads, and other implements of a later stone period, could have placed such excessively rude weapons in the kist of a chief on whose sepulture so much pains and labour had been expended.

In using the term "the early stone period," I by no means wish to settle the question of great positive antiquity. There is nothing in the fashion of the weapons to indicate any advance beyond the Abbeville period, when man was contemporary with the mammoth and rhinoceros; but it by no means follows that a relic of the aboriginal population may not have lingered on in this remote corner of Britain, without progress or improvement, down to a comparatively recent period, when they were extirpated by the historical races who were acquainted with metals. It is even probable that this may have been the case from the fact that the mounds are posterior to the last raised beach. This, however, does not affect the interest of the fact that we have here an undisturbed series of the graves and skeletons of the aboriginal race of North Britain, which is either itself of great antiquity, or represents a race who had lived on little changed from the earliest period of the occupation of the country.

2. The other mounds and shell-middens, with the exception probably of the Moorland Mound, are of the same race and period, although they have been subsequently occupied by later and more advanced people. This is proved not only by the general evidence of contiguity and resemblance, but also by the specific identity of the kists of the Burial Mound with those of the Links Mounds, and of several of the stone implements of the Burial Mound with those of the Harbour and other mounds, as well as by the character of extreme and primitive rudeness which attaches alike to the stone weapons of the kists and to the whole series, without a single exception, of stone and bone implements and pottery from the lower strata of the middens.

3. The type of the race is very remote from that of any modern European race, and accords with what might be expected from the rudeness of their implements.

Professor Huxley, to whom I first mentioned these discoveries when he was in Caithness as one of the Fishery Commissioners, has kindly undertaken to make a thorough examination of the skulls and skeletons, which will doubtless be of great interest to the scientific world. In the meantime, I content myself with producing the skulls for inspection, and making a few general remarks.

The number of skulls from the same cemetery is sufficient to exclude the chance of accidental variety, and give a fair idea of the type.

Eight kists in all, containing human remains, were opened at the Burial Mound, and one at the Links Mound. In one of these, No. 6, a few fragments of skull only remained, with the lower jaw of a dog. In the kist of the Links Mound the skull was missing, but the lower jaw and most of the skeleton remained, shewing that they had belonged to a very aged male of the same type as the others, and about five feet two inches in height.

In kist No. 4, the frontal bone and part of the upper and lower jaw only remained, shewing the same type with extreme prognathism.

In the remaining kists, Nos. 1, 2, 3, 5, 7, and 8, the skulls were entire, or nearly so, and are now on the table; and I obtained also the entire skeleton of No. 1, and portions of those of Nos. 2, 7, and 8.

No. 8, the chief, was a male, and of very massive proportions.

No. 7, who lay next the chief, was also a tall man.

No. 1 was a female and No. 2 an adult male, not above five feet to five feet two inches in height, which was also the height of Nos. 3 and 5, and, probably from the length of the kists of Nos. 4 and 6, I believe they were all adult males.

We have therefore a considerable series from which to infer the type. It is decidedly dolichocephalic, the length ranging from seven to eight inches, while the *maximum* width ranges from five and a quarter to six inches, the proportion of width to length being from seventy to seventy-eight to one hundred inches. The *minimum* frontal diameter is not above three and a half to four inches, and the height above the glabella-occipital line from three and three-quarters to four and a quarter inches. The arc from the occipital protuberance to the

root of the nose is eleven to twelve inches, and the horizontal periphery nineteen to twenty-one inches.

There is considerable variety in the series, skull No. 7 being a very fair one, with little prognathism, and not inferior to many ancient British skulls, while in No. 1 the low attributes of the type are carried to such an extent as to give it a decidedly Negro aspect, and make it, in the opinion of some high scientific authorities who have examined it, the worst European skull they have seen, with the exception of that of Neanderthal. The prognathism is extreme; the forehead is singularly low and narrow; the skull so depressed, that the height above the glabello-occipital line is scarcely more than half the length of that line; and the brain so deficient that, instead of filling out the skull to a well-rounded arch, the sides meet almost like the flat roofs of a pent-house, forming a protuberant ridge at their junction.

No. 3 is a skull of better frontal development, and not very marked prognathism. The other skulls approximate more to No. 1 than to No. 7.

Nos. 2 and 4 have been almost, if not quite, as prognathous; and Nos. 5 and 8 show very marked prognathism. They have also all very small frontal development, unusually low proportion of height to length, and the same tendency to flatness in the walls of the skull, with a protuberance along the ridge of the median suture. The teeth, which are of moderate size, are all much worn, as if by the attrition of uncooked food mixed with sand. The nasal bones are prominent, the lower part of the face narrow, the chins small, but not receding.

In these and other respects they differ from the Negro type, which is conspicuous in other parts of the cranium; and all that is meant in referring to it is, not that those primitive men were genuine Negroes, but that these skulls show, in several instances, a marked deviation from the river-bed type in that direction, which is the more remarkable as the primitive skulls of the Danish middens differ in a diametrically opposite direction, and are decidedly Turanian and brachycephalic.

From the type of the race I pass to a few conclusions which may be drawn respecting their habits and mode of existence.

FAUNA:—

By the kind aid of Mr. Roberts and Mr. Carter Blake, who have been assisted in their identifications by Mr. Davies of the British Museum, I am enabled to give the following complete list of the animal remains of the Keiss middens. We are indebted to Professor Owen for the important identification of the *Alca impennis* or Great Auk.

MOLLUSCA:—Limpet (*Patella vulgata*); periwinkle (*Littorina litorea*); lesser periwinkle (*Littorina neritoidea*); whelk (*Buccinum undatum*); cockle (*Cardium*); scallop (*Pecten majus*); lesser scallop (*Pecten argus*).

ANNULOSA:—Lobster; Serpula.

FISH:—Cod (*Morrhua vulgaris*).

MAMMALIA:—Ox (*Bos longifrons*); horse (*Equus caballus* (?) fossilis); red deer (*Cervus elaphus*); goat (*Capra hircus*); hog (*Sus*

scrofa); dog (*Canis familiaris* or *familiaris fossilis*); fox (*Canis vulpes*); rabbit (*Lepus cuniculus*), perhaps recent; water rat (*Hypudæus amphibius*), the same; grampus (*Delphinus orca*), or small whale; dolphin (*Delphinus delphis*), or some other small cetacean.

BIRDS: Great auk (*Alca impennis*); lesser auk (*Alca torda*); cormorant (*Phalacrocorax carbo*); shag (*Phalacrocorax graculus*); solan goose (*Sula bassana*).

The most interesting fact is the discovery of the "*Alca impennis*," which is now extinct in Europe, having but lately died out in Ireland, but said to survive in Greenland. Its bones are frequent in the Danish kjökkenmöddings, where they have been thought to imply great antiquity and a more glacial climate, but it is believed that they have never been found in any tumuli or deposits of a later date than these primæval middens. Hence their discovery in the Caithness middens affords an important link of connection with those of Denmark, and strengthens the evidence of high antiquity drawn from the rudeness of the implements and low type of the skulls.

The fauna also corresponds with that of the Danish middens in its general characters, and contains just such an assemblage of animals as are commonly found in quaternary deposits. The dog is the only one of which we may assume with some certainty that it was in the domestic state.* The ox was the *Bos longifrons*; the hog probably wild, from the size of the tusks; the horse, a large-headed animal of small size, but considerably larger than the Shetland pony, corresponding perfectly with the *Equus fossilis*, and probably wild, as it had been commonly used for food; the goat precisely similar to the fossil goat from the newer pliocene figured by Owen in his *British Fossil Mammalia*.

The absence of the sheep, should it be confirmed, would strengthen the inference against domesticated animals; and the horns of the red deer confirm the supposition of considerable antiquity, some of them being of unusually large size and very abnormal. It will be recollected that in the earliest lake dwellings of the age of stone in Switzerland the goats outnumbered the sheep, but towards the close of the same period the sheep were more abundant than the goats. The presence of goats without sheep, therefore, in the Caithness middens, would point to a connection rather with the antecedent Danish middens than with the earliest relics of the stone period in Switzerland, agreeing completely with the similar evidence derived from the presence of the *Alca impennis* and the excessive rudeness of the stone and bone implements.

Food.—This was evidently composed principally of shell-fish from the adjoining shore, consisting in nine cases out of ten of periwinkles and limpets. Fish and whales were also eaten, but the latter were

* I found this conjecture mainly on the jaw found in one of the kists, apparently of the hunter's faithful dog to bear him company; but the size corresponds either to that of a large shepherd's dog, or of the fossil dog of the quaternary period; and if dogs were domesticated, it is singular that so few remains should be found, and no trace of the gnawing of other bones, which is so common in the Danish middens.

probably stranded. Even as regards fish, the total absence of anything like fish hooks or tackle, and the very small proportion of fish bones on a coast abounding with fish, suggests a doubt whether they did more than pick up dead fish which are very frequently cast up on this shore.

I never heard of canoes, which are so common further south, being found in any of the peat mosses or lake marls of Caithness or Orkney, and although the country was doubtless once covered with a scrubby underwood, I question if trees of sufficient magnitude to form canoes ever existed in sufficient number near the sea-shore or navigable rivers to teach the savages the art of boat-building. Be this as it may, the fact is worth noticing that in these refuse heaps on the shore of a sea abounding in fish, there are far fewer bones of fish than of *Bos longifrons*, and no traces of any fishing or boating tackle.

The fauna enumerated all afforded food, the whole of the remains having been found in the middens, and in many cases showing the action of fire. The two instances of human jaws found in the middens afford a strong presumption that cannibalism was occasionally resorted to. Shell fish only being placed in the kists as food for the dead, strengthens the presumption that they were the staple and ordinary article of food.

Did grain form any part of their food? Upon this point there is no sufficient evidence. In two cases large stones were found, nearly circular, in which holes had been bored on opposite sides to a certain depth, as if an attempt had been made to bore a central hole which had been abandoned. These may have been intended for quern stones, and if so, grain was probably used. But there is no proof that these were quern stones; on the contrary, they seem unsuited for such a purpose from want of density and hardness, and one at least of these stones showed traces of the action of fire and was covered with greasy black ashes and decomposed animal matter. It has occurred to me that these stones may have been used for obtaining fire by friction.

A large stone block was found with a space excavated in it, which, if circular, would have done for a quern, but it was oblong and apparently intended as a mortar in which to pound with the oval sandstone beach stones used as hammers.

Grain may have been so pounded, but it is equally possible that bones may have been thus reduced to the small splinters in which they are generally found, for the sake of extracting the marrow. I looked carefully among the ashes and debris for any trace of grain or vegetable substance, but could never find anything but small pieces of wood charcoal, and for the present all that can be said is that there is no proof of the use of grain, and perhaps some slight presumption against it from the absence of unmistakeable querns which are so common in connection with later buildings.

The attrition of the teeth may possibly afford an argument; but I apprehend that this might equally result from gnawing bones and eating large quantities of shell-fish mixed with sand.

Interment.—The mode of burial has evidently been the simplest

and most natural—viz., that of laying the body in its extended position on the surface of the ground, enclosing it in a rude kist of stones from the beach, and covering it with a small grave-mound, or a long and low heap of stones and sand. This mode of sepulture has commonly been considered that of the later Anglo-Saxon age after the Pagan custom of cremation had been abandoned; but it is so simple and obvious that it does not, like more artificial rites, afford any inference of a particular period.

At any rate, the fact is certain that in this instance and in many others in Orkney, to which I could refer, the simplest mode of interment is the oldest, and the association of the rudest stone weapons with human remains of the lowest type, is found in what Wilson, in his *Prehistoric Scotland*, calls the "Long Barrow," or simple grave-mound covering an extended kist.

Rude as they were, these aborigines had ideas of a future existence, as shown by the burial of weapons and food with the deceased.

Intercourse with other Countries.—It may fairly be inferred from the nature of the weapons and implements that these aborigines were isolated from the rest of the world. The tools and weapons are in all cases made of the stone belonging to the district, though for most purposes it is very inferior. The value of flint was evidently known, but the only flints available were those small waterworn pebbles, the relics of some chalk formation to the eastward which has disappeared, which are not uncommon on the sea shore and old raised beaches of Caithness.

In a more advanced stone period the instances are innumerable where weapons of flint, porphyry, greenstone, etc., in districts destitute of these materials, testify to some degree of intercourse with neighbours. But in the present instance the total absence of any foreign material, and the use of the native substance for weapons and cutting tools, for which flint would unquestionably have been used if it could have been obtained of sufficient size, lead to an opposite inference.

Arts and Architecture.—The former were evidently at the lowest point consistent with human existence. The weapons and tools show little in advance on the ingenuity of the Gorilla, who uses a thick stick as a club, or a large pebble from the river bed to crack a cocoa-nut. It is specially remarkable that the arrow heads have no trace of a barb, and the spear heads, celts, or hammers, no holes or grooves to facilitate attachment to a shaft or handle. Many of them, including the chief's battle-axe, seem to have been simply held in the hand. It also deserves notice that there is no trace of ornament in any of the stone or bone implements or fragments of pottery. The only trace of more advanced art is in the whirls which may be thought to indicate spinning.

On the other hand, if it be established, as I think is probable, from the section of the Harbour Mound, that the older portions of the burghs or circular towers are connected with this primitive race, their architecture was by no means contemptible. This would be only an illustration of the truth that the civilisation of a secluded and primitive race de-

depends very much on the materials which nature surrounds them with. The tools and weapons of the Caithness aborigines were miserable because nature gave them no large flints or hard cutting stones, while on the other hand, she supplied them with a profusion of flags and blocks from the fissile strata of the old red sandstone, squared almost as regularly as by the chisel of the mason. With such means at hand, it must be admitted that a circular tower afforded the readiest means of combining defence against enemies with shelter from the elements, and the construction of a second concentric circular wall, with a narrow interspace which could be divided into chambers and roofed over with flags was a natural development of the original idea.

There is much evidence in the adjoining county of Orkney that these burgs are in some cases of great antiquity. I may mention that of Savrough near Birsá, where the ruins of a burg had been converted into a green mound like this of Keiss, in which graves had subsequently been made of the bronze period, as shown by the urns containing burnt bones and other relics found in the kists.

I see no difficulty, therefore, in carrying back the origin of the burgs to the earliest stone period, although they may have been occasionally occupied, as there is historical evidence of occupation in the case of the burg at Monsa in Shetland, as late as by the Scandinavians of the ninth and tenth centuries. It is a material fact, that however regular the architecture may appear, in no single instance is there a trace of a tool on any stone used in any of the kists or buildings. They have been without exception squared by Nature's hand, and hundreds of blocks and flags, as regular in form, could now be picked up on the adjoining beach.

Lastly.—I submit this conclusion, that although it would be rash to draw positive inferences without a wider range of facts, there is strong presumption that a careful examination of the shell middens and early graves and buildings of the North of Scotland will establish the same classification as in Denmark, of an early and later stone period, succeeded by periods of bronze and iron, though it will show that the aboriginal race was of a different type and probably came, as the rigour of the glacial period abated, from the south, with the hippopotamus and elephant, rather than from the north with the musk ox and reindeer.

The thanks of the Society having been given to the author of the paper,

Professor OWEN said: No one can be better aware, Mr. President, than yourself, that I am here simply as a visitor; and one who has come to gather and learn important details of this exemplary investigation of ancient remains which we have had the pleasure of listening to this evening. I cannot but regard Mr. Laing's paper as likely to be a guiding type and pattern of the way in which certain ancient evidences of our race ought to be investigated and dealt with. It is most fortunate for anthropology that these ancient burying-places should have had for their first investigator a man with so

philosophical a mind and so good a judgment—one who could draw his inferences so carefully, and who was so alive and awake to all those circumstances that might lead the observer astray, as the distinguished author of the paper we have just heard. I have not in the whole course of my studies heard anything that has taught me so much in reference to the ancient relics of interments in Caithness as what I have heard this evening. It has repaid me most amply for availing myself of the opportunity afforded me by your president of listening to the paper. All I knew beforehand of the rich treat we anticipated this evening, was from the circumstance of some of these remains—the remains of the lower animals—having been brought last week to the British Museum for determination. Our experienced attendant, Mr. Davies, who, in reference to all the evidences of more recent remains, can determine with great accuracy, went through that labour with Mr. Carter Blake, your assistant-secretary. He found skeletons and parts of birds in the museum to match most of the bird-bones, but he brought me a few specimens, of which there were no examples in our cases. Most luckily, some time ago my friend, Mr. Alfred Newton, committed to my care the mummy of the *Alca impennis*, which had been discovered in a heap somewhat analogous to a guano heap on the coast of a small island off Newfoundland. It had got into the hands of the Bishop there, who transmitted it to his friend, who conveyed it to me, and we obtained an almost perfect skeleton of the species, which Mr. Gould and some other ornithologists consider to be not only extinct in Great Britain, but to have utterly passed away for some thirty or forty years. To my great delight, I found that these residuary bones were several parts of the *Alca impennis*, and they are the first direct evidences of specimens of the bird taken on our northern coast, on which my friend, Mr. Gould, in his admirable work on British birds, may introduce the *Alca impennis* as a genuine old British bird. With regard to the characters of the human crania, I was not aware that Mr. Laing had referred them to an accomplished and assiduous fellow labourer, from whom we shall obtain all the requisite anatomical observations respecting them. Looking at them for the first time to-day, I must observe that singular as are the superficial resemblances to the Ethiopian skull in the small female, there are three or four characters that enable the anatomist at once to see that it is not an Ethiopian. The teeth are small; then there is the extent to which the alisphenoid joins the parietal; there is also wanting a character that always strikes my eye in reference to crania of the genuine Negro—a certain bulging out of the middle part of the frontal bone; a feature that is very rarely seen in prognathic northern skulls. Finally, the nasal bones are prominent, indicating rather a good contour of that feature of the face. On the whole, it seems to me to indicate a type combining the greater beauty we find in the Grecian with a certain delicacy of feature we find in the Hindoo, showing that that old primitive orient race may have been the source of this race—that these oldest Caithness people and ancient Egyptians came from the south rather than from the north. That was the conclusion passing through my mind in re-

ference to that skull. It would be unbecoming in me to offer many observations. I will, however, conclude my remarks by referring to a point which can hardly be considered an ethnographical or craniological question. I am looking at that little child's lower jaw. It is not a light matter to bring the charge of cannibalism against our old northern progenitors, however far back they may date. One would not willingly infer that they combined occasionally with their limpets and fish, the delicate animal food of a tender well-fed child of five years old, the age at which the dentition of this jaw clearly shows the poor little creature to have been. But yet I am compelled to admit that if I had been called upon to give professional evidence on such a case before a judge and jury, I should have first looked at the lower margin of the jaw. I have had experience of the way in which jaws of mammalia that have been used for food have been dealt with by the old primitive flesh-eaters of a period perhaps as remote as the oldest of these; and I find that when they came to the lower jaw, after picking off the flesh in a general way, as indicated by the marks on the superficies, by chipping the lower margin of the jaw, they proceeded to lay open the dental canal, which contains something nearly analogous to that which they never failed to get out of the marrow bones. Now, there are clear indications that this has been practised with this child's lower jaw. The whole of the dental canal in which runs a substance analogous to marrow has been laid open, and I cannot help suspecting that this substance has been sucked out, and agree therefore, with Mr. Laing, in thinking that that dear little old young creature has not come fairly by its end, and that this jaw really belongs to the same category with regard to its use and purpose with the other multifarious animal remains, the refuse of the meals of the old Caithness meals. I again thank most cordially my friend Mr. Laing—an old fellow labourer, for I am indebted to him for some interesting fossil remains from his former neighbourhood in Hampshire—for his valuable paper. I did not expect that so soon after his return from graver duties, I should again have to thank him for such a fine body of information on this most interesting subject, the study of which we are associated together to promote.

The following paper was then read:—

On the Discovery of Large Kistvaens in the Muckle Hoog, in the Island of Unst, Shetland, containing Urns of Chloritic Schist, by GEORGE E. ROBERTS, Esq., F.G.S., Hon. Sec. A.S.L. *With Notes upon the Human Remains* by C. CARTER BLAKE, F.G.S.

[This paper is published in the first volume of *Memoirs*.]

The thanks of the Society were voted to Mr. Roberts and also to Mr. Blake, and the discussion being invited on the two papers,

Professor OWEN: With regard to the smallest skull—that of the female—from Shetland, I do not remember to have seen one that presented so strong a resemblance, especially in the fore part of the skull, to the cranial characters which we find in the Australian race, both with regard to its prognathism and to the very strongly-

marked supranasal indent between the short nasal bones and the forehead, as the skull marked B. If I had seen that part of the skull only, I should have thought that it came from Australia; but the anthropologist is at once undeceived by looking at the comparatively small molar teeth, the large size of which especially distinguishes the Australian and Tasmanian races. Those characters of a jaw-bone, which Mr. Blake has pointed out, are well exhibited in the larger skull (A.) There is one character which I see in two of these—that tendency to sloping away from the mid-line in a roof-line fashion that is so strongly marked in the Esquimaux.

Mr. ALFRED TYLOR: I think it is stated on Mr. Franks's authority, that stone vessels have been used in the north of Europe; but I remember in the Swedish Court of the Great Exhibition seeing a number of vessels made from steatite—which were sent there as articles in general use in the present time for boiling milk, etc. They are, I think, the nearest utensils to those described by Mr. Roberts. I do not know whether any gentleman here saw them. They were of various sizes, and about as deep as they were broad, made of steatite, a mineral which occurs in the serpentine of Sweden. I think this paper is particularly interesting as proving that the custom of carving out vessels from stone, in which water or milk may be boiled, has existed so long and still exists in the north of Europe. I have not seen anything of the kind in the south.

Sir CHARLES NICHOLSON: I beg to offer my humble testimony to that given by Professor Owen as to the extremely interesting and instructive nature of the communication read by Mr. Laing. The lucid and graphic way in which the facts have been brought before the notice of the Society has been such as to give a most accurate conception of them. Certainly, a much more accurate conception has been afforded to me by those details than from any account I have hitherto had the opportunity of reading. One or two points have suggested themselves to me on listening to the debate this evening. I confess, that whilst I think much has been urged by the author of the paper to establish the antiquity of the remains presented to us this evening, and to show that there is a fair presumption of their belonging to the earliest stone age, I still think there are difficulties in the way of coming to that conclusion which would induce me to hesitate in subscribing to it altogether. In the first place, in reference to the implements which were found in the stone kists and which are now on the table, they are regarded by Mr. Laing as distinct specimens and types of the implements used by the people with whom they were interred. Now, such a conclusion is, perhaps, scarcely to be relied on. I think it is exceedingly probable that the natives of that part of the British islands whose remains are discovered in this particular position, when they made these interments, would hardly be likely, in consequence of the value and scarcity of the implements of warfare and of domestic use, to bury them even with the bodies of the chiefs and those whom they were anxious most to honour. It is exceedingly likely that they would use very rude examples of what were their ordinary implements, just as we find in the middle ages on

the skeletons of bishops and dignitaries of the church, and even of monarchs, leaden rings and paper ornaments in substitution of the more costly materials worn by the individuals during their life time. In the same way, these people may have interred in the graves of their deceased friends, these rude similitudes of implements that were in actual use at the time they lived. There is an obvious discrepancy in the supposition that the people who used these excessively rude and inartistic materials, as knives and spear-heads, could have constructed such really admirable masonry as we see exhibited in those drawings, which I presume are correct. Those stones are evidently squared, by some sort of metal instrument I should imagine. At all events, great care must have been bestowed in the squaring and laying of them, and I think they indicate a much higher attainment of the arts of civilised life than would be implied in these objects. Without presuming to offer any very reliable opinion upon these skulls, I confess that when I saw them I was not prepared at first to find skulls presenting so much of the ordinary normal character as these do. It would not really be difficult to go to any cemetery and bring skulls that would present as favourable a development as those on that table. Even the worst of them might, I think, be matched by skulls of people belonging to the present period. With reference to the age of this structure (the tower), I still think it is not quite clear that it may not be much more modern than is implied. The kitchen middens were collected on the sites of strongholds, towers, bergs, such as I believe studded the whole of that part of Scotland. I think I have seen such in Orkney, where there are several on the coast: some in the neighbourhood of Kirkwall, of this character, where you have concentric rings which form the foundation of strongholds which are not older than the days of the vikings and of the Scandinavian population, who were constantly making descents on our shores and establishing themselves for a time. I am sure we are all very much indebted to the author of this very interesting and elaborate paper; and also to Professor Owen for that most interesting fact he has mentioned of the existence of the remains of a bird that is no longer to be found in any part of the British islands or of Europe. The extinction of that bird does not, I think, argue any very great antiquity; for, I believe that in the memory of some persons present, birds that were exceedingly common in the southern hemisphere are quite extinct now. I allude to the *Nestor productus*, a beautiful parrot well known in Philip's Island.

Mr. BENDYSHE: I do not know whether Mr. Laing attempted to found an argument on the absence of cremation; but I think a simple reason would explain that. There was nothing to burn the bodies with. There is no evidence of the existence of forests or of wood enough even to make canoes with. To burn bodies would take a great deal of fuel, and it is clear there would not be sufficient material. With regard to the child, I have not the least doubt that the jaw-bone was sucked as Professor Owen describes; but I hope that this occurred merely in the same way as Mr. Laing says they devoured the seals and whales—that they merely took the children after

death and did not kill them for the purpose of sucking their bones; but, that when the child had died, they thought it might be put to an useful purpose.

Mr. REDDIE: I have a suggestion to make to Mr. Laing, whose careful observations made in opening these kists have given us so much pleasure. With reference to those drawings, where we have three distinct structures represented as being built upon separate midden foundations, possibly those shells were placed under the foundations of the buildings for the purpose of drainage. When I was in Caithness, I remember noticing that the greater part of the country is peat moss; and I should think that anyone building on the soil in most parts would have a very bad foundation indeed. As there is very little gravel to be found, it would be about the best thing the inhabitants could do, to collect shells and put them underneath the stones in order to drain their buildings properly. With regard to the buildings themselves, if I recollect rightly, there are plenty of stones on the coast of Caithness, formed by nature almost in the shape those are, so that I think the remark of Sir Charles Nicholson is not borne out, that those represented in the drawing must have been formed by metallic tools. But I think Mr. Laing can inform us that there are plenty of buildings in Caithness, even now, not nearly so good as those in the drawing—with not nearly such nice fire-places. I have been in some where there is no attempt at a chimney, but where the fire is kindled on the floor. The amount of skill evidently displayed in building these houses would justify, I think, my conclusion that their builders had the sense to drain them well; and I know of no material better in Caithness than shells. The absence of large wood is well known: I believe there is not a bush as thick as my arm in the county. And then, it is a curious fact, in connection with these and the Danish “kitchen middens,” that the people in this county are Scandinavian, and not like the people in the adjoining county who are Celtic. One other question might be interesting. I was much amused when I was at John o’Groat’s house, to find that it was like one of these slightly elevated mounds. It would be interesting to examine it, and ascertain whether it is a pre-historic dwelling or not. As the story goes, John o’Groat had a great idea of equality, and built his house an octagon, that he and his seven sons should be on a level. Some time ago we had a paper about “the man of the future,” in which we were told we were all to be equal; it would be curious if it were found, that in the history of man, extremes have thus met in such a fashion!

Mr. MACLEAY: It is possible that John o’Groat’s house may be a pre-historic dwelling. The people of Caithness consist of two races. On the coast they are Scandinavians; in the west country and the interior they are Celtic. I understand Mr. Laing to say, that he does not suppose these more elaborate buildings were erected by the people who were buried in the mounds, and whose implements are now upon the table, but that they were put up by a second race—a metallic race; that these buildings are secondary buildings, erected upon the ruins of buildings put up by the people of the stone period—buildings which really assume a very respectable aspect on paper.

The estate of Keiss belongs to a cousin of mine, and I know the neighbouring country well. Several of these so-called Picts houses have been pointed out to me; one of them I found converted into a conservatory, and the stonework has a most respectable aspect. I have little doubt that these dwellings have been put up by a comparatively civilised race—most probably by the early Scandinavian race who occupied the coast of Caithness and who were a superior race to the one whose remains we see on the table. I quite agree with the gentleman who spoke last, that among the bothies in Caithness, you will see fire-places not to be compared with these; indeed, in that respect, the present race have, I think, rather degenerated from their predecessors. Perhaps it would be well for them to be here to see these drawings of the fire-places constructed by their ancestors. I would ask my friend Mr. Laing whether he does not think the remains discovered in the excavation on the moor may not be very much more modern. When I was first there the spot since excavated struck me as looking very green, while the surrounding vegetation was all brown moss; the stones on the surface looked as if they had been squared with a chisel; and, on asking one of the Gillies what the history of the place was, he told me that the tradition was that it had been an old Roman Catholic chapel. Now the building traced on the drawing does look something like a chapel. It is quite possible, that the stone benches on the side may have been meant for the congregation and the recesses or processes at the end may be parts of the altar. I only know that that is the tradition on the spot. It appears altogether of a far more modern character than the others. All these Scandinavian remains are circular, and this is the only angular building of any antiquity I have seen there.

Mr. LAING then replied. He said: there are one or two points to which I had better at once refer, while I remember them. My friend, Mr. Macleay, suggests that the angular building marked in the drawing is a chapel. I think that the size, which is only twelve feet long, is a sufficient answer. Certainly, it would accommodate a very limited congregation. I have seen very small chapels in Cumberland, Westmoreland, and throughout that district, but I never saw anything so small as that. I agree, however, that the building is probably of a different and a later date than the other dwellings. With reference to the drainage, I think I can give an answer which will set that question at rest—namely, that these middens are not simply a mass of shells, but are intermingled with fragments of bones, animal teeth, greasy animal matter, charcoal, stone implements, etc., showing that they must have gradually accumulated *in situ* and not have been transported thither. Moreover, the site is not on a peat moss, but on the raised beach by the sea-shore, which is as dry as anything can be in that rainy climate. At the same time, I think they have been used for drainage by subsequent inhabitants. Suppose that to-morrow you should sweep off the whole population from Orkney and Caithness, and a new people were to come upon those islands, I venture to say, that in four cases out of five, the cottages would be fixed upon these mounds for the advantage of drainage. As regards cremation, I think that though there were probably no great forest trees or oaks out of

which canoes could be hollowed, the country was overspread with a short scrubby forest, of which you will find the remains in the peat mosses. The red deer would hardly have existed where there was no wood. In addition to which there is a great quantity of wood charcoal in these middens, though generally mere branches and twigs of a size insufficient for canoes. If they had plenty of wood for cooking their fish and other things, the probability is, that they would have enough for cremation if it had been practised. As to what Sir Charles Nicholson says about the weapons in the tombs—whether in fact they might not have been dummies—I would remind you, gentlemen, that in kists of a later period, there would seem to have been spared no expense in interring with the departed chiefs the best that could be obtained. Instances are innumerable where horses and slaves have been sacrificed for that purpose, and perhaps one half of the specimens of stone implements now to be seen have been obtained from these tombs. In the museum at Copenhagen, I have seen instances of dummies, but they were invariably well fashioned; and besides, there are knives and hammers taken from kitchen middens, that were evidently in daily use, of precisely the same pattern and just as rude as those interred in the kists. There was one question as to the age of these circular dwellings. It is very important that everyone should understand—I can pledge my word for the fact—that there is not the mark of a tool on any stone connected with any one of these dwellings. The red sand-stone strata of that part of Caithness is split up into forms of surprising regularity. At Duncansdy head there is a cut in the rock, where the sea comes in, that is piled up so regularly that you might believe it to be cyclopean masonry piled up in layers. While exploring, I have constantly come upon stones, which I have thought must have been fashioned by man, till I looked in the adjoining bothies, where I found blocks just as regular. Now the question is, whether some of these circular towers may not be much older than any Scandinavian period—as old as the primitive race. I can pass no opinion except from the presumption founded upon the solid wall of that circular dwelling invariably going down to the natural rock, and having the midden accumulated upon it. I do not see how that wall should have gone five feet lower than any of the others, unless the midden had been built at the same time. With regard to the other structures, they are undoubtedly of a later period. All these appliances of fire-places, chimney-pieces, etc., are comparatively recent. They are the work of the people who constructed the third pavement and adapted it to more civilised uses; and, for all I know, these people may have lived in the last few centuries. But the old circular buildings must, I think, be very much more ancient than anything of the Scandinavian date, which, as we know, does not go further than the ninth century A.D., when Harold Harfager established his kingdom in Norway and sent the vikings to seek abodes elsewhere, and they came to Orkney and Caithness. They then, no doubt, adopted these round towers and used them for fortifications as we know the one of Maeshowe was used. Maeshowe ran off with the wife of one of the kings of Orkney, and stood a siege in the round tower. In Orkney, you have kists of the

bronze period. I could mention other cases where the old circular wall has been partly eaten away by the encroachments of the sea in very sheltered bays and in situations showing great antiquity. Therefore, without expressing a decided opinion, I think it is quite an open question, and it is to my mind quite conceivable that almost savages might have constructed these dwellings though working with very rude instruments. I have always thought that the best clue to what savages would do is to see what children do. Children will constantly build beautiful round towers with even stones; but the same children, if they had nothing but the unequal instruments of Caithness would have had great difficulty to get the beautiful cutting tools that you see there. That does not affect the to my mind conclusive evidence of these excessively rude weapons being found buried in graves and similar descriptions of stones being found invariably.

The discussion was adjourned till the 20th instant.

DECEMBER 20TH, 1864.

CAPTAIN R. F. BURTON, V.P., IN THE CHAIR.

THE minutes of the last meeting were read and confirmed. The names of the following gentlemen who had been elected Fellows were announced; F. R. Izard, Esq.; Robert Marshall, Esq.; Captain Samuel R. J. Owen; E. Tinsley, Esq.; Dr. J. Hillier Blount; G. C. Rankin, Esq.; C. Plummer, Esq.

The following presents were announced, and the thanks of the Society given to the donor (Mr. Conrad Cox). Kirkpatrick, "Account of the Kingdom of Nepaul;" Hodges, "Travels in India;" Turner, "Embassy to Thibet;" Isenberg and Krapf, "Journals in Abyssinia."

Mr. C. CARTER BLAKE stated that a letter had been received from Mr. Pengelly in reference to some remarks in the discussion on his (Mr. Blake's) paper on Kent's Hole in the Journal of the Society. The following is the letter referred to.

To the Editor of the Journal of the Anthropological Society of London.

DEAR SIR,—Having taken an active part in the cavern researches which, at various times during the last twenty years, have been made in this county, I was much surprised on reading the following statement in the last (the November) number of the Journal, page cclxxv (mis-paged cclxv in my copy), viz.—"Mr. Roberts said that about four years ago the sum of £450 was granted by the Royal Society for the complete examination and clearing out of Kent's Hole, and a committee was appointed for the purpose; but owing to the gentlemen who composed it residing so far from the spot, and to other circumstances, they did not do much towards the accomplishment of the desired object. The chief thing they did was to discover about twenty flint implements in the mud of the cave, the whole of which were in his possession. He was afraid that nothing else was done by that committee, etc."

I may remark in passing, that I know of no cavern in Devonshire in which it is possible "to discover about twenty flint implements" without doing a great deal towards clearing out the cavern itself.

Having heard nothing of the labours, or indeed of the existence, of such a committee, I concluded the statement to be altogether inaccurate, and this conclusion was confirmed by inquiries which I at once made in the proper quarters. The Guide to Kent's Hole—without whose knowledge and consent no one can enter it—assures me that he has never been applied to by or for any committee, and that, with the exception of a few desultory diggings which he has himself made, there has been no investigation of the cavern since the partial one undertaken by the Torquay Natural History Society in 1846. The Assistant Secretary of the Royal Society, in a letter on the subject, says "the Royal Society never voted money for an exploration of Kent's Hole, nor have I ever heard that they were ever asked for money for that purpose."

It has been suggested that the error probably originated in confounding Brixham Cavern with Kent's Hole; but even on this hypothesis the statement is singularly incorrect, as the following facts will show:—

In 1858 the sum of £100 was granted by the Royal Society for the complete examination and clearing out of the Windmill Hill Cavern, at Brixham, and a committee was appointed for the purpose by the Council of the Geological Society of London. The committee entrusted the superintendence of the work to one of their number who resided in the neighbourhood, and they also appointed a local committee consisting of gentlemen residing at Torquay and Brixham.

The work was commenced about Midsummer 1858, and was carried on with so much success that, early in the following year, the Royal Society granted a second sum of £100, and liberal contributions were received from Miss Burdett Coutts, Sir J. Kay Shuttleworth, and the late Mr. R. Arthington of Leeds. A large number of bones and upwards of thirty flint implements were discovered, and, at the termination of the exploration, at Midsummer 1859, when the cavern was completely cleared out, these, together with numerous samples of the deposits and stalagmites, were forwarded to the apartments of the Geological Society, Somerset House, London, where they have remained ever since in the care of the Brixham Cave Committee, of which Dr. Falconer is chairman.

I do not seek to know how the mistake originated; but, believing it to be your wish that such errors as, notwithstanding your care, may creep into the Society's Journal, should be at once corrected, I beg to request you to read this letter at the *next* meeting of the Anthropological Society, and to print it in the February number of the Journal.

A line in reply will greatly oblige yours very truly,

WM. PENGELLY, Loc. Sec. A.S.L.

Lamorna, Torquay, December 14th, 1864.

The adjourned discussion on Mr. Laing's, Mr. Roberts's and Mr. Carter Blake's papers was then continued.

Dr. J. HUNT said that at the last meeting, when the paper by Mr. Laing, giving an account of the interesting remains and skulls he had found in Caithness, and the communication from Mr. Roberts on the remains found in a kist in the Shetland islands, were read, he had moved the adjournment of the debate, as it was a subject that required deliberate consideration. Remarks were made on that occasion, on the resemblance of the crania found by Mr. Laing to the Negro and also to the Australian type. Since that meeting there had been letters on the subject in the public papers and discussions in other Societies, therefore the question now came before them in an enlarged form. At the last meeting they had not time to discuss the resemblance between the skulls brought from the kist in Caithness and those of the Negro, which question should be fully considered. They had now the opportunity of hearing what those resemblances were. Mr. Laing said that the skull marked No. 1 bore a general resemblance to the Negro type, and he hoped that they should have heard something to confirm that opinion, but they had not. Professor Owen pointed to a skull that resembled an Australian, and it was often said that there is a general resemblance between one skull and another, but it was necessary to have something more specific than a general resemblance. Professor Owen was stated to have said, that one of the skulls brought from Caithness bore a general resemblance to Australian skulls, but he had merely said that it resembled them in the depth of the supranasal notch. No progress could be made if they merely took general resemblances, which account for very little, for the same might be said of almost any skull. What they had to consider was, whether the skulls on the table threw any light on the question of the primitive inhabitants of this country. It was a most important subject, and should be discussed in a scientific manner, without reference to general resemblances. What they wanted to find out was, who were the primitive inhabitants of this island? With regard to the antiquity of these remains, it was important to know the exact position in which each one was found. There was one, for example, which had certain marks that might have been made by a sharp cutting instrument, and if they could ascertain its date by the stratification in which it was deposited, that sawn antler was no doubt of great value. There could be no doubt that Mr. Laing's communication was most important, and there could be no question respecting the great care with which he had pursued his investigations; but as to the antiquity of the skulls, the determination of that question must depend on the results of further similar researches, and he hoped that Mr. Laing, when he resumed his investigations, would endeavour, particularly by an examination of the stratification, to ascertain whether the remains were comparatively modern or ancient. There appeared to be very distinct marks in the skulls of different races. He was inclined to think that this collection of skulls was more in accordance with what was wanted to correlate them with those described by ancient historians as the form of the head of the ancient inhabitants than any before discovered.

Mr. HIGGINS observed, that of the skulls exhibited by Mr. Laing

two differed very much from the rest, and might have belonged to any Englishman of the present period. Those marked 1 and 5 differed the most from them; and they might be placed with those classed by Professor Daniel Wilson as kumbekephalic, and which he considered to be the type of the skulls of the ancient inhabitants of Scotland. The principal difference consisted in the prominent parietal tubers. Those skulls also resembled the "river bed" skulls. Dr. Thurnam, in the paper read before the society during the late session, attributed the round form of skull to the Celtic races, and the long form to a pre-Celtic race, and the skulls found by Mr. Laing, which were of that form, might, therefore, belong to the most ancient race. They bore considerable resemblance to some of those figured in the *Crania Helvetica*, particularly to the mixed form called Hohberg-Disentis. Several authorities were quoted by Mr. Higgins in confirmation of the opinion that the Hohberg form of skull was that of the old Roman; but he thought there was good evidence that, although this form of skull was introduced into Switzerland during the Roman period, it belonged to a pre-Celtic people from a distance. In an ancient grave in Northern Prussia similar skulls had been found. All these skulls were characterised by occipital dolichocephalism, and belonged to the same class as the Basque skulls which have been referred to Africa, it might therefore be conjectured not unreasonably that the primitive population of Scotland came from Africa.

Mr. MACKENZIE made a few observations on the speculations of various authors as to the peopling of the whole of Western Europe from India, especially from Afghanistan.

Mr. C. CARTER BLAKE said he would offer no excuse for entering into technical details in considering the subject, for though that was not "a meeting of anatomists" the only effectual method of investigating the subject was that which anatomy afforded. The anatomist had his task lightened, however, on that occasion by the accuracy and care with which Mr. Laing had laid the evidence before them. Dividing his remarks into sections, he would first speak of the animal remains, which had been identified by Mr. Roberts, Mr. Davies, and himself. There were among the bones those of a horse. The characteristics by which it could be distinguished from the *Equus caballus*, or from the fossil horse (*E. fossilis*), were very small, and it was difficult to say whether the horse, the remains of which were found in the Caithness shell mounds, was recent or extinct. There were other animal remains still more interesting. There was the *Bos longifrons*; the descendants of that species of ox still exist, but the dental characters of those from Caithness indicated that they were identifiable with the *Bos longifrons* of the pleistocene deposits. There were among the bones many jaws of a smaller ruminant which at the first glance it was possible to class as those of the sheep or goat. There were certain marks, however, which showed that they belong to the goat of the recent deposits and the pleistocene, and by which they were very distinguishable from those of the existing sheep. There were some zoologists who might wish to show that these Caithness bones were of

a more recent date, and who desired to prove them to be those of sheep, carrying out the aspiration of the old poet—

"Inter oves locum præsta,
Et ab hædis me sequestra!"

but he could not agree with that opinion, and on the authority of Mr. Davies, fully believed that the bones on the table were the remains of the domestic goat. He would next consider the skulls. Referring to one on the table, he observed that it appeared to be almost brachycephalic, and bore a strong resemblance to those found in the round barrows of Great Britain, and agreed closely with those denominated by Dr. Thurnam the ancient British type. It agreed in its measurements also with a skull found at St. Acheul, near Amiens, by the President. If they accepted the cranium in the old French cemetery to be that of a civilised Celt, they must consider the one to which he now referred to belong to the same race; for the differences between them were indeed very small. The next division was very different. The skulls numbered 2 and 3 had since their last meeting been compared with the skulls found in English river-beds. He could not agree in thinking they belonged to that class. Mr. Blake then proceeded to describe the peculiarities of the river-bed skulls, as they have been defined by Professor Busk and other authorities, and he pointed out the differences between the skulls on the table and those from Mewslade, Muskham, Blackwater, the valley of the Thames, and other places, which have been considered types of the crania from the river beds, in scarcely any of which particulars he said did the skulls brought by Mr. Laing from Caithness agree. To go into details. The Mewslade skull (found in an ossiferous fissure) had been selected as a type of the river-bed skulls, but the elevation of its forehead, and the horizontal line on the vertex, were markedly different from the shape of the true river-bed type. Then we have the Muskham skull, in which Mr. Blake felt a peculiar interest, as he had the honour to describe it in the *Geologist* of June 1862, in detail. The Muskham skull had large supraciliary ridges; Mr. Laing's skull had none. The Muskham skull had a deep supranasal notch; none was exhibited to us by Mr. Laing's specimens. The occipital foramen, it is true, was slightly oblique in one of the Caithness skulls; but of a totally different shape to that which the Muskham skull presented. There it was very narrow and of great backward extent, whilst a more circular form was assumed in the skulls from Caithness. The Muskham skull has a ridge along that part of the sagittal suture where the Caithness skulls exhibit a depression. The squamosal bone is developed posteriorly in a trapezoidal form in the Muskham skull, while in the Caithness skulls it is rounded. The Muskham skull has an unusually large union in the centre of the superior semicircular line, but even in those Caithness skulls wherein the muscular attachments were strongly marked, there was no such protuberance. The Borris skull, from the bed of the Nore in Ireland, had a much longer and more produced occiput than the Caithness skulls, and the Blackwater skull further departed from them by its greater height, and the larger proportional prominence of the *tubera parietalia*. The skulls from Towyn y-Capel in Anglesea, had never been described and figured; but,

judging from the inspection which Mr. Blake had made of them at the Royal College of Surgeons, the differences between them and the Caithness skulls were very great. The Eastham skull from the banks of the River Lea, also differed in minor respects; Mr. Blake would only again refer to his own memoir, in which measurements of this skull were given. Alluding to the erroneous deductions which he conceived had been drawn from some alleged similarity in the skulls from Caithness with the river-bed skulls, Mr. Blake observed that any two objects may be taken which appear to bear some resemblance *inter se*, inasmuch as they may both have a specific gravity greater than water; they may be both opaque, and neither of a dark colour; yet they may be as essentially different as chalk and cheese. The skull marked No. 1 had been said to be of a degraded character, to be almost ape-like in its palate, and to be that of a female. In the size of the molar teeth and in the proportion of the nasal ridge, it did not, however, agree with that of the Negro, and in many other respects it was entirely different. Comparing it with that of an Australian, it might be said to bear some resemblance. There are two types of Australian skulls; in one of which there is a distinct elevation on the sagittal suture, and in the other the skull is more flattened, and resembles some skulls from Port Essington. He next considered the anatomy of the pelvis, on which great stress had been laid when the subject was discussed elsewhere. The pelvis belonging to the skull marked No. 8, he regretted to say, was not on the table. It had been stated that the measurement of that pelvis was contrary to the normal conditions, and that it differed from the pelvis of an European in having the antero-posterior diameter greater than the transverse. In that respect it differed, according to the researches of Dr. Joulin, not only from the European, but from all known races of man, the transverse invariably exceeding the antero-posterior diameter. The abnormality was certainly very remarkable, but it should be remembered that it is at present confined to two instances. The next question to be considered was the probability of the existence of cannibalism amongst those ancient people. On the former occasion, when the subject was discussed, there was exhibited the jaw of a child of five years of age, the lower edge of the horizontal ramus having been chipped away, and other abrasions being present which had been attributed to the action of knives. Professor Owen, who has had great experience in observing the jaw-bones of animals which have been eaten, told them on that occasion that the fracture of the jaw agreed with those on the jaw-bones that had been gnawed away to suck out the dental marrow. Mr. Laing had originally formed the same opinion. The correctness of such a conclusion had, however, been denied, on the ground that the quantity of dental pulp to be obtained from the jaw was not sufficient to induce the ancient people of Caithness to take the trouble to break the bone to extract it. That weak argument was offered by those who had described the Australians as living principally on a grub found in their forests. Except on the supposition that the jaw had been chipped for the purpose of extracting the marrow, it was difficult to account for its having been broken in

that manner. Two blows of a flint implement would have been sufficient for the purpose; and if the jaw had been gnawed either by a carnivorous or rodent animal, the marks of the teeth would have been left. He agreed, therefore, with Mr. Laing and Professor Owen in considering that the appearance of the jaw-bone indicated cannibalism. The general conclusions at which Mr. Blake said he had arrived from an examination of the skulls from Keiss were, that they afford no evidence of more than one "race" of man, however the word race may be defined. There were so many characters in common among them—for instance, the breadth between the orbits and the absence of anything approaching a supraorbital notch—which would lead to the inference that the presumed diversity between the two types of skull was very slight. Similar instances of the concurrence of an extremely brachycephalic with an extremely dolichocephalic type were frequent, as was seen in the graves of Etruria. It might be said, that the two types of skull differed in cranial characters as much as the European and Australian of the present day; but we know of no such intermediate links between the European and Australian as exist throughout the series of Caithness skulls. He regretted, therefore, that the comparison which he had been enabled to make did not qualify him to solve many of the disputed points relative to these skulls. He could not tell aught of the mental or moral phenomena of those individuals. He should be loth to inform them, for example, whether the skull of No. 1 was that of Hermia or of Helena, or whether or not it was the skull of a virago; and he preferred also not to carry those poetical comparisons so far as to infer from the evidence before them whether or not those skulls were affined to those of the river beds. These deficiencies, however, were probably the result of the plain, unimaginative, materialist education which he had received, and he would prefer to leave to such a meeting of enquirers as the Anthropological Society provide, the task of solving the probable affinities of the skulls from Caithness. In conclusion, Mr. Blake remarked that, although he was not an advocate of the Aryan theory, yet he had seen skulls of almost as negroid appearance from localities in Nepál, and considered it perfectly possible that they all belonged to one common Indo-European race, susceptible of elevation up to the level of the modern intellectual European race, of degradation down to the stature of the Caithness mound builders. No real affinity was disclosed between these remains and those of the dark races of man, in Western Africa or Australia.

Mr. MILLER said he had recently visited Keiss, and had examined the strata on which the barrow excavated by Mr. Laing had been constructed. A brook near the spot cuts through the strata, and enabled him to ascertain that the barrow was more modern than the boulder clay. The latter rests on the uppermost of the series of rocks; on the clay there rests about twelve or eighteen inches of peat moss, and on the top of the moss the barrow had been constructed. He was not able to form a definite opinion as to the age of the human remains, but he thought it was possible they might belong to the beginning of the Christian era. Some similar remains had been found on the east coast of Scotland, and on one of the skeletons

there were the remains of hair, which shewed that they were not of very great antiquity. As to the question of cannibalism, he differed from Mr. Blake, and having been born within twelve miles of Keiss, he felt a personal interest in the matter, as the allegation of such a practice he considered a reflection on his ancestors. He thought the evidence of cannibalism was very slight indeed. If it had been the practice of the people to eat human flesh, the evidence of it would have been more abundant, and not limited to the finding of a single jaw. He said he looked upon Mr. Laing as a first-rate discoverer, and he hoped he would take an early opportunity to pursue his investigations on a more extended scale. He believed the houses had been the habitations of the ancient Picts, who had been destroyed by the Northmen in about the year 900.

Mr. PRIDEAUX said, that with regard to the skulls, he conceived many of the opinions which had been expressed were erroneous. As to the one marked No. 7, he agreed with Professor Huxley, that it was superior to the others; but he differed from him in thinking that it was a British skull. The predominating type was that of the Roman. He had seen skulls identical with those on the table taken from ancient Roman burial grounds in France. Instead, therefore, of those skulls being of the ancient British type, he believed that so far as the present state of our knowledge extends, they must be considered Roman, or at best Gallo-Roman. What is certain about them is, that their type does not enter largely into the composition of the crania of the existing English people; but some of the Scotch, especially near Aberdeen, bear some resemblance to them. In confirmation of his opinion he referred to the *Crania Britannica*. The British skull was longer, and the central portions of the head offered a contrast to the skull No. 7. The other skulls had been said to resemble the "river bed" skulls and the skulls of Australians, but with neither of those opinions could he agree. Mr. Prideaux then alluded to the distinguishing characteristics of Australian skulls, for the purpose of showing their dissimilarity from those of Caithness, and he said that he conceived the most important part of the skull, as indicative of difference of races, is the base. In his opinion the only mode of successful research for the origin of human races was to read the past by the light of the present, and to trace the chain of connection backwards. It was only by obtaining correct measurements of the skulls of all existing races that they could obtain, as it were, the power of recreating the past.

Mr. MACLEAY said that as to the question of cannibalism he thought with Mr. Miller that the verdict should be the Scotch one of "not proven." He considered it not improbable that the jaw had belonged to some child who had been devoured; but it appeared to be a solitary instance, and it was not sufficient to support the general charge of cannibalism against the whole of the people. He presented for inspection a stone "celt" found at Thrumster, not far from the place where the remains on the table had been discovered. It was found at the bottom of a drained lake covered with fifteen feet of marl; nothing else being near it except two skulls of the *Bos longifrons*. It was a well made "celt," finished and polished in a superior manner,

and was the most perfect specimen of the kind. The discovery of this highly finished weapon so near the place where Mr. Laing had excavated the rude implements at Keiss, would imply that the latter must belong to a very remote period.

Mr. MACKENZIE stated that a few years ago, when on the shores of the Baltic, he opened several barrows, in one of which was a skeleton with a long sword by its side. The whole of the jaw-bone had fallen away, but there were distinct traces upon it of some kind of action which he was disposed to think was chemical. It was possible, therefore, that some portion of the abrasion noticed in the jaw of the child found by Mr. Laing in the shell-mounds might have been produced by chemical action.

Mr. REDDIE feared the question of cannibalism, respecting which the amount of proof was very small, would be rendered more obscure if they introduced the probability of the abrasion of the bone being produced by chemical action. He thought it likely that the cleavage of the jaw-bone was produced by accident. When they saw so large a number of remains carefully collected from kists, the testimony they afforded was, not that of a people who ate the dead, but the contrary. There was evidence that the chief of the tribe and numbers of others had been buried with great care, and if the people were so careful of the bodies of the dead in general, why should a child have been selected to be eaten? As to the general question involved in the discovery of these remains, he must say he had been much delighted with the minute manner in which Mr. Blake had explained the affinities and dissimilarities of the different skulls. Professor Owen had recognised the similarity presented by the skull marked No. 1 with that of a Negro, and by another to that of the Australians, but he did not connect these remains together in the way he had subsequently done in a letter in *The Times* of 9th December. Mr. Reddie then proceeded to read this letter.

"SIR,—The remarks which, at Mr. Laing's request, I made on the human crania from Caithness, and on those exhibited by Mr. Blake from Shetland, were to the effect that the general characters of the former showed affinity with the oldest Southern or Aryan type; those of the latter, with an old Northern type, combining Teutonic features with the roof-shaped calvarium and supranasal depression of the Eskimaux. The lowest skull in the Caithness series of an ancient stone period resembled that of a West African negro, but with marked distinction in the proportions of the teeth, nasal bones, etc., such as may be seen in some Hindoo and Egyptian mummy skulls; the lowest of the old Shetland skulls similarly resembled the Australian, but with equally decisive differences, the resemblance in both instances in the small cranium and prominent jaws being due to undeveloped intelligence, and perhaps to a prolonged period of suckling; while the identity in the essentially human cranial characters in all the skulls supported the inference of unity of species. The fact of chief interest deduced from the examination of the remains of the animals affording food to the ancient Caithness people was the presence of bones of the great auk (*Alca impennis*), now deemed extinct by ornithologists, but thus clearly proved to be entitled to a place in the records of British birds.

"Athenæum, Dec. 8.

"RICHARD OWEN."

For his own part, he believed the whole of the human race sprang from the same origin, and that the variety of skulls among ourselves and in these from the kists in Caithness, presented evidence of the unity of the species.

Mr. BENDYSHE said it could not be disputed that cannibalism was

known in Scotland since the Christian era. He referred to the authority of S. Jerome as distinct proof of that fact; for he stated that, when a young man, he saw some prisoners brought by the Romans from Scotland feed on human flesh, and that they selected some parts of the body in preference to others, and relished them as "tit bits."

Mr. REDDIE observed that the evidence of S. Jerome did not refer to pre-historic times.

Mr. HIGGINS remarked that the question of the antiquity of the remains from Caithness must depend on the nature of the weapons and implements; and the discovery among them of spinning-wheels indicated no very remote period.

Mr. MILLER observed that the account given by S. Jerome related to a distinct tribe who had no connection with Caithness. His own opinion, founded on his knowledge of the Picts' houses, was that they are more modern than is commonly supposed. He did not think much of the antiquity of the "kitchen middens" of Caithness, the upper portions of which might have been accumulated without supposing that there were persons dwelling in the houses. Referring again to the question of cannibalism, as indicated by the jaw-bone, he said the child might have been murdered by the Northmen who subdued and mixed with the Picts, or it might have been devoured by wolves; which animals were not extinct in the north of Scotland until the end of the seventeenth century.

Captain BURTON said he appeared before the meeting almost for the first time as their president since the early days of the Society, when it consisted of not more than ten or twelve members; but now, he was happy to state, they numbered 454, and were rapidly increasing. It was the duty of every one to proselytise, and he had no doubt, in a short time, the Anthropological Society would complete the number of 1500, and become one of the most numerous and prosperous of the scientific societies in London. He appeared before them merely as a traveller, and he could not enter into the anatomical consideration of the skulls on the table. As to the question of cannibalism, his experience led him to believe that that was a state through which all mankind must pass before they arrived at a state of civilisation. In that respect it was like atheism, slavery, and polygamy in the progress to an enlightened condition of society. With regard to Caithness, however, they must, in deference to the gentlemen present from that part of the kingdom, make an exception. Far be it from him to accuse the ancient inhabitants of Caithness of cannibalism; but it was only in Caithness that the practice had not been general. With regard to the "celt" which had been exhibited by Mr. Macleay, he must say that it had a very modern appearance. The men who made it must have arrived at great power of manipulation to enable them to bore a hole through the hard stone, wherein to fix the handle; the plan adopted in all the ruder works of the kind being to make a hole in the handle to fix the stone into. As to the question of unity of species, it was one of great difficulty, and could not be decided with the facility that Mr. Reddie appeared to consider practicable. With respect to the spinning whorl found among the remains

in the shell mounds, he stated that it was exactly the same as he had seen used by the women in central Africa.

Mr. J. FRED. COLLINGWOOD made a few observations to explain the cause of the absence of those objects to which Mr. Blake had adverted in his speech from amongst the specimens upon the table. He said that they had been sent to Professor Huxley for his inspection, and that, in consequence of the absence of that gentleman from the Government School of Mines, they could not be procured, though they had been applied for several times. He was anxious to exculpate the secretaries from any imputation of negligence in not having them exhibited that evening.

Mr. H. BURNARD OWEN said,* in the valuable specimens from Caithness, submitted by Mr. Laing, a very striking similarity is presented in the stone weapons of races apparently entirely unconnected with each other, and this similarity is not confined alone to implements of war or hunting, but extends to the rites of sepulture. In a very marked manner is this shewn in the spear and arrow heads, and maces or axes, and the weapons which, until recently, when the rifle and the knife supplanted them, were for ages in use amongst the Red Indian of the Far West. That man in the rudest state, where his sustenance depended almost entirely upon the chase, or such waifs and strays as his simple means could procure from the sea-shore, should, even in different lands, to a certain extent adopt somewhat similar devices for obtaining food, clothing and shelter, is obvious to all; but when we see that in the weapons, whether of the chase or war, of two peoples 2,000 miles apart a resemblance so exact, we are led to the conclusion that there must have been something more than a mere coincidence, and that from a common source must have been derived even the simple art of manipulating these rude materials. As habits of comparison and reflection enable the anatomist to recognise in the fragments of a bone the animal of which it once formed a part, so may not these, at first appearance, trivial resemblances form the connecting links in that chain of evidence which shall establish the relationship and once close intercourse of nations now widely separated? In the spear and arrow heads from Caithness, the resemblance to the American is so close in material, shape and size, and especially in the fashioning of the parts attached to the shaft, that it would be almost impossible to distinguish them. In the Indian arrow and smaller spear head, flint and quartz are most commonly used; in the larger, the common bluish-grey stone, which admits of being worked thinner, with a finer cutting edge. Some of the specimens I have seen were narrow and elongated, whilst others were more lancet-headed. The maces, clubs, or battle-axes appear in both cases to have been adapted with little labour bestowed upon them, but to have been selected from those stones where attrition had, in the centre, rendered the fixing and retention of the handle a more easy task. Nor does it appear that in the majority of cases a *cutting* and *penetrating* edge was so much regarded as the *weight* and *crushing power* of the instrument. With these brief remarks, I now pass on to the mode of sepulture.

* Owing to the lateness of the hour, it was merely possible to hand these remarks to the reporter.—EDITOR J.A.S.L.

With the Celts, as with other northern races, the plainest interments were observed. Cremation, and the Roman mode of disposing of the remains of the dead was never entirely adopted, even by the mixed race sprung from intermarriage, whose nearest approximation to the costly and elaborate tomb of the Roman was a grave cut in the rock or chalk bed, or, where these were wanting, a simple sarcophagus of the rudest workmanship. So general was the custom of placing the bodies east and west, that deviations have only been sufficient to establish the rule; and in those instances where a north and south line was discovered, the fact of the remains being of those who had fallen in a neighbouring battle, and upon whose interment there would naturally be less care and time bestowed, affords a sufficiently reasonable explanation of the exception. As in the remains described by Mr. Laing, numerous instances can be cited where, in addition to the easterly inclination of the skeletons, the feet being pointed in that direction, the bodies were found lying on their right sides, and the faces were consequently thus directed towards the east and south. The arms were also crossed, the right hand placed against the left shoulder, whilst the hand of the left arm was placed against the right elbow. In an interesting paper on the remains at Towyn-y-Capel, read by the Hon. W. O. Stanley at the annual meeting of the Archæological Society in 1846, the disregard to the compass points, and the indiscriminate interment of the bodies, was assigned, as in other instances, to the effects of battle, which in the kistvaens he describes took place between the Irish and Welsh, resulting in the defeat of the former and the death of their chieftain. The custom of regarding the east in the burials of the dead is not confined alone to the Christian, but in a greater or less degree appears to have been observed in the funeral rites of the most ancient nations, as well as to have descended to those of later times. From the position of the skeletons, as described by Mr. Laing, being on their sides, I am inclined to believe that the date of interment must have been *subsequent to the introduction of Christianity*, yet so close upon it that its influence had not yet been sufficiently felt, as with the still uncivilised Indian, to eradicate the pagan tenets of their ancestors. In reference to the observation of Sir Charles Nicholson, that in the interments of the middle ages imitation weapons and ornaments were deposited in the grave of the deceased, the practice, I venture to believe, was isolated, and arose in all probability from the costliness of the materials and value of the jewels which adorned them. That in ancient kistvaens, both here and in America, the practice did not prevail we are assured, from the discovery of implements and remains of animals in the graves of the departed, which pointed either to their prowess in the battle, or their success in the chase, and as alike in the oyster shells of Caithness graves we find the old idea of the support supposed to be needed in the journey to other lands, where the spirit shall enter upon the re-enactment of the happiest scenes of former existence, so in the corn and food deposited with his favourite weapons in the tomb of the western warrior, do we find the belief of the spirit's requirements in its passage to the "happy hunting fields," where the fondest aspirations of his wild life shall be realised, and where,—

"Admitted to that equal sky,
His faithful dog shall bear him company."

In the one case we have the mind unimbued with the doctrines, and unenlightened by the precepts of Christianity; in the other, we discover the mind only just awakened from its sleep of ignorance, and in the reception of truth still clinging to the superstitions of a bygone age. In regard to the absence of any vestiges of canoes, I think we must not expect here to find any similar to those discovered in districts anciently better supplied with timber, but to consider the great probability that such boats as they possessed would, like the British coracle, be constructed of more easily procurable osiers, the very slightness of whose fabric would leave but little, if any, distinguishable traces at this distance of time, unless preserved by petrification. I should be reluctant to place so low an estimate upon the skill and ingenuity of the inhabitant of Caithness as to suppose he would rest content with the chances of fish in various stages of decomposition washed up on the shore, instead of endeavouring, like his not far distant contemporaries, to secure an unfailing and ample supply of more palatable food. Concluding these brief remarks, I venture to offer for the consideration of the Society the coincidences here noticed; and when we follow the traces of habits and customs, alike pertaining to the Red man and the ancient inhabitant of Caithness, may we not be led, step by step, till we arrive at the oriental source from which both alike sprang. It is not my purpose to enter into a discussion of the effects produced by climate and other changes, but to draw attention solely to certain facts in the arts of two races we have been accustomed to consider as so totally distinct.

Mr. LAING replied to the observations that had been made during the discussion. In the first place he said he would advert to the episode of cannibalism which had been introduced. He had merely referred to it in his paper as stating the facts that had been made known. The evidence of the practice was, that the jaw-bone of a child had been found among a mass of shells and bones which were obviously the remains of substances that had been used as food. In another mound a human tooth had also been found. In those two instances, at least, they had the evidence of human remains with those of animals that had been eaten. It was, indeed, quite possible that a dog might have dragged the jaw from a grave and eaten it, but the bone did not present the same appearance of having been gnawed by dogs, which was seen in those bones that had been so gnawed; and, from the experience of Professor Owen, it was evident that the breaking of the bone to extract the nerve-pulp shewed design. There was, therefore, strong evidence that cannibalism had been at least occasionally practised. The question of the antiquity of the remains was, however, the important point to be considered. It had been observed in the earliest Danish middens that the skulls were round, resembling in that respect the skulls of modern Esquimaux, indicating an arctic origin. If they were to take the authority of Professor Agassiz, the skulls in the Danish middens were altogether distinct from those of the arctic character. The skulls from the burial mound in Caithness, however, exhibited different and even opposite characters; for two of

them were round, and the facial angle corresponded with that of Europeans, while the greater number exhibited the indications of the skulls of savage tribes in the tropical regions. In their extreme prognathism, the flatness of the sides, and in other characters, they approached the African type, but there were differences to distinguish them from the genuine Negro. The strongest evidence of the antiquity of the remains was, however, to be found in the implements from the shell-mounds, and in the kists, and not in the skulls, especially when the types were so various in some of the sepulchres. The force of the evidence of great antiquity rested almost entirely on the extreme wildness of the implements. In the shell-mounds there was a mixture in the upper strata of house implements and the finer kind of pottery. In the kists themselves were found the rudest of the stone weapons, and the evidence of their great antiquity was strengthened by the discovery by Mr. Anderson of similar instruments of corresponding antiquity buried with skeletons in kists, which showed more clearly that they were weapons intended for actual use and not mere models, as had been conjectured. That supposition he believed to be quite unfounded; for the most costly instruments were commonly found buried with the dead. Then came the question, Could a people who used weapons of that very rude description have had a knowledge of anything more advanced? Even the degrees of art exercised on the various stone implements indicated different stages of civilisation. In the Museum at Copenhagen, where the implements from the *kjökkenmøddings* were deposited, the arrangement of them according to comparative dates was based on the fact that greater rudeness of construction implies greater antiquity. The implements were classified from the rudest to the finer kinds of stone implement; then the stone period died out, and it was succeeded by that of bronze; and that was succeeded by a period when iron instruments were used. If they discarded that evidence no standing point seemed to be left. Was it conceivable that a people at all unacquainted with the use of metals would use such rude implements of stone and bone as those found in the mounds? In the later stone period the hammers and "celts" had holes in them for the attachment of a handle, and there were also attempts at ornament; but in those discovered in Caithness there was nothing of the kind. They were simply fragments of the sandstone of the district of the rudest kind ever witnessed. There was also a perfect identity in those implements found in the kists with those in the lowest stratum of the shell-mounds, which proved their antiquity. A mere inspection of the things on the table would show that they belonged to the earliest stone period. With regard to those objects which were considered to have been spinning-whorls, he doubted whether they had been used for the purpose of spinning; they might perhaps have been ornaments. They were certainly not very well adapted for spinning. If they were regarded as indications of a more advanced state of civilisation, it was important to determine on what part of the mounds they were deposited. On that point, however, he could not be quite certain; but he knew they were considerably lower than the artificial deposits, and that they were at least as low as the secondary strata

in the mounds. The main argument that had been advanced against the great antiquity of the skulls was the mode of interment. It was quite true, that when the Pagan method of disposing of the dead by cremation went out, burial in a crouched position was introduced, and though extended burial might perhaps in many places belong to a comparatively modern period, the notion that it did so generally was refuted by the practice in the north of Scotland, at least. There it is certain that the rudest implements were found in the extended kists. That was a known fact, and it might have been assumed that such would be the case, for extended burial was the simplest and easiest mode of disposing of the dead. The irregular directions in which the bodies had been laid on the ground also afforded evidence that they had not been interred by men professing Christianity. In Christian interments the head was always laid towards the west; but in the kists of Caithness the head was laid in no particular position: the bodies being sometimes extended towards the north and south. In his opinion, no objection to the great antiquity of the remains could stand against the distinct evidence of the very rude construction of the implements found in the kist. If they departed from the self-evident rule of classification adopted in the Copenhagen Museum, they would be led into inextricable confusion. He did not mean to assert that these remains went back to a period of ten thousand years; probably they did not go back more than a few hundred years before the Christian era. He thought, however, that they had in those remains relics of the original population of Britain, and that some portions of them lingered on in the north of Scotland, until overtaken and extirpated by a people more advanced in civilisation.

Some further Notes upon Pre-historic Hut-circles. By GEORGE E. ROBERTS, F.G.S., Hon. Sec. A.S.L.

IN continuation of this subject, illustrated by myself in a paper read before the Anthropological Society last session, and by an article published in the *Popular Science Review* for May, I propose to notice, briefly, some newly-discovered sites of these ancient dwelling-spots; and others, which although previously known, have been wrongly interpreted. My friend, the Rev. Mr. Joass of Eddertoun (Ross-shire), has been prosecuting similar researches to my own with great vigour, and he has kindly placed at my disposal the material he has obtained. His notes of exploration are so exceedingly interesting that I prefer incorporating them in their entirety, rather than making extracts.

"During a recent visit to Strathnaner, in the north of Sutherland, I discovered a great many hut circles, almost invariably in pairs, and surrounded by groups of tumuli of sepulchral origin. These circles are about forty feet in diameter, and twenty or thirty yards apart. In Rogart, also, I found similar pairs of circles associated with tumuli, which latter are connected, in the traditions of the district, with battles fought between the McKays and Sutherlands within the historic period. Such stories frequently spring up to suit the circumstances of particular localities. The kists of these tumuli indicate that they were not the hurriedly-got-up graves of those who fell in battle, but the burial-places of detached settlements scattered over

every important river terrace, or bordering the sheltered bays along the coast; and point to a period long prior to the time when men fought as McKays or as members of any existing Celtic clan whatsoever. Do the *pairs* of circles seem to you to have any connexion with the fact recorded by Dion Cassius that the early Britons used wives in common (l. 76, 12). A custom again referred to by him in the story of the Empress Julia and the wife of Argentocoxus:—

.... “Ex quo urbanè in primis, Argentocoxi, cujusdam Caledonii uxor, Juliæ Augustæ, quæ ipsam mordebat, post initum fœdus, quod mixtim cum maribus coirent, dixisse fertur.

“Nos multo melius explemus ea, quæ natura postulat necessitas, quam vos Romanæ; nam aperte cum optimiis viris habemus consuetudinem vos autem occulte pessimi homines adulteriis polluant. Sic illa Britannia.” (Dio. l. 76, 16.)

“This interview occurred early in the third century. Was the custom referred to a remnant of an earlier time, dating from the period of occupancy of the hut circles? Would not this custom make it likely that in the earliest times, at least, the males and females should occupy separate neighbouring circles? The cairn at Skibo which we were to examine was found to contain a large *triangular* and rude kist, but no remains.”

A large number of circular “barrows,” as they have been wrongly called, have been known for some years to exist on the Moor of Dinnat, near Aboyne. My intention was to have visited these in the month of July, but illness prevented the journey. I am indebted to the Marchioness of Huntly for some suggestive notes upon them, obtained by a Mr. Christie, a schoolmaster upon the Aboyne estate. He describes them as being situate on the north side of the Dee, south of the northern highway, east and west from the new bridge at Dinnat, for about half a mile in each direction. They amount in number to nearly two hundred, so that the moor of Dinnat was a not unimportant dwelling-spot in pre-historic times. Mr. Christie’s description of them entirely precludes the possibility of their being “barrows” or kists, as they are circular or oval hollows in the ground, in which charred oak has been found; but no regular or careful investigation of them or their contents has yet been made.

In a letter to myself, Lady Huntly remarks that she has long regarded it as an extensive and promising field for investigation, and would be happy to give orders to a labourer to explore the site under proper superintendence.

I am convinced that a very large addition to the data we already possess as to the domestic and social lives of these ancient hunters and fishers of the Highlands, would result from a careful and continued examination of the sea-board north of Tain. Numerous *kjökken-möddings* exist along the shores of the Dornoch Frith; in one of which, at a spot opposite to the Meikle-ferry, an enormous quantity of small flint-flakes, both of the knife and arrow-head form, are to be seen, commingled with limpet and mussel shells, and split bones of deer and other animals. Specimens of these I exhibit. Such *kjökken-möddings* generally occur in the vicinity of hut-circles.

It is, perhaps, somewhat premature to attempt any connection in

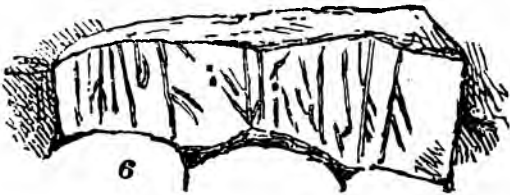
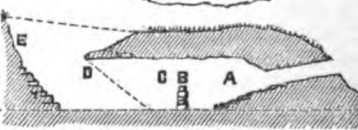
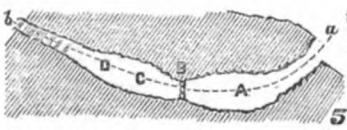
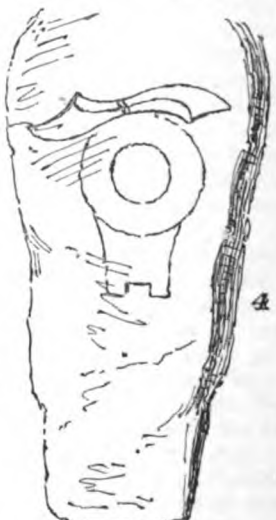
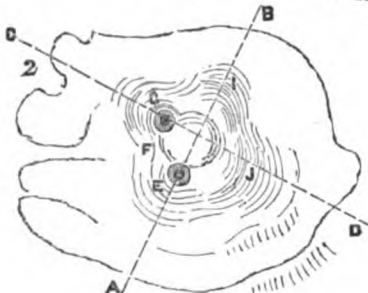
time between the hut-circle dwellings of Northern Scotland, and the beehive-shaped huts of Cornwall, Devon, and South Wales. But we may reasonably assume that the Highland dwellings were covered in from the inclemency of the weather by some rude roof of wattle, or heather supported upon poles; and the discovery of low narrow galleries, or rather roofed spaces *beneath* the central hearth-stone in the Sutherlandshire hut-circles, as described by Mr. Joass and myself in the articles before referred to, connect these dwellings in design with those in which similar apartments—probably in each case the sleeping chambers during the winter months—have been found in S.W. England, as at Carn Goch in Carmarthenshire, and those described by Borlase (*Antiquities*, p. 273) as then existing near Penzance.

Mr. S. R. Pattison, F.G.S., has been good enough to direct my attention to some notices of circles, indicating dwelling-spots, existing within the limits of camps at Carn Englee, near Newport, Pembrokeshire; within Ingleborough camp, near Clapham, Yorkshire; on the side of the Watling Street in Northumberland, and on the north-east side of the Cheviot Hills. These have all been briefly noticed by Mr. H. M'Lauchlan in the Report of the Royal Institution of Cornwall for 1857. The circles in the Cheviot camp are described as being of various diameters, seldom, however, more than thirty feet; the mean diameter is placed at twenty-five feet. The openings are generally on the south side.

Numerous hut-circles also occur near Clùn Castle, Cornwall, of a rude circular form, varying from eight to forty feet in diameter; the "walls" or hedges composed of unhewn stones placed without cement. The hearth-stone was met with beneath the centre of one circle covered up with about twelve inches of mould. These are locally known as the "huts of the old people." They have been briefly described by Miss Millett in the Report of the Penzance Nat. Hist. and Antiquarian Society for 1849; and previously by the Rev. Mr. Buller, Mr. Saull, Dr. Young. (See *Trans. Brit. Arch. Assoc.*, 1846; and "*Notitia Britanniae*," by W. D. Saull, F.S.A.) Similar circles have been noted by Mr. R. Edmonds, jun., in the Isle of Bryher, off the Penzance coast. (Rep. Penzance Nat. Hist. Soc., 1849, p. 312.)

The Forty-fifth Annual Report of the Royal Institution of Cornwall (1863) contains an interesting paper by Mr. Edmonds on the "Bee-hive British dwellings at Bosphrennis and Chapel Enny near Penzance." As Mr. Edmonds considers them the most perfect examples of the hut remaining, I propose to compare his detailed description of their characteristics with the more fragmentary remains of our Highland huts. Both Cornish examples may more properly be termed, (as the author remarks) "Bee-hive *caves*," as they were originally, with the exception of the entrance, buried beneath thick turf; with their entrances probably also concealed by furze or other evergreens, like the well-known longitudinal cave at Boleit in S. Buryan. The little which remains of the roof at Bosphrennis is still covered with turf." A longitudinal chamber occupies eighteen feet of the hut-space at Chapel Enny, and nine feet at Bosphrennis, in each case leading, as a vestibule would, to the circular bee-hive chamber, which is about twelve feet in diameter.

Fig. 1



PREHISTORIC HUT CIRCLES.

Many other hut-circle dwelling-spots of like character have been discovered in various parts of the kingdom; and I am convinced that much valuable light may be thrown upon a period which cannot at present be termed other than pre-historic, by a careful investigation of them.*

The following Notes, received lately from my indefatigable friend Mr. Joass, may with propriety be added to my paper.

Notes on the Antiquities of Sutherland.

Hearing from my friend Sheriff Mackenzie, of Dornoch, of the existence of an ancient fort, with dome-roofed chamber attached, and surrounded by earth-works and a ditch, on the farm of Kintradwell, near Brora, I resolved to take an early opportunity of inspecting it, and arrangements for that purpose having kindly been made by my informant and Mr. Houstoun, of Kintradwell, who placed a party of six good men at my disposal, excavations were commenced.

The building occupies a commanding position close to the edge of a sandy terrace, once an old coast line, and the stone work is now covered to a considerable depth with earth and turf.

Work was begun at *z*, which had previously been opened by accident. When the rubbish had been cleared out, an elliptical dome-roofed chamber was exposed of Cyclopean structure, each tier of stone overlapping the lower, till the walls approached sufficiently to be capped by one large flag which had been previously removed.

At the bottom of this chamber, a passage two feet wide by twelve inches high led towards the interior, as at *z* (3). Buried in black mould at *F* (2), and about a foot below the surface, were found jaws of swine and deer, with part of the frontal bone and horn-core of a large animal of the ox tribe, besides shells of the limpet and periwinkle. On discovering that one of our diggers had assisted at the excavation of Maes Howe, Orkney, and knew what he was about, I left him with instructions to dig at *g* (2), while I accompanied Mr. Houstoun to *h* (1), a point in the slope of the same sandy terrace, and about one hundred yards distant, where a kist and human remains had been discovered a short time previously, by the blowing away of the sand. Near this I found a number of human bones, including portions of the skull, part of the upper jaw detached and without teeth, a few vertebræ, the os coccygis, part of the pelvis, an ulna and radius, &c.

In the kist, on its first exposure, was found a piece of deer's horn perforated in its long axis, as if to be used as a knife-handle. Also the brow antler of a stag of very large size. This seems to have been separated from the main horn by successive blows of a blunt instrument (a stone celt?) and by breaking. It is very old, and almost crumbles to the touch. It adheres strongly to the tongue, and now probably consists of but phosphate of lime. Near the kist an irregularly

* Dr. Aitken, F.A.S.L., of the District Lunatic Asylum, at Inverness, has been good enough to place in my hand some portions of a calvarium, with fragments of lower jaw, found in a kist while excavating in the grounds of the asylum. The kist was of the usual character, composed of four stones placed upright, so as to enclose a space about three feet long and two wide. No other portions of the skeleton were found.

shaped flint flake was found. There are no native flints. Close to the kist stood a rough sandstone slab, bearing incised ornamental markings as shown (4).

This stone, I am informed by the Secretary to the Society of Scottish Antiquaries, has not been figured before. It is, moreover, different from any given in his very valuable Monograph on the "Sculpture-stones of Scotland."

Returning to the Fort, we found that the digging at *a* (2) had resulted in the discovery of a chamber *g* (3), corresponding in all respects to that at *e*. The buttress-like prominence at 1 and 2 (3) probably indicate similar cells. No time to work this out, darkness coming on before we had done more than dig down from the interior circle upon the passage (3).

Leaving further excavations at this locality to a more favourable opportunity, when longer days bring better weather, we next morning held council over the mouth of an underground passage opening in the hill side, about a mile off, and averred by the majority of our men to have been traced to Dunrobin Castle, seven miles away, whilst the utmost concession to our most delicately expressed doubts on the subject, could go no further than to reduce its length to four hundred yards, throughout every inch of which it had positively been followed by the uncle's wife's father of one of our party, accompanied by his collie and carrying a candle.

The opening in question occurs about four feet from the top of a high and steep slope, forming the western side of the ravine in which runs the river of Kintradwell. The passage, built with undressed and uncemented stones, and roofed by rude slabs of granite, is at first about two feet square, but at the distance of seven feet the height diminishes to eighteen inches. This much we could ascertain from the outside. Sending in a trusty Clumber-spaniel and a keen little terrier to serve "notice to quit" upon all wild cats and other possible vermin not pleasant to encounter at a disadvantage, and being assured by their return that the premises were unoccupied, I clothed for the occasion, and, pushing a lighted lamp before me, crawled and finally dragged myself, into a chamber, *A* (5), five feet high by four broad at the widest part, and ten feet long.

After a careful examination of the walls, I could find no opening suggestive of a passage to Dunrobin or elsewhere. I discovered at *B* (5) a wall two feet high, separating the chamber *A* from *c*; another which proved to be of the same dimensions. Being now joined by Mr. Houston and a friend with another lamp, we discovered on the perpendicular face of a stone on the top of the wall, *B*, certain markings which were unquestionably artificial, and which were at first thought to have been made by the sharpening of weapons. On more careful examination by daylight, their resemblance to early Scandinavian letters was striking, although I have failed to identify more than two or three of the characters, some of which seem to be inverted.

At *D* the chamber *c* was found filled up to the roof with loose black earth, in which occurred numerous shells of the periwinkle and limpet, with several bones of oxen and small portions of very hard peat. By careful digging the side walls were exposed to *E*, but could be

traced no farther, even after the removal of seven stones arranged like steps, of which the ends were built into the walls, and which terminated the building.

This subterranean retreat resembles, in several respects, that previously described to you as occurring in the strath of Helmsdale* (the length of which was thirty-three feet; that of this, from A to B, is thirty-four).

[The above notes have been communicated to "the Society of Antiquaries of Scotland."]

An Account of the Human Bones found in the Round and Long Tumuli, situated on the Cotswold Hills, near Cheltenham. By Dr. H. BIRD.

The barrows and tumuli on the Cotswold Hills vary in their size, structure, and contents: they are of two kinds—round tumuli, and long barrows.

First; as to the round tumuli. The round tumuli are roughly constructed of loose surface or quarried stones; a kist is generally placed near the centre; its sides and ends are formed of dry walling of small flat stones, and covered with rough unhewn stones, sloping each way like the roof of a house, or placed flat across the walls. And the tumulus is raised up, and forced into shape, with small surface stones; sometimes they are covered with a layer of earth a few inches in thickness. The circle may be raised four or five feet in its highest part, and may be from twelve to twenty yards across.

The kist may contain the bones of one, or many, human bodies of different ages, and both sexes, and flint flakes, and black rude pottery. Among the stones of the tumulus, some distance from the kist, human bones, flint flakes, pottery, lumps of flint, round pieces of Bredon gravel, horses' cattle and pigs' bones and teeth, shank bones of horses and cattle divided vertically, calcined human bones, stones and charcoal, may be found.

There are several round tumuli near Cheltenham, but most of them have been frequently disturbed. Some of the bones found in the tumuli had been fractured and again united, a humerus in Dry Heath field, and a parietal bone from the Waste tumulus. Many of the thigh bones were peculiar in having a wide, flat, oblong space below the trochanter major. The persons to whom these thigh bones belonged differed in height from five feet five inches to six feet and upwards.

Secondly. The long tumuli, or barrows, are constructed in a superior manner as compared with the round tumuli. They are formed of loose surface or quarried stones, having dried walling running through or across them in different directions, to support and maintain their form; in the large end a heart-shaped curve is formed, which contracts into a form something like a portion of the human heart.

They gradually rise from the surface of the ground at their smallest end to several feet above it at their larger and wider end, where there are dry walling entrances, or large stones placed in the form of platforms, or altars.

* See *Journal of the Anthropological Society*, vol. ii, p. cccxxxv.
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Dr. Paine has described the Bown Hill tumuli, near Stroud, which contained the remains of five individuals, an infant clavicle, and a rudely made bone chisel or scoop. Uley barrow has been described by Dr. Thurnam; and the Nymphsfield in Creepers, near, by Professor Buckman and Dr. Thurnam.

The long barrow upon the Crippetts on Shurdington Hill has been disturbed, and its altar stones removed, but the burial places if any exist, have not been discovered. It is placed nearly east and west, is sixty-three yards long, thirty-four across its eastern or wider part, and about twenty yards across its western or narrower end. It varies in height from twelve to twenty feet. Belas Knap, a long barrow situated above Honey-bee-Wood, near Charlton Abbott, is constructed of quarried stones. The large altar stones were procured from an adjoining quarry. It is sixty-three yards long, thirty-two across its northern, higher, and wider part, and twenty-three yards across its southern, narrower, and lower part; it is fourteen feet high at the stone work or platform, and gradually falls off to near a level with the ground on its southern or small end. The three large stones on the western side may have been the covering of graves near the middle of the tumulus, which had been removed on a former occasion.

The neat stone walling of Stonesfield slate, gracefully curved to form a heart shaped entrance, with the huge unhewn stones placed at its northern end to form a platform or altar, presented a most imposing appearance.

A large jaw-bone, a large square skull, and bones of children and infants, were found upon, under, and near the large flat stones of the altar; with a bone pin, and a bone implement with two small holes drilled in its end, and a beautifully cut flint saw, with a knife edge on its back; boars' jaw-bones, teeth, and tusks; horses' teeth, a bone of the roe-buck, bones of birds, and the upper part of a large radius—which has been supposed to belong to a lion or a cave bear.

Graves were found in the small end on its eastern side, formed of rough dry walling, and quarried stones for the sides and ends, and covered or roofed over with flat rough unhewn stones, and the entrance to the grave was covered with a large flat stone, five feet by three feet, and about a foot thick. The grave contained the bones of several individuals with long oval heads and narrow foreheads.

The Rodmarton tumulus, lately opened by the Rev. S. Lysons. The large unhewn stones, or altar, was placed in the eastern end; on the northern side there was a vault, covered with a large stone, formed of rough dry walling, and also each side of the entrance; it was closed by flat stones, and two were curiously placed to form an archway into the grave, covered behind with another flat stone. The grave contained the bones of eight adults—male and female, youths, children, and burned bones of children. All the skulls were large and well developed, and the more square ones were broken; a long rough piece of flint, neatly shaped flint arrow-heads; jaw-bones, teeth, and tusks of boars, horses, and cattle were found at the eastern end. The whole tumulus was supported by rough strong dry walling of quarried stones.

The long barrows contain neatly finished flint arrow-heads, flint

saws, knives, and rude bone implements, and very ancient pottery. Agriculture does not seem to have been known, for only the remains of wild indigenous animals were found; the worn state of the teeth may have been produced by masticating seeds of plants, fruits and acorns, and wild kinds of grain.

THE PHYSICAL CHARACTER OF THE TWO RACES OF MEN.

1. The bones found in the round tumuli indicate a peculiar and distinctive race. They are tall, stout, square built, and athletic, varying in height from five feet six inches to above six feet. They had large oval heads, with large bases, wide and expanded behind, narrow, low, and contracted in front. The frontal sinuses and orbital ridges are prominent, with a wide and deep depression in the frontal bones above those parts; the cheek-bones are large and high, the jaws large and strong, and the lower jaw deep, and square at the chin and angles. The teeth are fine and white, and free from caries, although in some instances they were much worn away on their outer edges. The women were above five feet, and had the same general character as the men, and presented clearly the female distinctions, the bones being smaller and more delicately formed. No suture could be discovered in the frontal bones of many of the children and infants.

2. The human remains discovered in the long tumuli differ from those of the round tumuli, and are often mixed. They may have belonged to another or to a mixed race. These were tall, stout and square-built, with long heads, large bases, fairly developed foreheads, no great projection of the orbital ridges, nor depression in the frontal bone; and the facial bone did not project so much, but the lower jaw was deep, and square at the chin and angles. The teeth are free from caries, although in many instances they are worn away obliquely in their outer sides. (Many of the thigh bones in both races have an oblong square surface on their outer side, below the trochanter major.) The ridges and processes are very prominent and strong, some of the thigh bones measured more than nineteen inches. The female bones of this race were larger and less distinctly marked than in the round tumuli bones. Most of the higher developed skulls found in the vaults of the long tumuli were broken across the vertex; and Dr. Thurnam suggested that such broken skulls found at Rodmarton tumulus may have been broken before death, being the remains of murdered prisoners, or of persons slain for sacrificial purposes.

Bodies are often discovered some feet deep in the earth, or near the surface, near tumuli, barrows, and knaps, presenting the round tumulus character of skeleton, as the bones recently discovered near the surface of the soil in St. James's-square, Cheltenham—where a knap and burial place formerly existed, described in Gomonde's *History of Cheltenham*. For this and other reasons, we may infer that only chiefs and their families were placed in tumuli and barrows. No gold, silver, bronze, iron, or other metal have been found in these tumuli and barrows. But Roman and English coins, iron nails and spikes, Roman and common pottery, have been often collected from their surface, and from the black earth of their outer covering, and, those which

have been much disturbed, even from the interior, as the iron spear-head from Rodmarton tumulus.

CREMATION.

In most of the tumuli and barrows indications of cremation are found. In the Nymphsfield barrow the burnt bones were carefully placed in separate kists eighteen inches long and twelve inches wide on the ground floor on the north side of the tumulus, and they did not appear to have been opened before. These kists contained only human calcined bones, parts of skulls, ribs, arms, and vertebræ of young persons or children. In Rodmarton barrow a few calcined bones of children were found in the vault on its north side. In the Dry Heathfield tumulus the burnt bones were found on the floor of the tumulus, outside of the kist, near its eastern end. Dr. Pain, of Stroud, writing upon Bown barrow, stated, "I should mention also that there are no signs of cremation having been practised within this burial place. The bones were untouched by fire, although the surface of the mound bore evident indications of this action." There were no human or animal calcined bones found.

In Belas knap barrow traces of fire were observed upon its surface, but no calcined human or animal bones were found. Marks of cremation have since been discovered on the floor of a chamber since opened. On the floor of the round tumulus on the Waste Brockhampton, the signs of burning consisted of charcoal and burnt stones, six or seven feet removed from the kist.

The clearest indications of cremation, in this neighbourhood, are found in the triangular ditches on Leckhampton and Cleave Hills.

In conclusion let me acknowledge the valuable assistance afforded me by the Rev. T. Norwood, in examining the Dry Heathfield tumulus, and in marking the bones; by Mr. E. Barford for the information on Whist tumulus, and for the skulls, bones, and flints from Brockhampton; by D. W. Nash, Esq., for his assistance in arranging the papers, notes, etc.; by Dr. Pain, of Stroud, for his list of bones, etc.; by the Rev. S. Lysons, for the list of the contents of Rodmarton barrow; and by L. Winterbotham, Esq., for the information as to Belas knapp, and the loan of his collection from that curious barrow; and by my other friends who have made suggestions, and have rendered me assistance in investigating the subject.

APPENDIX AND NOTES.

Dry Heathfield Tumulus, Leckhampton Hill, March 1st, 1860.—It had been disturbed, and the human bones were exposed. The remains of two skulls, when put together, measured:—No. 1. Circumference, 21 inches; from ear to ear, 11 inches; from foramen magnum to the nasal process, 15 inches; width over the sella Turcica, $5\frac{1}{2}$ inches; over the glenoid cavities, $4\frac{1}{2}$ inches. No. 2. Circumference, 20 inches; from ear to ear, $11\frac{1}{2}$ inches; from foramen magnum to the nasal process, 14 inches; width over sella Turcica, $4\frac{1}{2}$ inches; across the condyles, 4 inches. Part of a diseased femur, 18 inches long; a fractured humerus united; part of a frontal bone, with a hole in it; parts of fourteen thigh bones; some pieces of calcined human bones.

Conclusions :—1. That there were the remains of at least seven adult persons, who varied in height from five feet to five feet ten inches. 2. Male and female bones were found together. 3. That the skulls belonged to persons with a broad oval head, wide behind, flat at the sides, and low on the roof.

Foxcote Tumulus, near Withington, Feb. 25th, 1863.—Tumulus, circular; consisted of quarried, loose stones; twenty-three yards across from east to west, and twenty-six from north to south; highest part was five feet ten or eleven. Pieces of flint flakes were found by the Rev. T. Norwood. One perfect flint chisel, others angular, with sharp edges. There were burnt stones, earth, and bones, and a very old piece of black pottery; one skull in pieces, large based oval; part of a lower jaw, the teeth were not decayed, and but little worn away. Three lumbar vertebrae were united by ankylosis, and the sacrum was spongy and diseased; two femora, bones of the arm, and foot, etc.; a horse's tooth, and shoulder of an ox. Charles Taylor, who opened the tumulus, and removed the stones for road mending, stated that coins were scattered thickly over the surface of the tumulus, in the black earth, for the space of at least fourteen feet, and that there was a broken earthen pot in the centre of them, that there was a dry wall in the heap of stones, and that the human bones were found near the centre, covered with rough flat stones two feet across. About three or four hundred Roman coins were found in this tumulus in the black mould, while the human bones were discovered in the red earth. It had been previously opened.

Waste or Whist tumulus, near Brockhampton; visited with E. Harford, Esq., March 21st, 1863.—It was twenty yards across; there were the remains of four other tumuli in the same field, and one about one hundred yards to the south, that did not seem to have been disturbed.

The man who removed the stones to repair the roads, stated that it was a heap of loose stones, covered with earth, and often ploughed over. Near the centre a grave was formed of flat stone, (of *Stonesfield slate*), dry walling eighteen inches deep, two feet wide, and eight feet long; and that it contained seven frames or human skeletons; and that it was covered over with rough unhewn flat stones, like the roof of a house. Several pieces of flint flakes, and a rude saw were picked up on and near the tumulus, a horse's tooth and several horses' bones; there was burnt earth, stones, and charcoal on the tumulus floor, several feet from the kist. The remains of two or three bodies were found on the floor of the tumulus, some way from the kist, only covered with stones; no burnt bones were discovered. No. 3 skull:—above 22 inches in circumference; 15 inches from foramen magnum to nasal process; length of temporal bone, 5 inches.

No. 2. Frontal bones and part of the bones of the face; frontal bone measured 5 inches from nasal process to the coronal suture. No. 4. Part of frontal and parietal bones left; one fractured and united; the fractures may have been made by a stone from a sling. No. 4. Frontal bone of a child, without frontal suture.

Three tumuli on Cleave Hill, beyond the Racing Stables, were formerly opened, and found to contain human bones. Triangular trenches, filled with burnt stones, charcoal, and burnt bones, are not

uncommon on Cleave Hill, and are of a more recent period: there is one on Leckhampton Hill, at the end of Sandy Lane. There is a large round tumulus on Puckham Scrubs. On Bredon Hill a mound like a long barrow is seen, and some heaps very like round tumuli on its southern end.

Four Roman skulls in Cirencester Museum:—circumference 20 and 21 inches; from ear to ear, 12 to 13 inches; 1, occipito-frontal, 13 inches; 2, width of frontal bone, $6\frac{1}{2}$ inches; 3, length of frontal bone, 5 inches; 4, circumference, 20 inches; 5, auditory, 13 inches.

The Celtic or ancient skulls were found under a heap of gravel, removed for making walks, with flint flakes, and no kists, but lying on the ground.

Belas Knap long barrow extended sixty-three yards, north and south: and thirty yards across, east and west. It had been opened in several places before. Large rough stones on the western side, about six feet by four, which appeared to have been removed from a higher position on the tumulus. A large stone on the east side covered a kist which contained human bones in a decayed and broken state; it had evidently been opened before: the most perfect skull measured:—circumference, 22 inches full; from ear to ear, 12 inches; width, 5 inches; width of the frontal bone, 6 inches; depth, $5\frac{1}{2}$ inches: from the small frontal sinuses it was concluded to be a woman's skull. Parts of the lower jaw-bones of two men and one woman, one entire humerus, parts of two femoral and two temporal bones, vertebræ, ulnæ, radii, pelvis, and scapular bones, much decayed.

In the tumulus opened there was a grave, running east and west; no charcoal, flints, coins, teeth, nor pottery, had then been found;—only the human bones. The kist was formed of rough flat quarried stones and dry walling. 1, North end—one large stone, six feet square, two feet thick; 2, middle stone, four feet by four, and one foot thick; 3, pillar, six feet, two feet square; 4, second pillar, six feet six, two feet square. West side—two large stones: 1, five feet six inches by four feet six inches, and two feet thick; 2, seven feet long, five feet wide, and 20 inches thick. The large stone on the eastern side was five feet by three, and sixteen inches thick. The grave at the south-east end—west end, two feet six inches wide; east end, three feet three inches; length north and south, six feet six inches, and two feet deep. One large inferior maxillary bone; five lower jaws of children; one jaw of an infant, the teeth were uncut; two pieces of flint, beautifully striped, triangular, and notched like a saw; two pieces of red pottery, very soft; burnt stones, and two or three pieces of charcoal; parts of two thigh bones, seventeen inches long, very stout; one humerus; several vertebræ; dorsal, lumbar, and cervical; a tibia, astragalus, and patella; four boars' tusks; two thigh bones, 19 inches long; a curious bone like the radius of a tiger or bear; boar's jaw; roe-bucks' bones; and bones of other animals. At Sudely Castle, not far from Belas knap, there were,—part of boar's tusks, part of male sacrum, and large; two patellæ of children; part of a very large lower jaw bone of a boar, with last molars much ground away, and very large spaces for the tusks.

Rodmarton Barrow.—Skulls, 22 inches in circumference; 13 inches

from ear to ear; vertical, 14 inches. Femur, 17 inches—one 15 inches. Two neatly executed flint arrow-heads; two or more pieces of Bredon gravel; a round piece of rough sandstone; a large piece of flint; pigs' jaws, boars' teeth, cattle's teeth, and a calf's jaw. An altar at the east end, formed of large stones, two upright ones, seven and eight feet high, and a large flat one supported on walling, sloping to the east. Altar—side stone, seven feet six inches by four feet six inches; side stones, eight feet six inches. Tumulus, about sixty yards long. Grave, or vault, eight feet six inches by six feet seven inches, five feet high; contained—eight adult males and females, bones of youths, and burned bones of children, and remains of one or two children not burned, some pieces of ancient British pottery.

Crippetts Barrow, Shurdington Hill.—Sixty-three yards long, nearly east and west; thirty-four yards across, north and south,—wide end; twenty yards at the narrow end; height, from twelve to twenty feet, Altar or platform;—stones have been removed and displaced, but the vaults and kists do not appear to have been disturbed or uncovered, nor the western entrance. A round tumulus, formed of earth, and said to be a Roman burial place, contained cinerary urns with burnt bones. It seems to have no great antiquity, and may perhaps be a Saxon burial place.

Rev. S. Lysons's list of contents of Rodmarton barrow:—"Within this tomb lay, flat upon the floor, the skulls and skeletons of no less than thirteen persons, apparently male and female, young and old. On the floor, among the bones, were discovered the following articles. 1. Five small flint implements, two of them finely wrought, so as to be almost transparent, used probably as lances or arrow-heads. 2. A large piece of natural flint, placed there doubtless with some superstitious object—emblematical probably of, or for the purpose of keeping up, the sacred fire. This flint must have been brought from a considerable distance, as there are none of this character within twenty miles of this locality. 3. There were the débris of a crock of very coarse, almost black, pottery. 4. A largish stone of a grit not found in this neighbourhood—used probably as a hammer. 5. A small round pebble, such as is said to have been found in most barrows of this character. These were all the entire contents of the chamber. The human bones, for the most part, present no appearance of cremation; nevertheless, there are some indications of fire upon a very small portion of them. One victim only perhaps was burnt."*

Ablington tumulus, near Bibury, Gloucestershire, is curiously formed, heart shaped at large end, with a large rough upright stone, no chambers, burials in the small end, surrounded in part with dry walling.

BELAS KNAP NEAR CHARLTON ABBOTS: LIST OF BONES, ETC.,
FOUND IN THE KIST AT THE SOUTH END.

Cranial Bones.—Three skulls; two restored, wanting sphenoid,

* The contents of the barrow are accurately described in Davis and Thurman's *Crania Britannica*, and also in the Proceedings of the Society of Antiquaries, by the Rev. S. Lysons, Assistant Secretary, S.A.L.

ethmoid, and facial bones, orbital part of frontal, two temporal, two fragments of parietal, two occipital, of a third. Parts of three superior maxillary bones, teeth much worn, one molar very carious. Four inferior maxillary, nearly perfect; two with rami at right angles to bodies and with square projecting chins (male); two with the rami more oblique, and with delicate pointed chins (female). These jaws are, with one exception, without teeth.

Bones of Trunk.—Vertebræ forming one spinal column, lowest lumbar, and some cervicals wanting; two of the cervical vertebræ are ankylosed together. Fragments of ribs—one has a small exostosis. Fragments of sacral and pelvic bones—two acetabula being perfect.

Upper Extremity.—Fragments of scapulæ. One left clavicle perfect, fragments of others. Four humeri—three left, one right; one left humerus perfect, length, 12 inches. Two pairs of ulnæ, upper ends. One pair of radii, two fragments. No carpus or metacarpus.

Lower Extremity.—Two pairs of femora; the right bone of one pair perfect, except head and neck; the left minus the lower end, but perfect in the parts wanting in its fellows; length deduced from the two bones, 19½ inches. Two pairs of tibiæ; one pair nearly perfect; length, 14½ inches. Fragments of fibulæ. Two patellæ, not a pair. Tarsal bones, various, including—calcaneæ two pairs, and various metatarsal phalanges, one of which has an exostosis.

Remains not Human.—Part of tibia of roebuck (Owen). Large head of radius. Part of shaft of a long bone, with drilled holes. Four pieces of rough sun-baked pottery. No flints of any kind.

The remains are those of two aged men and two aged women. All the bones found in the kist are much broken and decayed, and of a red colour. The measurements of the two restored skulls are given on the opposite page.

LIST OF ADULT BONES FOUND UNDER THE LARGE STONE OVER THE ENTRANCE, NORTH END.

Cranial Bones.—One skull restored, most of the base wanting. Part of a superior maxillary. Three inferior maxillary; one a very perfect strong square jaw, all its teeth *in situ*, little worn, one broken, more delicate, teeth very perfect, wisdom tooth just through; this jaw, a female one, belongs to the restored skull. A left condyle represents the third.

Bones of the Trunk.—A few vertebræ and ribs. Part of one pelvis.

Upper Extremity.—Three scapulæ; two left, one right. Humeri, tibiæ, and radii,—a pair of each. No carpus, or metacarpus, or phalanges.

Lower Extremity.—Femora, one pair; one bone perfect, length, 17 inches. Tibiæ, two pairs. Fibulæ, two pairs. Calcaneæ, two pairs, and various tarsal and metatarsal bones.

These bones, representing three adults, are, though much broken, strong and firm in texture, and beautifully white in colour,—in strong contrast with those found in the kist at the south end of the tumulus. They might, indeed, be considered ages younger, judging from their appearance, though the strong family likeness in the lower jaws forbids the supposition. They were found six feet from the ground

level, packed in loose rubble, whereas the others were lying on the surface of the ground, and were quite damp when found. This circumstance explains the difference in the condition of the two sets of bones.

BONES OF CHILDREN FOUND IMMEDIATELY UNDER THE LARGE STONE OVER THE ENTRANCE, NORTH END.

Cranial Bones.—Represent five skulls. The bones being very thin, have become too flattened and warped to be restored. All the bones seem represented. The largest frontal bone is in two pieces, the sutures being quite opened, though the smaller frontal bones are all in one, the line of suture, even in the youngest, being invisible externally. Five pairs of superior maxillary bones, mostly imperfect, crowded with teeth in all stages of development. Five inferior maxillary bones; the youngest has its two central incisors only (age, twelve months): the eldest has its front pair of permanent teeth through (six or seven years): the remaining are in regular gradation, as to size and state of teeth, between these extremes.

Bones of Trunk.—Vertebræ of all sizes; the body of the vertebræ is distinct from the arch, and in some the arch is still in two lateral pieces. Ribs, numerous. Iliæ, five pairs. Ischia, five pairs. Pubes, five pairs. The ischium is united to the pubes in one pair.

Upper Extremity.—Scapulæ, five pairs, in well marked gradation in size. Humeri, ulnæ, radii, five pairs of each; the heads of the bones, and in some the condyles, being not yet ossified, are absent. There are numerous small bones, which probably represent carpus and tarsus, etc.

Lower Extremity.—Femora, tibiæ, fibulæ, five pairs of each; several loose heads of the larger bones.

Remains not Human.—Part of lower jaw of boar; tusks and teeth of same; tooth of horse; tooth of sheep; part of pelvis of a small animal.

Four pieces of pottery, one bearing the marks of the lathe, and stained on the outside. A few pieces of flint.

Measurements of the Three Restored Skulls.

A and B, the ones found in the kist; C, the one under the large stone.

	A.	B.	C.
Longitudinal arc (from glabella to occipital protuberance)	14.1	13.7	13.2
Longitudinal diameter (from ditto to ditto)	7.4	7.2	6.6
Transverse arc (from one auditory foramen to other)	12.9	12.3	13.3
Transverse diameter (from ditto to ditto)	4.6	4.2	5.0
Circumference (from glabella round occipital protuberance)	20.6	20.0	20.1
Extreme length	7.9	7.5	7.1
Extreme breadth	5.3	5.0	5.6
Extreme circumference	21.6	20.6	20.5
Capacity in cubic inches (about)	81.6	64.6	81.0
"Cephalic index"*	67	66	78

* These skulls are those referred to by Dr. Thurnam in his memoir read before the Anthropological Society, *Memoirs*, etc., vol. i, p. 131, note "near Charlton Abbots."

NOTE ON THE CHILDREN'S BONES.

The children's bones, I believe, have never been moved from the time the bodies were first laid under the large flat stones over the entrance. I base this opinion on the fact that none of the bones are broken; the flat bones, especially the cranial bones, are warped and flattened, and some of the long bones are corroded by time, but none are broken. Again, all the bones requisite for the building up the five skeletons, I believe to be present, except such small ones (those of the hand and foot, for instance) as must have crumbled away in the course of years. Had such delicate bones been even slightly disturbed, they could not have been found in their present perfect condition.

The regular gradation in the age of the children (beautifully shown in the jaws and long bones, and in the various pelvic bones) from the infant to the youth of seven, seems to indicate that they were all of one family; if so, doubtless all buried at the same time.

Quæro.—Was a whole family sacrificed, and then placed under the great flat stone which served as an altar?

Captain BURTON referred to the work recently published by the Society, Carl Vogt's *Lectures on Man*. He felt sure they must be unanimous in the opinion that a great boon had been conferred on science by their excellent president in editing it, and that they would all join in a vote of thanks to him.

Dr. HUNT acknowledged the compliment, and observed that he only held the office of President of the society until some other person, more worthy of the office, could take his place. He hoped that all the members present would attend the anniversary meeting, to be held that day fortnight, when the important question would be taken into consideration, of the steps to be adopted to obtain separate recognition of Anthropological science at the meetings of the British Association for the Advancement of Science. He also announced that Mr. Laing intended to have casts made of the skulls found at Caithness, and that he had kindly offered to send some to this society to be placed in their museum. He proposed the thanks of the meeting to Mr. Laing for his liberal offer as well as for his valuable communication.

The thanks having been given the meeting then adjourned.

GENERAL ANNIVERSARY MEETING.

JANUARY 3RD, 1865.

DR. JAMES HUNT, PRESIDENT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The TREASURER submitted the following Balance Sheet.

*Financial Statement of the Anthropological Society of London
for 1864.*

Dr.	£	s.	d.	Cr.	£	s.	d.
Received 337 Annual Subscriptions for 1864.....	709	8	0	Paid for printing, lithography, and woodcuts	000	15	0
Nine defaulters from 1863 paid up	18	18	0	„ Stationery and binding	21	9	2
Twenty-two subscriptions for 1863 at present in arrear	46	4	0	Rent of apartments.....	32	10	0
One hundred and fourteen subscriptions for 1864 at present in arrear	239	8	0	Mr. Ayres, for attendance, etc. etc.....	45	14	9
Twelve Life Compositions of £21	252	0	0	Postages, advertisements, and sundries.....	63	17	6½
Donations for Library Fund:				Reporting	17	6	6
H. Hotze	5	5	0	Furniture	50	0	0
J. W. Conrad Cox	10	0	0	Mr. Blake's expenses to Bath	12	18	0
A. Ramsay, junr.	1	0	0	„ Salary	25	0	0
J. Peiser	5	0	0	Boy's ditto.....	2	2	6
H. Johnson.....	10	0	0	Paid for casts of New Zealanders	7	4	0
J. Moore	1	1	0	Purchases for Library in application of Hotze's Fund	3	18	2
Donations for Gorilla Fund	16	7	0	Gorilla Fund paid out.....	15	0	0
Donation from A. Trevelyan, Esq.	1	0	0	Temporary assistance for Secretaries in 1864	126	7	3
Subscriptions for 1865 paid in advance	12	12	0	Owing for Assistant-Secretary's salary	25	0	0
For Sale of Journal and Waitz	7*	5	4	„ for rent	32	10	0
Average value of present stock in hand:				„ for printing (Pouchet)	96	15	8
Longman (Waitz).....	116	5	0	„ „ (Vogt) ...	211	12	3
„ (Broca)	36	2	7	„ for printing (general account)	138	8	5
„ (Pouchet)	57	12	0	„ Richard, stationer ...	30	7	0
„ (Vogt)	126	1	2	„ for bookbinding	11	19	8
Trübner (Miscellaneous Publications)	25	0	0	„ on miscellaneous accounts	10	2	0
				Balance in favour of Socy.	115	11	2½
	£1696	9	1		£1696	9	1

R. S. CHARNOCK, *Treasurer.*

Examined and approved.

H. J. C. BEAVAN, }
L. OWEN PIKE, } *Auditors.*

January 3, 1865.

The following report was then read.

SECOND ANNUAL REPORT OF THE ANTHROPOLOGICAL SOCIETY OF LONDON.

JANUARY 3RD, 1865.

THE Council of the Anthropological Society of London have great pleasure to report to the Fellows the continued success and prosperity of the Society. The increase in the number of members having produced a corresponding augmentation in the Society's Finances, it has been endeavoured during the past year to attempt to carry out some of the objects for which the Society was founded, and to lay that substantial groundwork of organisation on which its future prosperity and scientific efficiency must depend.

MEETINGS. During the year 1864, fifteen Ordinary Meetings of the Society have been held, at which thirty-five Papers have been read, consisting of the following:

- R. LEE, Esq., F. and Loc. Sec. A.S.L., On the Extinction of Races.
- T. BENDYSHE, Esq., M.A., F.A.S.L., On the Extinction of Races.
- Dr. C. G. CARUS, Hon. F.A.S.L., On the Construction of the Upper Jaw in the Skull of a Greenlander (with report thereon by C. CARTER BLAKE, F.G.S.)
- J. REDDIE, Esq., F.A.S.L., On Anthropological Desiderata.
- Rev. J. M. JOASS, M.A., On some Prehistoric Dwellings in Ross-shire, with an Introduction by G. E. ROBERTS, Esq., F.G.S.
- C. CARTER BLAKE, Esq., F.G.S., On the Alleged Peculiar Characters and Assumed Antiquity of the Human Cranium from the Neanderthal.
- A. R. WALLACE, Esq., F.Z.S., On the Origin of Human Races, etc.
- E. DE SCHLAGINTWEIT, On some Ethnographical Casts.
- Dr. J. SHORTT, On the Domber.
- L. O. PIKE, Esq., M.A., F.A.S.L., on the Places of Sciences of Mind and Language in the Science of Man.
- H. F. J. GUPPY, Esq., F.A.S.L., On the Capabilities of the Negro for Civilisation.
- Rev. F. W. FARRAR, M.A., F.A.S.L., On the Universality of Belief in a God, and in a Future State.
- Rev. F. W. FARRAR, M.A., F.A.S.L., On Hybridity.
- Captain R. F. BURTON, V.P.A.S.L., and C. CARTER BLAKE, Esq., F.G.S., On Skulls from Annabom in the West African Seas.
- Dr. J. THURNAM, F.S.A., On the Two Principal Forms of Crania in the Early Gauls and Britons.
- W. BOLLAEET, Esq., F.A.S.L., On the Palæography of the New World.
- T. BENDYSHE, Esq., M.A., F.A.S.L., On the Precautions which ought to be taken to ensure the Health of British Troops, had any been sent to Copenhagen.
- GEORGE E. ROBERTS, Esq., and J. BOLTON, Esq., On the Kirkhead Cave, near Ulverstone.
- C. CARTER BLAKE, Esq., F.G.S., and GEORGE E. ROBERTS, Esq., F.G.S., On Human Remains from Peterborough.

- W. BOLLAERT, Esq., F.A.S.L., On the Alleged Introduction of Syphilis from the New World.
- G. D. GIBB, Esq., M.D., M.A., LL.D., F.G.S., On Extreme Hypertrophy of the Skull.
- GEORGE E. ROBERTS, Esq., F.G.S., and C. CARTER BLAKE, F.G.S., On a Jaw from Buildwas Abbey, co. Salop.
- C. CARTER BLAKE, Esq., F.G.S., On Human Remains from Kent's Hole, Torquay.
- C. CARTER BLAKE, Esq., F.G.S., On Human Remains from a Bone Cave in Brazil.
- Dr. PAUL BROCA, General Secretary to the Anthropological Society of Paris, On Skulls from the Basque Provinces, and from a Cave of the Bronze Period.
- S. E. BOUVIERIE-PUSEY, Esq., F.A.S.L., On the Negro in his Relation to Civilised Society.
- C. CARTER BLAKE, Esq., F.G.S., Report on the Anthropological Papers read at the Bath Meeting of the British Association.
- Captain BURTON, V.P.A.S.L., Notes on some Anthropological Matters connected with the Dahomans.
- W. T. PRITCHARD, Esq., F.A.S.L., F.R.G.S., On Viti and its Inhabitants.
- W. BOLLAERT, Esq., On the Astronomy of the Red Man of the New World.
- Dr. BARNARD DAVIS, F.S.A., The Neanderthal Skull; its Peculiar Formation considered Anatomically.
- SAMUEL LAING, Esq., F.G.S., On the Prehistoric Remains of Caithness.
- GEORGE E. ROBERTS, Esq., F.G.S., Hon. Sec. A.S.L., On the Discovery of large Kistvaens in the Muckle Heog, in the Island of Unst, Shetland, containing Urns of Chloritic Schist; with Notes upon the Human Remains by C. CARTER BLAKE, Esq., F.G.S.
- GEORGE E. ROBERTS, F.G.S., Hon. Sec. A.S.L., On Prehistoric Hut Circles.
- Dr. H. BIRD, On Human Remains from Tumuli at Cheltenham.

The discussions on the above papers have been of great interest, and have been joined in by a large number of Fellows and visitors.

SALARIED OFFICER. The increase of two hundred and twenty-eight Fellows in the Society's numbers during the past year, and the consequent greater amount of labour which devolved upon the Hon. Secretaries, as well as the necessity for the constant attendance of some responsible and competent person, induced the Council to deem the appointment of a salaried Officer advisable, who should act as Curator, Librarian, and Assistant-Secretary; the salary to be fixed at £100 per annum, until the number of Fellows shall have reached five hundred, when it is proposed to increase it to £150. Candidates having been invited to offer themselves for the post, the Council unanimously declared for Mr. C. Carter Blake. This gentleman's great zeal and constant efforts on behalf of the Society from its foundation, and his devotion to Anthropological studies, especially fitted him for the office, which he has held (since its creation in June)

with so much advantage to the Society, that the Council feel confident they have the hearty approval of their choice from every Fellow of the Society.

TRANSLATIONS. The following translations have been published under the Society's auspices during the year 1864:

Broca, Dr. Paul, On the Phenomena of Hybridity in the Genus Homo. Edited from the French by C. Carter Blake, F.G.S., F. and Assistant-Secretary A.S.L.

Pouchet, Georges, On the Plurality of the Human Race. Edited from the French (Second Edition) by H. J. C. Beavan, Esq., F.R.G.S., F.A.S.L.

Vogt, Professor Carl, Lectures on Man; his Place in Creation and in the History of the Earth. Edited by Dr. James Hunt, F.S.A., F.R.S.L., Pres. A.S.L.

The publication of the last work calls for a few remarks in this Report. The Council cannot but congratulate the Fellows upon the judicious editorship of a work, in which views of nature so divergent from the usual channels of thought are given with such boldness and nakedness as will inevitably lead to great differences of opinion; the Council, however, trust that all will tender their best thanks to the President for his excellent editorship, and more especially for his lucid and able statement, in the dedication, of the origin of the Society, and its present relations to others of a kindred nature in England and abroad.

The Life and Anthropological Treatises of J. F. Blumenbach, translated and edited by T. Bendyshe, Esq., will be issued to the Fellows during the present month.

A volume of Memoirs is in the press, and will be ready early in the year. It contains several papers of interest, and some of great value; all of which have been read, either *in extenso*, or in abstract, at the evening meetings of the Society. Some of the Memoirs are illustrated copiously with lithographic plates and woodcuts.

Before the conclusion of this session, the Council also hope to have ready a volume by Professor Gastaldi, On Objects of High Antiquity found in the Turbaries and Marl Beds of Italy. Translated and edited by Charles Harcourt Chambers, Esq., M.A.

There is also ready for publication a translation of Dr. Gratiolet's important Memoir, On the Cerebral Convolutions of Man and the *Primates*. Translated and edited by Dr. D. H. Tuke. Whether this volume is issued to the Fellows of the Society during the ensuing year must depend entirely on the finances of the Society, which will be considerably influenced by the accession of new members.

The Council have decided on publishing a translation of Retzius's complete works early in 1866, edited by Alfred Higgins, Esq., Hon. For. Sec. A.S.L. In 1867, they propose to publish the second volume of Professor Waitz's *Anthropologie der Naturvölker*, to be edited by J. F. Collingwood, Esq.; to which, they are glad to be able to report, Captain Burton has undertaken to write a preface, and to add voluminous notes. This volume treats entirely of African races; and with the notes of so experienced an observer as your senior

Vice-President, the Council anticipate that the original value of the work will be very much increased.

The Council have also been for some time considering a plan proposed by Mr. Bendyshe, for the issue of an Encyclopædia of Anthropology. After mature consideration, the Council have undertaken to publish the first volume of this work early in the year 1868. The volume will be limited to general and biographical articles, and will be complete in itself.

ANTHROPOLOGICAL REVIEW. The *Anthropological Review and Journal of the Society* has been punctually supplied to each Fellow quarterly. The completion of the second volume, containing Nos. 4 to 7 inclusive, of larger size than the first, and of equal interest and merit, gives abundant evidence that the management is still conducted with the same liberal spirit that characterised its first issue, and gave promise of a success which is now fully realised. The Council, therefore, feel that they may well congratulate the Fellows on a connection so happily conceived and so judiciously maintained. That portion of the volume for which alone the Society is responsible, viz., its journal, has been placed under the care of our Assistant-Secretary, Mr. C. Carter Blake, and it is to be hoped that his editorship of so important a section of the Society's Transactions will secure for it that independence which experience has shown is most desirable.

A proposition having been submitted to the Council, that the Society should become the proprietors of the *Anthropological Review*, the Council gave to it their deep and careful consideration during the summer of the past year, and the result of their deliberations may be expressed in the following resolution, which was passed by the Council on the 14th of June last:—

“That the Council considers it would be highly detrimental to the best interests of anthropological science that the *Anthropological Review* should ever become the property of the Anthropological Society.”

APARTMENTS. The offer which was made by the Royal Society of Literature to let the suite of rooms situated on the second floor of No. 4, St. Martin's Place, at a rental of £130 per annum, was accepted, and the Council have to report that they have been in possession since Midsummer last. The finances of the Society, although in a healthy state, were perhaps hardly such as to justify the Council in entering upon the additional expense for another quarter or so, which these rooms entail, had they not thought that so excellent an opportunity of carrying out the important scheme of forming a museum and library should not be lost, even if it were at some sacrifice. The rapid growth of the Society, together with an increasing wish on the part of many Fellows to contribute, as soon as a proper room is ready for the reception of books and specimens, would seem fully to warrant the Council's decision. The daily attendance of many active members is a fact which speaks for itself, and may be cited as a further justification.

MUSEUM. The lack of exhibition-space which the Society has possessed, has precluded that attention being yet paid to the Museum,

which its future importance deserves. At present the specimens, many of which are of the highest possible scientific value, and one or two unique in European collections, have been placed temporarily in a small room adjacent to the Library. The Council hope that the increased finances of the Society during the year 1865 will warrant such an expenditure upon the necessary fittings and furniture of the Museum as will be requisite to exhibit adequately the whole of the collection.

The Council must here allude to a few of the more valuable specimens which have been presented.

The gift of an extensive series of flint implements from the neighbourhood of St. Acheul, comprising many unique specimens from the drift, a large series of flints from the peat beds, and a highly instructive collection of modern forgeries, by our President, Dr. James Hunt, calls for especial notice.

Our corresponding member, Dr. Hyrtl, has given us eight highly valuable skulls from the Austrian provinces, being the first series of examples of the skulls of the brachycephalic races of south-eastern Europe, which has been yet publicly exhibited in England.

M. P. Du Chaillu, our Local Secretary at the Gaboon, has presented us with an interesting series of negro skulls from that locality; whilst some specimens of prehistoric age from the Shetland Islands have been deposited in our Museum by George E. Roberts, Esq., our Honorary Secretary.

Donations have been received for the Museum from the following gentlemen :

Dr. James Hunt (President), M. P. Du Chaillu, Professor Hyrtl, W. W. Boreham, Esq., Dr. Rooke, H. Leach, Esq., Dr. Canton, the Anthropological Society of Paris, George E. Roberts, Esq., J. Hutchinson, Esq., Dr. F. Royston Fairbank, Major Rickards, W. Bollaert, Esq., J. Maclelland, Esq., J. Hutchinson, Esq.

LIBRARY. Since the last annual report the condition of the library has materially improved. It now amounts to more than 500 volumes, which have been all bound and stamped, and placed in two large book-cases, in the Society's Library. A catalogue is in course of preparation, which will be arranged both according to subjects and alphabetically. The invitation from the Council last year that the Fellows should contribute towards the library those works which might be intrinsically of little value, and yet might be of great use in an anthropological library, has been responded to from several members; but the Council would nevertheless suggest again to the majority of the Fellows the great benefits which would result from the establishment of one central anthropological library in the metropolis; an undertaking to which it is practicable for each Fellow to contribute to the best of his ability.

Donations have been received for the library from the following gentlemen :

Dr. J. Hunt (President), Captain R. F. Burton, Sir Charles Nicholson, Bart., M. Duhoussat, M. Morlot, G. Witt, Esq., J. Dickinson, Esq., George Tate, Esq., M. A. de Quatrefages, Prof. Ernest Brücke,

J. S. Brickwood, Esq., J. Reddie, Esq., W. A. Nunes, Esq., H. G. Atkinson, Esq., Prof. R. Wagner, M. Georges Pouchet, J. F. Col-lingwood, Esq., T. Bendyshe, Esq., Dr. F. R. Fairbank, Professor A. Ecker, Dr. Ludwig Beck, Dr. Joulín, M. Digby Wyatt, Esq., Dr. Karl Scherzer, Professor Giustiniano Nicolucci, Dr. Ryan Tenison, Dr. Boudin, C. Carter Blake, Esq., Dr. Perier, J. W. Conrad Cox, Esq., A. Michie, Esq., the Rev. Dr. M. P. Clifford, W. Bollaert, Esq., Dr. J. Barnard Davis, G. F. Rankin, Esq., W. J. Hooper, Esq.

DONATIONS. A special subscription list has been opened for the museum and library, commenced by the following gentlemen:—

J. W. Conrad Cox, Esq., B.A., £10; A. Ramsay, Esq., jun., £1; Captain R. F. Burton, V.P.A.S.L., £5; Samuel Laing, Esq., F.G.S., £10; S. E. Bouverie-Pusey, Esq., £50; Henry Johnson, Esq., £10; John Moore, Esq., £1 1s.; J. Peiser, Esq., £5; Rev. E. Spooner, D.D., £1 (annually); Rev. P. H. Newnham, M.A., £1.

As a very short time will probably elapse before the large room of the Society is fitted in such a manner as to receive the many valuable presents that have already been made, it is hoped that the liberal example of these gentlemen may be followed by others who have the importance of a typical museum and good reference library in view.

COMMITTEES. *Publishing Committee.* The Council have delegated the chief management of the Society's publications to a committee; and the work which has devolved on them may best be seen by a reference to the minutes of this committee. The Council would now recommend that three members of the committee should be elected for a definite number of years, or be permanent; and that two other members should be appointed by the Council annually. The Council consider this to be especially desirable, as it would help to ensure the engagements of the Council of one year being carried out by their successors. The Council feel that their best thanks are due to the Publishing Committee for their labours during the past year, which have materially assisted to lessen their own work.

The Furnishing Committee. The sum of £50 was voted in July last to the committee appointed for the purpose of furnishing the new rooms of the Society; and they have to report that the one set apart for the use of the Secretaries has been supplied with the necessary articles for carrying on their business. A small balance of £1 7s. 6d. only remains in hand. The committee now recommend that a further sum be voted to enable them immediately to commence the very desirable work of furnishing the large room for the reception and proper preservation of the many valuable gifts already cited, for the meetings of Council and committees, and for the use of the Fellows generally.

MEMBERS. The Council have elected 228 members during the past year. On the other hand, eleven resignations have been received. The total number of Fellows on the Society's books amounts at the present time to 453.

HONORARY FELLOWS. Twenty-six honorary Fellows are now inscribed on the books. The Society has experienced a loss during the

past year by the deaths of Professor Theodor Waitz of Marburg, and of M. Rudolph Wagner of Göttingen. To fill the two vacancies thus created, Professor Carl Vogt of Geneva, and Professor C. G. Carus, have been selected.

CORRESPONDING MEMBERS. Forty corresponding members are now enrolled, seven of which have been elected during the year 1864. Two of the corresponding members have been selected to fill the vacancies in the list of honorary members. The following are the gentlemen who have been added to the list of corresponding members:—M. le Commandant Duhoussset; Dr. E. Dally; Professor Nicollucci; Dr. Ludwig Büchner; Professor His; Professor Moleschott; Professor Burmeister.

LOCAL SECRETARIES. Twenty-seven Local Secretaries in England are now enrolled, five of which have been elected during the past year. Thirty-six Local Secretaries abroad are enrolled, sixteen of which have been appointed during the past year.

SOCIETIES. The list of Societies exchanging publications remains the same as last year.

RELATIONS WITH OTHER SOCIETIES. It having come to the knowledge of our President that some members of the Ethnological Society had intimated their wish for its amalgamation with the Anthropological, he proposed a meeting of the two societies to discuss the practicability of such a course. Accordingly, delegates were appointed—viz., the officers and an independent member of each Council; and a meeting took place on November 21st. It having been suggested by the Ethnological Society that we should propose a scheme for consideration, the subjoined was submitted.

Scheme for the Amalgamation of the Ethnological and Anthropological Societies of London.

I. That a union of the Ethnological and Anthropological Societies be effected; that a charter be petitioned for the joint Society, to be styled the Anthropological Society of London.

II. That all members of either Society become Fellows of the Anthropological Society of London.

III. That all members of either Society at present paying £2:2 annually shall be entitled to all the privileges of the new Society.

IV. That those members of the Ethnological Society at present paying one guinea annually shall be entitled to the privileges of Fellows, with the exception of receiving the translations and *Journal*.

V. That the members of the Ethnological Society, who have compounded their subscriptions by the payment of £21, shall be entitled to the ordinary privileges of the Society—the volume of *Memoirs* and the *Translations*, or *Review and Journal*, as they may select.

VI. That those compounders of the Ethnological Society who have paid less than £21 shall be entitled only to the volume of *Memoirs*.

VII. That a committee, to be named hereafter, be appointed to amalgamate the lists of honorary members of the two societies.

VIII. That the rules of the Anthropological Society of London be based upon those of the Anthropological Society.

ix. That the museums and libraries of the two societies be united.

x. That a committee of six members of each Society be appointed by their respective Councils to nominate the officers and Council of the new Society; and that the first President and senior Honorary Secretary be selected from the present officers and Council of the Ethnological Society.

A counter plan was put in by the Ethnological delegates; but a disagreement as to the merits of the terms anthropology and ethnology cut short all further discussion. It should be stated that, had the name for the new amalgamated Society been agreed on, the counter plan was so utterly impracticable that the delegates on behalf of the Anthropological Society could not have entertained it for an instant.

OFFICERS. Mr. Blake having resigned his office of honorary secretary, the Council elected Mr. George E. Roberts to succeed him in this important post; and they anticipate great benefit to the Society from that gentleman's intimate knowledge of the working of other scientific societies.

The Council feel that the best thanks of the Society are especially due to Mr. J. Frederick Collingwood for the assiduous attention with which he has discharged his important duties as one of the honorary secretaries since a very early date in the history of the Society. As Mr. Collingwood will not be able to give the same undivided attention to his secretarial duties, the Council propose that his name should be added to the list of vice-presidents, and that Mr. Bollaert should be elected to fill the office thus becoming vacant.

The Council also are anxious to testify their appreciation of the important services rendered the Society by their very careful treasurer, Dr. Charnock.

The President expressed to the Council his wish to resign his office; but the Council respectfully declined to agree to this. They consider that the forthcoming year will be one of great anxiety to the Council, and that his services will be required to bring the negotiations with the British Association to a successful issue. Directly the Council feel that they can dispense with his services, they will feel bound to do so.

The Council have entrusted to the President a resolution respecting the formation of a separate section for anthropology in the British Association; and, in moving this resolution, the Society will be fully informed of the steps hitherto taken by the Council in this matter. We here merely append a copy of the instructions forwarded to the official delegate of the Society at the recent Bath meeting of the British Association, by our orders.

*Anthropological Society of London, 4, St. Martin's Place,
September 10th, 1864.*

SIR,—We are deputed by the Council of the above Society to hand to you the following instructions respecting the conduct of the business connected with the forthcoming meeting of the British Association.

Early on Tuesday, September 13th, you will proceed to Bath, and as soon as possible seek an interview with the honorary secretaries or assistant general secretary, and hand in copy of the enclosed list of delegates. (See Note 1.)

You will at the same time state that Dr. Hunt is prevented by ill health from attending, and inform them that you are deputed by the Anthropological Society to move the resolution which stands in his name respecting the recognition of anthropology in Section E.

Should this resolution be passed by the General Committee, you will submit the various papers (not read before in London) which are in charge of the Society.

Should, however, the Committee of the Association decline to recognise anthropology either in Section E or in some other suitable manner, you must return the papers to the Society's rooms. In any case, you will remain at the Association until the conclusion of the meeting.

Should ethnological papers be submitted to the Association which have before been read in London, you are requested to raise a question of the desirability of this proceeding, both in the sectional committee and on the meeting of the section. You will continue to raise the question as often as this shall happen.

Should the resolution proposed by Dr. Hunt not be passed, you are requested, at the second meeting of the General Committee, to give notice of your intention, at the succeeding meeting, to move the following resolution:—"That Section E shall in future be devoted to geography and anthropology."

We are, sir, yours very faithfully,

JAMES HUNT, *Chairman.*

J. FRED. COLLINGWOOD, *Honorary Secretary.*

To C. Carter Blake, Esq., F.G.S., F.A.S.L., Assistant Secretary
of the Anthropological Society of London.

*Anthropological Society of London, 4, St. Martin's Place, W.C.,
September 17th, 1864.*

SIR,—We beg to acknowledge the receipt of your report, informing us that the resolution you were requested to propose to the General Committee of the British Association was not carried.

Under the circumstances, we beg you will not carry out the last paragraph of the instructions; and, instead of proposing that Section E should be devoted to geography and anthropology, you will give notice of your intention to propose, "That a special section be created, entitled Section H, to be devoted to anthropology."

We are, sir, yours very faithfully,

JAMES HUNT, *Chairman.*

J. FRED. COLLINGWOOD, *Honorary Secretary.*

To C. Carter Blake, Esq., Assistant Secretary of the
Anthropological Society, London.

In concluding the Report, it only remains for the Council to acknowledge the many acts of kindness and the good services they have re-

ceived from many members of the Society. A large share of the success which the past year commemorates, the Council feel to be due to the harmony of thought and action which exists between the responsible and irresponsible members; and, should the general meeting think fit to approve our efforts on this our second anniversary, we may confidently promise a continued prosperity and a prouder position for the Society at its next general meeting.

Signed on behalf of the Council,

JAMES HUNT, *Chairman*.

Mr. R. LEE moved—"That the Report of Council be adopted." He said that he had heard with great pleasure that portion of the report read which treated of the failure of the attempt to amalgamate the Ethnological and Anthropological Societies. He thought that we should congratulate ourselves exceedingly on this failure, as if carried into effect, the proposed amalgamated Society would have been composed of two discrepant elements, and would have united a young and vigorous Society with one that showed no signs of life or animation. Looking forward to the next meeting of the British Association, he thought that every member should unite to use the best influence at their disposal with the General Committee, to induce that body to give that proper recognition to anthropological science, on which the future prosperity of the Society must depend.

The motion was seconded by Lieut. FIREBRACE, R.E., and unanimously adopted.

The PRESIDENT appointed the Rev. F. W. Farrar, M.A., and George F. Rolph, Esq., to be scrutineers for the annual ballot.

Mr. BOLLAERT moved, and Mr. BEAVAN seconded,—“That the thanks of the Society be given to the retiring members of Council—Sir Charles Nicholson, Bart., V.P., the Duke of Roussillon, V.P., and Professor G. W. Leitner, for their services during the past year.” Carried unanimously.

Mr. J. SMITH moved, and Mr. A. RAMSAY, jun., seconded—“That the thanks of the Society be given to the President, Vice-President, officers, and Council, for their services during the past year.” Carried unanimously.

Dr. Hunt, Mr. J. F. Collingwood, Mr. Bollaert (on behalf of the Council) and Mr. Carter Blake, briefly responded.

Mr. BENDYSHE moved, and Mr. DIBLEY seconded, that the thanks of the Society be given to the Auditors.

The PRESIDENT then delivered the Annual Address.

The President's Address.

GENTLEMEN,—We are met this day to celebrate our second anniversary; and it may, perhaps, be useful if we take this opportunity of glancing at our labours during the past year, with a view of appreciating what yet remains for us to do. It is not for me to give any opinion as to the value of what we have done, or how far our labours have contributed to advance the cause of truth and science. I shall confine myself to a narration of undisputed facts respecting our past

work and the present state of the Society, and shall conclude with some general observations respecting the future development of anthropological science in this country.

The Fellows are well aware of all that has been published under the auspices of the Society; but they are not so well acquainted with the enormous labours which have devolved on the officers and council in order to place the Society in a permanent and satisfactory working order. Although our Society is still in its infancy, this has, to a great extent, been already accomplished. Twelve months ago, the plan of our Society was scarcely understood by many of the fellows; but during the past year it has gradually unfolded itself, and we now only await the issue of the first volume of our *Memoirs* to fully realise all the objects contemplated. During the past year it has been an especial object to set the Society on a permanently satisfactory footing, and this has been accomplished to a great extent, and without at all interfering with our present work. Although the first year's existence of the Society was one of great anxiety and labour, the second year has, therefore, required equal care and attention. Only one of the objects contemplated by the Society has hitherto proved a failure, namely, the appointment of committees to report on various subjects. None of these committees have as yet sent in any report. This may, however, be to a great extent explained by the fact that it is only recently we have had convenience for the meeting of such committees, and, under altered circumstances during the present year, the result may be very different.

At our last, or first anniversary, but little had been done for the establishment of a Museum and Library; but during the past year we have secured some very suitable apartments, and our Library promises to become most useful to the students of our science. Our Museum also progresses; but we require to establish more intimate relations with our foreign local secretaries before we can have a Museum worthy of the Society and of anthropological science.

Until a few months ago, the whole work of the Society devolved upon the honorary officers, and an enormous amount of work and attention was given by them. And here let me congratulate the Society on having been able to secure the entire services of Mr. C. Carter Blake for the Anthropological Society. I think it alike fortunate for the Society and for that gentleman that he is thus enabled to consecrate his powers to such a noble science as our Society represents. It is not sufficiently known how much time and labour Mr. J. Frederick Collingwood has given to his official duties, and how greatly the Society is his debtor for the success which has attended it. There have been periods in the Society's history, brief as it is, when the moral courage, combined with great discretion, which that gentleman so eminently possesses, has been of the greatest service. Nor must I omit to mention in this place the important and arduous labours of our treasurer, Dr. Charnock. If there has been any proposal which would benefit the Society, he has always supported it, while by exercising a judicious caution on subjects of less moment, he

has been enabled to present to you the favourable account of our finances which you have just heard. If I do not allude to other members of the Society individually, it is not because I am unconscious of the services which they have rendered; but that an opportunity has rarely presented itself to me of publicly testifying how much of our present success may be traced to the labours of the three officers I have named.

Having thus briefly touched on our past work and its present state, I shall proceed to make some remarks on the development of future anthropology in England, and the duties of our Society at the present juncture.

In my introductory address I dwelt with much emphasis on the necessity for a correct and definite terminology of our science, and proposed a committee to report thereon. It was, however, soon discovered that the present state of the science is not so advanced as to enable us to decide on this important subject. If we could determine what should be the terminology of our science, we should at the same time settle the most disputed points of anthropology. Such terms, therefore, as "variety," "race," "species," can only be defined as our science advances, when some general agreement may be, perhaps, arrived at respecting the meaning to be attached to them. To use the excellent metaphor of the illustrious Von Baer*:—"Every great scientific problem is like a fortification, to which one can only approach slowly by running trenches. Generally people think at first that it is possible to take it by assault, but it very soon becomes clear that it is not the real thing, but only the appearance of it, only the image in our mind's eye which has been understood. Let us, however, go to work and sap slowly onwards, protected by the gabions of criticism, and at last we shall, in time, slowly get nearer and see the end more clearly before us, and meanwhile have got a firm footing in the outer work. If we can never completely take the fortress by digging trenches, the reason may be, to stick to our metaphor, that nature is no craven commander who surrenders as soon as the outworks are taken."

This admirable metaphor has other applications in anthropological science, besides that of endeavouring to fix the terminology; and I would especially call Professor Huxley's attention to it.

While we must leave the great problem as to the meaning of "race" or "species" to be worked out by future researches, we shall still be doing good service if we survey the more general terms in use, and to which so much theoretical importance does not attach.

First of all, it is necessary for us to appreciate clearly the bearing and extent of our own science. After what I have before said on this subject, I should have hardly felt it necessary to dwell upon it here but for the extraordinary statements which were recently made at the meeting of

* I have taken this from a manuscript translation, by Mr. Bendyshe, of an article on the "Ethnographico-Craniological" collection of the Imperial Academy of St. Petersburg, which appeared in the *Bulletin de la Classe Physico-Mathématique de l'Académie Impériale des Sciences de St. Pétersbourg*, tom. xvii.

the British Association. Although in my introductory address I gave it as my opinion that "it is utterly impossible for the science of man to make any progress, [in the British Association] while it takes only a second and subordinate place in Section E," I, nevertheless, was anxious not to increase the number of sections, and therefore gave notice of a motion to incorporate anthropology into that section. I did this under the impression that by uniting with others interested in a branch of our science, we might be better able to protest against the undue power which has hitherto been assumed by the geographers. The Council of our Society ordered their delegate to support the resolution, as I was prevented from attending. I hardly know whether it is a cause for regret or the reverse that this motion was not carried. When I proposed it, I was fully convinced that it could only be a temporary arrangement; and that the science of man must eventually obtain a separate section.

It was with little surprise that we learned that this resolution was not carried by the General Committee, and in anticipation of such a result, we gave instructions to the official delegate of the Society to give notice of a motion—"That a separate section shall be formed, entitled Section H, to be devoted especially to anthropology."

Before I make any remarks on this point, I must, in justice to Mr. Blake, say that he carried out his orders most faithfully. Amongst other instructions given to that gentleman was the following:—"Should, however, the Committee of the Association decline to recognise anthropology, either in Section E or in some other suitable manner, you will return the papers to the Society's apartments." In the remarks made by Mr. Blake to the General Committee, these instructions were mentioned, and were by many construed into a threat on the part either of the official delegate or of the Society. I am sure it was never intended as such either by Mr. Blake or by the Committee of the Society from whom he received these instructions.

I need not remind any one who is at all acquainted with the working of Section E, of the manner in which papers bearing on the science of man have been treated since 1851. But to those unacquainted with this subject I will give a few facts which will make it clearer. I wish also to show that the dissatisfaction respecting the position of the science of man at the Association is of no recent date. At the formation of the British Association in 1831, no arrangement was made for ethnology, for the best of reasons, on which I shall have presently a few words to say. In 1844, a sub-section for ethnology was appointed, in connection with Section D (zoology and botany). But this sub-section was not considered suitable by the ethnologists of that day, for we find that in the same year, when the Association met at York, a proposal was made by Dr. Richard King, the honorary secretary of the Ethnological Society, for a distinct section for ethnology, and this, although supported by Dr. Prichard and others, was negatived by the Committee of the Association. Dr. Prichard, a few years later, makes the following observations on this point* :—

* Anniversary Address, 1847, *Trans. of Ethno. Soc.*, vol. i, p. 301.

"In the meetings of the British Association alone, ethnology claims but a subordinate place in the section of Natural History. The reason assigned for this arrangement is, that the natural history of man is a part of the natural history of living creatures, and that there is an obvious propriety in referring to one division the history of all organised beings, namely, of all those beings which exist in successive generations, destined one after another to rise, flourish, and decay—a lot to which are alike subjected the lords of the creation and the worms on which they tread, and the plants and animals which they consume for their daily food. But though the natural history of man in a technical arrangement, be made a department of zoology, it is easy to show that the main purport of ethnological inquiries is one distinct from zoology; and the reference of both these subjects to one section of the British Association, can only have arisen from inadvertence."

These remarks were made in 1847, and Dr. Prichard's death at the end of the following year unfortunately prevented him from again advocating the claims of his favourite science to a special section. The students of ethnology were at that time very few, and the death of their chief rendered any opposition on their part to being entirely extinguished quite out of the question. The destroying angel who annihilated the Ethnological sub-section was Sir Roderick Murchison, who takes honour to himself for this exploit. Addressing the British Association at Oxford in 1860, he said:—

"It fell to my lot, in 1858, to offer a few words to the geographers and ethnologists who were assembled at Leeds. I then explained to the assembled members the satisfaction I felt in proposing, at the Edinburgh meeting in 1850, the formation of a separate section for geography and ethnography, to represent the letter E, left vacant by our medical associates who had seceded to found an association of their own. Until that year geography had been attached exclusively to the geological section, in which, in truth, it was submerged by the numerous memoirs of my brethren of the rocks."

Now, Sir Roderick did not like geography to be submerged in geology, and yet he felt no compunction in submerging ethnographical or ethnological papers amongst geographical ones. We give great honour to him for what he has done for geographical science, but I know of no ethnologist or anthropologist who will thank him for destroying the sub-section of ethnology. There is much in our science which can never be made popular, and for which the "Ladies' Section, E," is hardly the fit place. Thus we find the official reporter of the doings of Section E, informing the Ethnological Society in 1861, that at the meeting in Manchester in the same year papers were read before section E, on subjects but little interesting or instructive to students of the science of man, which, says the reporter,* "consisted of questions of railroads, telegraphs, ship-canal, earth-

* See Abstract of Report on Ethnological Papers read at Manchester, 1861, by James Hunt (at that time), Secretary to Section E, and Hon. Secretary of the Ethnological Society of London. *Trans. Ethno. Soc.*, vol. ii, new series, p. 2.

quakes, volcanic eruptions, and the formation of icebergs." Will any one contend that a section which discusses such questions is a place for the science of anthropology? At Newcastle, the Rev. Dr. Hincks made some very forcible remarks as to the necessity of a separate section for anthropology, and perhaps a sub-section for philology. It was publicly stated at the meeting that some members of the Association had said that it was useless to attend the meetings to gain any information respecting the progress of the science of man while the geographers so completely occupied the field as they have done for many years past. On an appeal made for the admission of anthropology into section E, Sir Roderick objected that the section was already overburdened with papers, and he proposed "that the anthropologists be invited to attach themselves to some other section of the Association more suitable than the section of geography and ethnology." It has been suggested that anthropology should become a sub-section of the zoological section. But if this arrangement was unsatisfactory twenty years ago, what would it be now? There can be no doubt on the minds of those acquainted with the extent and objects of anthropological science, that there should be a special section devoted to it. There ought to be, and, I believe, ere long there will be: would it were in our power to say there shall be. But, gentlemen, all our efforts may be useless. The Society may be unanimous on this point; but unfortunately the decision of this matter does not rest with us, but with the General Committee of the British Association. Last year our admission to section E was opposed by some leading members of the Royal Geographical Society, who, I am glad to hear will now give their support to the proposal for a separate section. I trust, also, that Sir Roderick Murchison, as the intimate friend of two of the most illustrious anthropologists of modern times, I mean Karl Ernst Von Baer and the late Andreas Retzius, will support the motion. But we must not rely on those who are not Fellows of our Society for support in this matter. We must show the General Committee that we have a good cause, and that it will really be for the benefit of science that a special section should be devoted to anthropology. I may say we are already receiving papers to be submitted to this new section. Let every member of the Society use his influence, and I have no fear for the result. The President elect of the Association has, at all times, expressed his views that the Association must adapt itself to the age and to the progress of science. Let us not be content by using our influence with others, but be at the post ourselves, support by our voices and votes the cause of anthropological science, and rescue it from the degradation of which the learned Dr. Prichard complained nearly twenty years ago, and under which it is still suffering.

In soliciting members of the Society to prepare papers for this new section, it has at once been inquired, "But what will you do with the papers if the section is not appointed?" So frequently has this question been asked, that I have been obliged to consider the matter, and, after some consultation with my colleagues, we have determined on a course of action which I trust will not be misconstrued

either into a threat, or as showing the slightest disrespect to the British Association, or even to the General Committee. This matter has not yet been under the consideration of the Council of the Society, and I must be held solely responsible for the suggestions which I feel it my duty to make on this subject. We have been refused admission into section E, and if we are also refused a separate section, no other course seems to be open to us than to form an independent section or rather congress of our own, and to continue to hold this until, what we believe to be, our just claims are recognised. I sincerely trust that there will be no cause for this, for the work which already devolves on the officers of the Society is very considerable, and much labour would be entailed on all concerned in this matter were we obliged to make all the arrangements necessary for the holding of an "Anthropological Congress." If we were supported by the Council of the British Association in our petition for a special section, we should have no fear of a refusal. If, on the other hand, they decline to recommend such an appointment, we shall be obliged to act accordingly. In any case, therefore, I hope anthropological science will be advanced. I myself, especially, would gladly shrink from the work and responsibility of bringing to a successful issue the first British Anthropological Congress. But the fellows of the Society may rest assured that I will shrink from no labour or anxiety when I feel convinced that I can in any way aid in the promotion and diffusion of anthropological truths, for which this Society was established.

Before I leave this subject let me add that should we be compelled to adopt this course, it will in no way, I trust, estrange us from the British Association, which has been the means of doing so much in popularising science in this country. Could we feel that the opposition to the proposals respecting the recognition of anthropology were based simply on scientific reasons, and that the question was considered on its own merits, I, for one, should bow with respect to such a decision. But, gentlemen, we feel that the opposition to the recognition of anthropology is founded on reasons, in many cases, altogether unscientific, and the responsibility of any disseverance of ourselves from the British Association must rest with the General Committee for allowing themselves to be led away by the arguments of our opponents.

Having said thus much respecting the recognition of anthropology, let me direct your attention for a short time to the point from which I started on introducing this subject, as we shall see that the chief objections made to the recognition of our science are entirely based on a mistaken interpretation of the extent and object of it, and of the history and etymology of the term anthropology.

I have already made some remarks on the arguments which were used at Bath respecting the meaning of the two words Anthropology and Ethnology, and as there appears to be a considerable amount of misunderstanding as to the definition of these words, I purpose now to make some further observations on this important subject. Nothing can be more instructive than to trace the origin of

words and to see the meaning which has been attached to them at different periods of their history. A statement was made to the General Committee of the Association at Bath that ethnology was an older word than anthropology. This statement has had a most beneficial effect, for it set an accomplished member of our Society on an investigation of its truth, and a detailed account of this inquiry will, I hope, be shortly laid before you by Mr. Bendyshe, under the title of *The History of Anthropology*. Unknown to that gentleman I had also been spending my leisure moments in endeavouring to trace the origin and different meanings attached to the words anthropology, ethnography, and ethnology. But before I enter on that subject, I will give the conclusions to which Mr. Bendyshe's investigations have led him, which he summarises in these words:—

"The word anthropology is first used as the title of a book on science by Hundt, sometimes called *Magnus Canis*, in 1501.

"Again, in 1535, by Galeazzo Capella, *Anthropologia, ovvero un ragionamento della natura umana*—quite in the modern sense.

"Then frequently by the writers of the sixteenth and seventeenth centuries.

"In English, *Anthropologie illustrated*, is the title of a work published anonymously in London, 1655.

"Anthropology is recognised as an English word in Todd's *Johnson*; ethnology is not.

"I do not find any trace of the existence of the word ethnology prior to its adoption by the French Society in 1839. They first of all assumed the title of *Société d'Ethnologues*, but in the Government certificate are called *d'Ethnologie*.

"The word does not occur in Prichard's first edition nor in Balbi, *Intr. to Atlas Ethnographique* of 1828, and as he enters into all the terms of the science, it seems impossible, if it had then any existence, that he could have passed it over. The word ethnography appears to be the only one he knew.

"In Knight's *Penny Cyclopædia*, a popular work, 1833, there is a very judicious little article on anthropology, and another on ethnography, ethnography is mentioned as a branch of it. Ethnology seems an unknown word, and the German *Völker-kunde*, which would now be translated ethnology, is there rendered *people-knowledge*, which implies complete ignorance of the word ethnology. Ethnography seems to be first used by Niebuhr."

Now for my own inquiries:

First, What is the origin and meaning of the word anthropology? Aristotle uses *ανθρωπολογος* for "one who speaks or treats of men" (*Eth. iv, 8*); and it is a mere accident that the word *ανθρωπολογία* does not occur. The use of this compound by Aristotle is very significant.

Until recently it has been thought that Casmann (*Casmanus Otho*), rector of the school and preacher at Stade, where he died in 1607, was the first who used the word anthropology in an extended sense; but this is not the fact, for Hundt (*Magnus Canis*) published a work at

Leipsic in 1501, entitled *Anthropologium*. His book is of great interest, as he is asserted to be the first author who used the new art of wood-engraving for anatomical purposes. The work of Casmann is, however, more nearly allied to what we now understand by anthropology. His work, entitled *Secunda pars Anthropologiæ* (Hanovix, 1596), consists of about 900 pages, and treats of the most abstruse questions concerning human nature, both physical and psychological. I can find nothing published in English before 1655, under the title of anthropology, except the work already mentioned.

In 1707 the widow of Dr. James Drake published two large volumes entitled *Anthropologia Nova*. The same year there was published in Jena, a work on *Anthropologia*, by Teichmayer.

In Chambers' *Encyclopædia*, published in 1740, the following definition of anthropology is given :—"A discourse upon man and human nature. Anthropology includes the consideration both of the human body and soul, with the laws that affect their union, etc."

If we refer to the dictionaries of the period, we get the following definitions of anthropology :—

1749—Martin, "Description of a man's body and soul."

1753—Bailey, "Description of a man, or man's body."

1771—Dyche, "Description of the whole man, both soul and body."

1772—Barlow, "A treatise upon man, considered in a state of health, including a consideration both of the body and soul, with the laws of their motion."

1772—Diderot and d'Alembert—"A treatise on man."

1800—J. Brown's edition of the union dictionary of Johnson, Sheridan, and Walker—"The doctrine of the structure or nature of man."

In 1788 there was published, at Lausanne, a work entitled *Anthropologie, ou science générale de l'homme*.

Later, the meaning of anthropology was considerably extended, and the following is a translation from an article which appeared in 1833 in the *Encyclopédie des gens du monde: répertoire universel des sciences, des lettres, et des arts*: "Adopting the most extended signification of the word anthropology, this science is an assemblage of many known facts which are connected together, and which bear particular names, and for the development of which the reader is referred to the respective articles. Anthropology embraces—1st. The knowledge of the structure of the body and of its parts. 2nd. The knowledge of the functions of the body and of its parts. 3rd. The knowledge of the dietetic rules to preserve health. 4th. The knowledge of the faculties of the soul and of the mind, and of their relations with the body. This last science is the philosophy of man, and it involves especially, 1st. *Ideology*, or the knowledge of the intellectual faculties. 2nd. *Logic*, or the art of reasoning. 3rd. Knowledge of the inclinations, sentiments, affections, and passions. 4th. Knowledge of morality and of natural religion. 5th. The knowledge, finally, of the government of mankind.

"This last includes—The knowledge of rights and natural duties

of prosperity. The knowledge of the social institutions concerning education, i.e., the art of preserving and of improving the human species. The art of procuring to society the advantages of wealth. The art of assisting the unfortunate. The art of maintaining public order. The art, finally, of the preservation of peace."

I will now quote two passages from Blumenbach, which, however, will be sufficient to show that the illustrious author used the word in exactly the same sense as we do at this day. These instances occur in the dedication of his work *De Generis Humani Varietate Nativa*, to the then President of the Royal Society, Sir Joseph Banks, which was published in 1795.

"When I visited London, three years ago . . . you gave me in my turn the unrestricted use of the collections of treasures relating to the study of anthropology, in which your library abounds; I mean the pictures and the drawings, etc., taken by the best artists from the life itself."

And yet we sometimes hear it said that anthropology merely means anatomy or craniology! Then, again, he says:

"When a more accurate knowledge of the nations who are dispersed over the southern ocean had been obtained by the cultivators of natural history and anthropology, it became very clear that the Linnæan divisions of mankind could be no longer maintained."*

The cultivators of anthropology in 1795. Properly speaking, we must remember that up to the period of Blumenbach there was no science of man, and the word anthropology was consequently not much used. Professor Marx, in his life of Blumenbach, 1840,† says, "It was a happy chance that his first literary work was concerned with the races of men, and thus physical anthropology became the centre of the crystallisation of his activity." A few years later (1847) M. Flourens, in his *Eloge* to the Paris Academy, says,‡ "It is to M. Blumenbach that our age owes anthropology." In another place, he observes,§ "The division of races is the real difficulty of the day, the obscure problem of anthropology, and will be so for a long time." I need only quote one more instance, as to the meaning which the greatest scientific writers have attached to the word anthropology. M. Flourens observes,* "There never was a scholar, author, or philosopher who seemed more adapted to endow us with the admirable science of anthropology." I need go no further in tracing the meaning of this word, as we must all agree that it is admirably exemplified in the writings of the father of the science, the illustrious Blumenbach.

I will now examine the origin and different meanings attached to the word ethnography.

Mr. Bendyshe thinks it was first used by Niebuhr, but in France it is generally considered that M. Balbi invented the word. I think, however, that the word was first used in Germany; for we find both the words *ethnographia* and *ethnographie* are used in Campe's

* See *Life and Anthropological Writings of Blumenbach*, edited by T. Bendyshe, 1865, p. 8.

† Loc. cit., p. 149.

‡ Loc. cit., p. 56.

§ Loc. cit., p. 49.

|| Loc. cit., p. 58.

edition of Adelung, 1807-12, with an explanation, *Volksbeschreibung*, description of peoples.

Nearly twenty years later, Balbi, in the introduction to his *Atlas Ethnographique*, Paris, 1826, p. 69, says: "*Ethnographie* and *ethnographie*—These two terms should, strictly speaking, be only applied to the science having for its object the classification of peoples, as *ethnos* signifies in the Greek, *people*. But as the study of languages, especially that part which treats of their classification, has, as yet, no name generally adopted; that the term *linguistique*, borrowed from the German, is displeasing to some savants, and as the terms *glossographie* and *glossographie*, which are more appropriate, cannot be employed in the sense we require, we thought that we might venture to further extend the terms *ethnographie* and *ethnographie*, and include in them the classification of languages. In point of fact, if people are only people because they speak different languages, the classification of peoples will correspond to the classification of languages, and thus the term *ethnographie* may, it appears to us, supplant those of *linguistique* and *glossographie*, or that of *idiomographie*, as proposed by Malte-Brun. For want of better terms, we consider ourselves authorised to use the terms *ethnographie* and *ethnographie* in the sense indicated, in order to avoid circumlocution."

A very lucid definition of ethnography is given by Cardinal Wiseman in his lecture in 1836:—"I mean *ethnography*, or the classification of nations from the comparative study of languages, a science born, I may say, almost within our memory."*

"This science is also called by the French *linguistique*, or the study of language; it is also known by the name of comparative philology. These names will sufficiently declare the objects and methods of study; and I will not promise any other definition, as I trust you will gradually, as my subject unfolds, become acquainted with its entire range."†

Dr. Wiseman often speaks of the distinction between what he called "philological ethnography" and what might not inaptly be styled "physiognomical ethnography." Yet eleven years later we find Dr. Prichard saying, alluding to Dr. Latham, "a learned member of this Society, who has contributed greatly to its extension, has proposed to term it 'ethnographical philology.'" Perhaps there is some profound difference between "philological ethnography" and "ethnographical philology." But Dr. Prichard objected to the terms "ethnographical philology," and says, "To this I have only to object, that the study in question is not ethnographical, but ethnological;" and he proposes a new term, *palælexia* or "the archæology of languages."‡

We are not aware what has become of this grand science, "ethnographical philology." It is sufficient for us now to observe, that the word does not appear in the *Dictionnaire de l'Académie Française*, nor in the *Encyclopædia Britannica* of 1842, nor in the *Encyclopædia Metro-*

* Connection between Science and Revealed Religion, London, p. 9.

† P. 10.

‡ Annual Address, in Trans. of Ethno. Soc., vol. ii, p. 121.

politana of 1845. Dr. Dieffenbach,* in 1842, defined ethnography to be "an authentic description of the physical condition of each nation." Dr. Prichard, in 1847, in his report to the British Association, in speaking of Blumenbach's division of mankind into five races, says, "This distribution was complete, so far as the ethnographical knowledge of the time allowed it to be."†

Since that period the word ethnographical has been used by the northern antiquaries to designate works of human industry, such as exist in the Ethnographical Museum of Copenhagen.

Mr. Luke Burke, in 1848, said,‡ "Ethnography, or the natural history of man."

I have now briefly sketched the history of the words anthropology and ethnography, and we find that the former has been in use more or less in the sense in which we now use it for the last two hundred years; and that since the time of Blumenbach, it has had a definite scientific meaning, being used by all the chief writers on mankind, as meaning the science of man, or mankind.

We here also see that the first use of the word ethnography does not extend beyond fifty years, and that the meanings which were originally attached to it have been continually changing; and it remains for anthropologists to decide whether they will give a definite, logical, scientific meaning to this word, or whether it shall be expunged entirely from the terminology of anthropological science.

We now come to the origin and meaning of the word Ethnology. All my inquiries respecting the first use of the word ethnology agree with the conclusions arrived at by Mr. Bendyshe, viz., that the word was not used before the formation of the Paris Ethnological Society in 1839. A correspondent has informed me that the word was occasionally used in some historical or philological works in France before that period; but it is equally certain that none of the great French writers of the period, like Desmoulins, Gerdy, or Broc, ever used the word.

And here it may be useful to trace the history of the formation of the Paris Society, in order that we may discover if possible the scientific meaning which those who first used the word ethnology attached to it. In 1838 there was established in London a society called the "Aborigines' Protection Society," which was presided over by Sir Thomas Fowell Buxton. This society deputed Dr. Hodgkin to proceed to the Continent, in order to establish a similar society in Paris. Dr. Hodgkin entered into negotiations with a well known English naturalist, long resident in Paris—William Edwards—but it was found impossible to found a society having for its object the discussion of social or political questions, as this was contrary to the French laws.

It was decided, however, that such a philanthropic society should be founded, but that it should have a scientific title. At last they coined a scientific-sounding title, first calling themselves *ethnologues*,

* Transactions of Ethnological Society, vol. i, p. 18.

† Report of the British Association for 1847, p. 233.

‡ Ethnological Journal, edited by Luke Burke, p. 1.

which, however, was afterwards changed, and the association was then denominated the *Société d'Ethnologie de Paris*. And here comes the most curious part of the subject. William Edwards, it is said, was the founder of the Paris Ethnological Society, and Dr. Hodgkin says,* "Ethnology very much engaged Dr. Edwards' attention." After such a statement, the society will perhaps be surprised to learn that William Edwards never once used the word "ethnology" in any of his scientific writings. They will also perhaps be more surprised when I say that he actually protested against the use of the word by the insertion, in the first volume of the memoirs of the society, of a memoir entitled, *Esquisse sur l'état actuel de l'Anthropologie, ou histoire naturelle de l'homme*. This memoir was never communicated to the society, because it is believed the author was anxious to avoid discussion on the subject with his non-scientific associates. It was published in 1841, and when the death of William Edwards a few years later deprived the society of its guiding power, the members fell into the sentimental extravagances on Negrophilism, and the revolution of 1848 put an end to their meetings. At this time the society adjourned for a month, but on the day appointed no members attended, and the society has not met since. During the existence of this society, however, scientific men continued to use the word anthropology, and more than twenty years ago M. Serres added to his professorship of human anatomy the sub-title of anthropology, and has occupied himself exclusively with the human races. For the last ten years the chair has been recognised as entirely devoted to anthropology, the original title of human anatomy being omitted.

We now come to the introduction of the word ethnology into England, and the meanings which have been attached to it; and we cannot do better than see how Dr. Hodgkin defines anthropology, ethnography, and ethnology. His first paper to the Society commences in these words: "The study of Man, in its most extended sense, to which the term Anthropology is fitly applied, is a most complicated subject, presenting such various points that it admits of being divided into several departments, each of which may constitute or appertain to a separate science." He goes on to say, "Man may be studied in his physical conformation," "as an intellectual being," "as a gregarious animal," "in relation to the lapse of time which his race has existed," "as to diet, climate, mode of life, and inherited peculiarities—collectively by government, religion, influence of surrounding nations." The author thus defines ethnography: "Writers of the highest antiquity have spoken of man as formed into various distinct groups which have been known as separate nations," and "these facts are blended with the writings of historians and geographers;" "and whether separated into a distinct study or not the description of them has acquired the peculiar and appropriate name of Ethnography or the description of nations." We see by the above lists of subjects what the author did not consider as belonging to ethnology. He then says, "that the in-

* Trans. of Ethno. Soc., vol. i, p. 34.

+ Report of the British Association, 1847, p. 23.

dividuals presenting these different characters, are very differently affected by the climate to which they are exposed;" and he then remarks, "The study of this very interesting subject forms a branch of science to which the name Ethnology has been given."

The study of man was *fifty* termed anthropology. The description of nations had the *appropriate* name of ethnography; but not a word in favour of the fitness or appropriateness of the word ethnology even in the sense in which the author used it!

In the preface to the first volume of the *Transactions of the American Ethnological Society*, founded 19th November, 1842, we read* that this Society "was established for the promotion of a most important and interesting branch of knowledge, that of man and the globe he inhabits."

Dr. Prichard in 1847, says, "Ethnology is, in fact, more nearly allied to history than to natural science." Again, "Geology is like ethnology, a history of the *past*."

I need hardly remark that Dr. Prichard never used the word ethnology in the first edition of his *Physical Researches into the History of Mankind*, and that he only adopted it after its importation from France. It will also be seen in what confusion he left the terms ethnology and ethnography by his objection to the use of the latter term in the sense that it was then employed.

I must also call your attention to the fact that the word was never used by Lawrence nor by Knox; even as late as the publication of his book in 1850.

Morton, up to 1846, did not use the word, and he was too scientific to accept the definition proposed by Dr. Prichard. In 1846, Dr. Morton published a work *On the Ethnography and Archaeology of the American Aborigines*.

Neither Colonel Hamilton Smith nor Van Amringe, although both writing in 1848, use the word "ethnology."

It is, indeed, very remarkable how few scientific writers have used the words ethnology; ethnography is used in preference, simply because occasionally some logical definite meaning can be attached to it. The science of man—anthropology—is always used in a different sense from ethnography or ethnology. Mr. Hotze, for instance, writes:—"The last great struggle between science and theology is the one we are now engaged in—the *Natural History of Man*—it has now, for the first time, a fair hearing before Christendom, and the only question we should ask is 'daylight and fair play.'"[†]

Here are two extracts from Mr. Hotze's edition of Gobineau:—

"The sickening moral degradation of some of the branches of our species is well known to the students of anthropology, though, for obvious reasons, details of this kind cannot find a place in books destined for the general reader."[†]

"As many of the terms of modern ethnography have not yet found

* Trans. of American Ethno. Soc., vol. i, p. ix.

† Appendix to Hotze's Gobineau, p. 506.

‡ Hotze, 454.

their way into the dictionaries, I shall offer a short explanation of the meaning of this word, for the benefit of those readers who have not paid particular attention to that science."*

"These remarks on the ethnography of the Bible."†

"In fact, nothing can be more incomplete, contradictory, and unsatisfactory than the ethnography of Genesis. . . . All this shows that we can rely no more upon its ethnography than upon its geography, astronomy, cosmogony, geology, zoology, etc."‡

From an attentive perusal of the writings of Dr. Prichard it will be gathered, that he was greatly perplexed as to the meaning which should be given to the words ethnology and ethnography. In the second edition of his *Natural History of Man*, § he thus uses the term ethnology, "Our contemporaries are becoming more and more convinced that the history of nations termed ethnology, must be mainly founded on the relations of their languages." In the same work|| he writes a chapter on American Ethnology, in which he says, "Gallatin is still the chief work of authority on the ethnology of the Northern Americans, and the only work in which these races are classified according to the extent of knowledge as yet acquired by the distinctions and affinities of their languages." There is a chapter "On Indian Ethnography" and one entitled "Ethnography of the ancient Egyptians." This chapter opens with the following sentence:—"A most interesting and really important addition has lately been made to our knowledge of the physical character of the ancient Egyptians."

In his preface to the same work¶ he speaks thus:—"Very brief indeed must necessarily be a summary of universal ethnography." An examination of this and other passages in Dr. Prichard's writings, leads to the opinion that ethnology was used chiefly in connection with language, and ethnography with physical character. Dr. Prichard was well aware that such a distinction was not accepted by his fellow workers; and there was published by a student of anthropology, the accomplished Dr. S. G. Morton, a paper entitled "Observations on Egyptian Ethnology, derived from Anatomy, History, and the Monuments."

The word ethnology does not occur in the seventh edition of the *Encyclopædia Britannica*, 1842; nor in the *Encyclopædia Metropolitana*; nor in Todd's *Johnson*; nor in the *Penny Cyclopædia*; nor in Brande's *Dictionary of Science*, 1842, although in all these works the word anthropology occurs.

In *Types of Mankind*, Dr. Nott used the word anthropology in its right signification: "The classification of M. Jacquinot is supported by much ingenuity. . . . Like all his predecessors, however, who have written on anthropology, he seems not to be versed in the monumental literature of Egypt. The ancient Egyptians had attempted a systematic anthropology at least 3500 years ago."

Agassiz always, I believe, uses the word ethnography, and it would be possible to give an unlimited number of quotations to prove that

* Hotze, p. 457.

† Loc. cit., p. 511.

|| Loc. cit., p. 583.

† Page 512.

§ Published in 1845, p. 152.

¶ Loc. cit., p. vii.

the word ethnology has in science no definite meaning, and that it is not used by many of the chief writers on the science of man.

Before I quit this subject, however, I cannot help calling your attention to the curious transformation which the "Philological Ethnography" of Cardinal Wiseman underwent, in 1847, under the manipulation of Baron Bunsen.* This same science then became "Comparative Ethnologic Philology," and we had the "results of Egyptian ethnologic philology." So the "Ethnographical Philology"† of Dr. Latham has since become "Philological Ethnology."‡ Will this change lead back to Dr. Wiseman's "Philological Ethnography"? We are especially anxious to know what has become of the science of *ethnography*, as Dr. Wiseman§ told the world thirty years ago: "(It is by the simple history of this science that we shall see the Mosaic account of the dispersion of mankind most pleasingly confirmed." Mr. Cull (a former Secretary of the Ethnological Society) stated that these four lectures on "ethnography" were on "ethnology"!

All this confusion compels one to inquire, What is ethnology? What does the word really mean? Is it a science, or any part of a science? These are questions, gentlemen, which I feel bound to ask you to consider most fully. If we use the words as we have hitherto done, we must give them a more definite meaning. We now say that ethnology is a part of anthropology, and yet no two persons appear to be agreed as to what the word ethnology means. One says "it is the science of nations;" but nations may be a combination of wholly different elements; and if this is the correct definition, ethnology must be, to a great extent, a political subject. Another says, ethnology means the science of races.|| But what races? All animal races?¶ "No," replies a third, "the races of man."

Let us now examine the meaning attached to the words by other writers on the subject; and first of all that given by the present senior Secretary of the Ethnological Society, one of our learned honorary fellows, Mr. Wright, who said,** (in 1855) "It is the task of the ethnologist to trace the migrations of races and the process of the formation of nations which preceded what is more strictly termed history."

Dr. Latham writes (in 1855), "The word†† [ethnology], like the department of knowledge which it expresses, is new; so new that it may almost be said to be unfixed both in power and in form. Instead of *ethnology*, many writers say *ethnography*. Some use the two words indifferently. Others use both, but distinguish between them; the latter meaning the *descriptive*, the former the *speculative* portion of the subject."

* Report of British Association, 1847, p. 205.

† Essays, p. 319.

‡ Encyc. Brit., 8th ed., vol. ix, p. 343.

§ Lectures, 1836, p. 10.

|| See an article which appeared in the *Edinburgh Review* for October 1848, entitled "Ethnology, or the Science of Races".

¶ Luke Burke, "The Future", p. 214.

** The History of France, vol. i, p. 3.

†† Encyclopædia Britannica, 8th ed., vol. ix, p. 341.

Dr. Nott says,* "The term 'ethnology,' has generally been used as synonymous with 'ethnography.'"

Now, if they mean the same thing, we clearly do not want them both.

Dr. Latham remarks,† "The chief criteria of the animals below man are moral rather than physical; of man they are moral rather than physical. Anthropology gives us the naturalists' view of our species. Ethnology gives us the historic view of it. Yet ethnology is different from ordinary history." Again, he says: "Ethnology is the general archæology of man." Is there an archæology of animals?

Dr. Latham is a follower of Prichard, who in nearly the last years of his life attempted to give a determinate meaning to the words ethnology and ethnography. His definition has not, however, been accepted. He says, "Palæontology includes both geology and ethnology; geology is the archæology of the globe, ethnology that of its human inhabitants." But no one has followed him in the confusion of terms which he thus proposed to introduce respecting the meaning of the word archæology. The proposal would have for its effect the abolishment of the word archæology and the substitution of the word ethnology in its place. Archæology is history deduced from the relics of the past, and according to Dr. Prichard, "Ethnology has for the object of its investigations, not *what is*, but *what has been*."‡

Dr. Latham says, "There existed the materials for anthropology when the first pair of human beings stood alone on the face of the earth, and there would exist the same materials for anthropology if the world were reduced to the last human family. But ethnology is a study which has no existence where there is no variety." If this be so, there can clearly be no such science as ethnology for those who believe there are no differences in mankind.

An extraordinary confusion as to the meaning of the term ethnology will also be found in Dr. Latham's *Essays, Chiefly Philological and Ethnographical*.§ Ethnology is there used in the following sense: "Now, both the languages have fundamental affinities with the Athabaskan, and *vice versd*; whilst it is generally the case in ethnology, that two languages radically connected with a third, are also radically connected with each other."

The most recent attempt to give a definite meaning to the word ethnology is that made by M. Cournot.|| Writing in 1861, he says, "Anthropology is the natural history of man . . . ethnology, on the other hand, should be occupied with all the accidental facts to which the circumstance of the grouping of men into distinct societies give birth." He proposes to call such varieties of men "ethnological varieties." Will this definition be accepted? and will ethnologists for the future devote themselves to the investigation of these "accidental facts?" It is rather unkind to ethnologists for one author to suggest that ethnology means the speculative part of a science, and for

* Type of Mankind, p. 49.

+ Loc. cit., p. 341.

† Address of Ethno. Soc., vol. ii, p. 302.

§ 1860, p. 271.

|| See Anthropological Review, vol. ii, 1864, p. 275.

another to assert that it is their duty to investigate "accidental facts."

I have searched in vain for a definition of the word by the most voluminous modern writer on ethnology, Mr. John Crawfurd. I trust he may be induced to give some definition to this word which may be accepted by his followers. I hope he may also inform us to what branch of "ethnology" belongs that long series of papers contributed to the Ethnological Society under the title of *On the Relation of Domestic Animals to Civilisation*.

Perhaps the following remarks by my friend Dr. Charnock, may assist in elucidating the true scientific meaning of the word ethnology. He writes:—

"I think we may translate ethnology, *science of the gentiles or heathens*. The origin of the word gentile (heathen) is deduced from the Jews, who called all those who were not of their name *gajin*, i.e., *gentes*, which, in the Greek translations of the Old Testament is rendered *τα εθνη*, in which sense it frequently occurs in the New Testament; as in Mat. vi, 32, 'All these things the gentiles (*τα εθνη*) seek.' Whence the Latin church also used *gentes* in the same sense as our *gentiles*, especially in the New Testament. But the word *gentes* soon got another signification, and no longer meant all such as were not Jews; but those only who were neither Jews nor Christians, but followed the superstitions of the Greeks and Romans, etc.*

"St. Matthew (vi, 7) says, 'Use not vain repetitions as the heathens (*εθνικοι*) do.' On this verse Valpy says, '*Εθνικοι*, heathens, men who neither acknowledge nor worship the true God. Our word heathen is from the Greek *εθνη*, the heathens or gentiles, as distinguished from the Jews or believers.' Somner (Ang.-Sax. Dict.) gives *hæthen*, paganus, ethnicus, gentilis; *hæthendom*, paganismus, ethnicismus, gentilismus. Junius gives the Gothic *haiðhnai* (the Greek, *εθνοι*) heathens. There is, indeed, no doubt that heathen and *εθνος* are the same word. Ethnology, *science of the heathens, gentiles, or pagans*.'"

Mr. Luke Burke, in 1848, attempted to give a definition of ethnology, which differs so widely from all those attempted before or since, that I am bound to give it in this place. And I would take this opportunity of observing that, although Mr. Burke has given a meaning to the word ethnology which cannot be defended and has not been accepted, he deserves much credit for attempting to found a science of mankind at a time when few dared to speak of the origin and development of man as questions entirely belonging to the domain of science.

The great error of the following definition is the use of the word ethnology instead of anthropology. "Ethnology," writes Mr. Burke,† "is a science which investigates the mental and physical differences of mankind, and the organic laws upon which they depend, and which seeks to deduce from these investigations, principles of human guidance in all important relations of social existence."

* Valpy.

† Ethnological Journal, edited by L. Burke, 1848, p. 1.

I am sure that you will doubt with me whether such a definition could ever have been given to a word like ethnology; but we may consider that Mr. Burke found a "pretty" word with no scientific definition, and declared it to mean the science he had defined.

Mr. Burke at the same time (1848) wrote,* "The leading doctrines of this science are now for the first time presented to the public." Writing in 1861, Mr. Burke said,† "But let ethnology be organised and developed, and the entire sweep of natural history becomes at once comparative ethnology." In 1848, ethnology was defined by the same author as "the science of human races." Ethnologists in 1861 were told "they need not travel to the ends of the earth, nor even look beyond the circle of their intimate friends, to find undescribed races, types of humanity demanding record and specification, and more deserving of both than the grosser distinctions of savage life." It will thus be seen that Mr. Burke uses the word ethnology: 1st. As the science of all races; meaning in reality the science of biology. Notwithstanding this definition, he says in the same place,‡ "The mind is everything in ethnology." 2nd. He differs from all other writers in using the word ethnology as partly meaning a description of races, which by all other writers is called ethnography, a term which Mr. Burke uses as meaning the natural history of man. Verily ethnology is a wonderful word!

Mr. Burke is very fond of the word "*ethnic*," meaning "racial," although in 1848 he wrote, "The genus *Homo*, like all other important genera of animals, was in the beginning divided by Nature into many different species and varieties, each of which was mentally and physically adapted to a determinate mode of life, and had its origin in a climate and region precisely suitable to its constitution."§ If this be so, the whole matter is settled: but we anthropologists declare this to be the very matter under dispute. Dr. Latham says, without difference in mankind there is no such thing as ethnology. But what does Mr. Burke mean by "race," or "ethnic"? His definition is sufficiently complete to banish the word entirely from our use. In what he called his *Fundamental Doctrines of Ethnology* we find the following,|| "Ethnical differences are such as arise from difference of race."

This is one of the fundamental doctrines of ethnology—truly a magnificent and most complicated science—but its difficulties are nothing in comparison to anthropology, for we do not know on what ethnical or racial differences really do depend, and indeed some of us are not even convinced that they exist.

But wishing to give the latest definition of ethnology, I must dwell on two other points. One of the honorary secretaries of the Ethnological Society, Mr. Francis Galton, has recently issued what perhaps may be described as an important manifesto on the present state of ethnology in this country, in a series of "ethnological inquiries on the innate character and intelligence of different races."

* Loc. cit., p. 1. † "The Future," May 1861.

‡ Loc. cit., p. 217.

§ Ethnological Journal, edited by L. Burke, 1848, p. 7.

|| Loc. cit., p. 6.

I must, in the first place, congratulate the Society on having a secretary with sufficient boldness to acknowledge the existence of different races of mankind. I shall now merely quote five of the questions out of thirty-four, to show what are, in England at this time, considered to be "ethnological" inquiries. I will simply quote from No. 21 to No. 26:—"Has he a strong natural sense of right and wrong, and a sensitive conscience? Does he exhibit to his religious teachers any strong conviction of an original sinfulness of his nature; or the reverse? Is he much influenced by ceremonial observances, such as those of the Roman Catholic Church? Is he a willing keeper of the Sabbath? Has he any strong religious instincts; is he inclined to quiet devotion? Is he ascetic, self-mortifying, and self denying, or the contrary? Is he inclined to be unduly credulous or unduly sceptical?"

I think these questions deserve especial record as showing the meaning attached to the words "ethnological inquiries" in the year 1864. I would, however, suggest the addition of one other question, such as, "Can he give any definition of the word 'ethnology?' if so, record the same."

Within the last few weeks, too, I have heard a paper read at the Ethnological Society on "The Principles of Ethnology." I must confess that I was a little disappointed at not hearing a definition given of ethnology in a paper treating of the "principles" of the science; but I was certainly much instructed to learn that the "principles of ethnology" consisted in a recommendation of the author to the effect that it was necessary to make a collection of authentic portraits, and that this would enable us to discover the "principles of ethnology." Mr. Prideaux can hardly claim any originality in this matter, for we find the illustrious Blumenbach, seventy years ago, insisted on the desirability of a "collection of pictures of different nations, carefully drawn, taken from the life by the first artists;" and he at that time remarked, "It is clear that a collection of this kind, especially whenever it is invariably compared with such collections of skulls as I have been giving an account of, is one of the first, principal, and authentic sources of anthropological studies." He further well observes, that the popular drawings on this subject are so incorrect as to be "scarcely of any use for the natural history of mankind."*

Blumenbach has sometimes been called the father of ethnology; but it is desecrating a sacred name to charge him with being the father of such an ill-defined study, or the author of such a meaningless word as ethnology is in science. It is hardly necessary to say that Blumenbach never used either the word ethnography or ethnology, which were only invented when the science of man became corrupted by the '*philological ethnographers*' attempts to overturn the truths of sound induction by speculation respecting an unity of origin of all languages.

Mr. Lubbock, the esteemed and accomplished President of the

* Loc. cit., p. 169.

Ethnological Society, while using all his power to prevent the British Association admitting anthropology, made a statement not a little startling in the face of the facts I have mentioned. He is reported to have contended that anthropology and ethnology meant the same thing! This is indeed startling information. How long have they meant the same thing? and by whom are they used as synonymous terms? He "did not defend ethnology upon its derivation, perhaps upon that light it was not quite so good as anthropology."* This seems to mean that anthropology is a better word to signify anthropological science than any other: a proposition which I will not attempt to dispute. In the English version of M. Morlot's recent *Researches on the Study of High Antiquity* we find these words, "Ethnology is to us what physical geography is for the geologist." Now, as physical geography is only a part of geology, if this simile holds good, ethnology is only a part of some other science. A part of what science? In using the word "us," does M. Morlot speak from an anthropological stand-point? Ethnology, meaning the study of man, in its present state, "is to be taken as our starting point; and we have already seen that it contributed largely in guiding the northern antiquaries into the right path."† Ethnology, then, used in the sense of a study of existing races, is a part of the science of archæology? Or are both integral parts of the science of anthropology?

I alluded to Mr. Lubbock as the President of the Ethnological Society, but to my astonishment I find that in 1845, Dr. Prichard, in the second edition of his *Natural History of Man*, announced himself as "one of the vice-presidents of the Ethnographical Society of London." In the same place, he also describes himself as a corresponding member of the "Ethnographical Society of New York." Now, the first volume of the journal published by the so-called "Ethnological Society of London," is not dated until three years after the appearance of Dr. Prichard's book, in 1848. An interesting question thus arises, whether between the year 1845 and 1848 the name of this society was changed from ethnographical to ethnological? Or are we to suppose that Dr. Prichard was vice-president of a society of which he did not know the name?

And now I would beg to submit a few suggestions for your consideration. Although ethnology is a very new word in our language, it has still been current amongst us; I would certainly advocate its retention, if any scientific definition can be given to it. If this cannot be done the sooner we get rid of it the better.

Personally, I may frankly admit that my investigations have led me to believe that the word ethnology had better be expunged from the nomenclature of our science. We speak of ethnology as the science of human races; as this is the arbitrary meaning generally given to it. I have, however, explained the objections which all scientific naturalists must have to a word without a proper definition.

* See *Anthropological Review*, vol. ii, p. 296.

† *The Reader*, Dec. 31, 1864.

The question which I have brought before you to day, is one which, must be freely and fully discussed. Two years ago, I proposed a committee to consider and report on the terminology of our science. The time has not yet arrived for that. But I think the time has come when we should all know what we mean by our own science—anthropology. Although an old word, anthropology is, in this country, a new science; and let us take a warning from the facts I have brought forward.

I think every unbiassed scientific man in Europe will admit that it is no stretch of the meaning which may be attached to the etymology of the word anthropology to say that it signifies the science of man and of mankind.

Nor do I think that there will be much difference of opinion as to the accuracy of the more general definition of the word proposed by the leader of French anthropologists, Paul Broca:—"The study of the human group, considered in itself and in its relation to the rest of Nature."

It appears to me that we may make three great divisions of our science. That part of our science which relates to the history of mankind on the earth, the late Rudolph Wagner has proposed to call by the most appropriate name of **HISTORICAL ANTHROPOLOGY**. By adopting this definition, we shall thus have a name for a portion of our science which we have sometimes called human palæontology. There can be no dispute about the meaning to be attached to these terms; and we shall all be agreed that historical anthropology really means the study of the science of man's past history.

The next great division of our science is the descriptive part, which the French writers have hitherto called ethnography, a term which is, however, used by the northern antiquaries, and indeed in our own national museum, in quite another sense. But it is quite certain that we cannot use the word ethnography as meaning remains of man's works of industry, and as a term to signify a description of the different peoples; or, as M. d'Omalius d'Halloy says, "*Des races humaines, ou éléments d'ethnographie*," meaning a description of the existing races of man. I would propose for the future we should call this branch of our subject **DESCRIPTIVE ANTHROPOLOGY**.

And now I come to the third part of anthropology, for which there has hitherto been no word or definition which has been accepted, which some recent English and American writers have called ethnology; but which the illustrious anthropologist, Karl Ernst von Baer, now proposes we should call Comparative Anthropology. I would strongly urge the absolute necessity of adopting this proposal made by a man who has now for some time used it. I strongly urge the dispassionate consideration of the advisability of this step on those who have hitherto used the word ethnology as the science of human races, and I cannot but think they will feel convinced of the necessity for the adoption of this definition. I feel sure, also, that by doing away with the word ethnology, we shall be greatly

assisting the progress of science. Feeling this conviction strongly, I earnestly invite the ethnologists of this country to assist us in discarding the name they have hitherto used; and I am sure, we will join them most heartily in promoting that branch of our science, which I hope ere long will be unanimously recognised under the name of **COMPARATIVE ANTHROPOLOGY**.

I have been asked, gentlemen, if it be good policy on the part of our Society to attach so much importance to what it has pleased some of my friends to call "a mere name." I know not and care not whether it is good "policy" for our Society to do so: but every member has a right to hold and express his own views on this subject. If, however, I may speak on behalf of the Society, I would say that we are not fighting for a "mere name"; on the contrary, we are fighting on behalf of a clearly defined inductive science. We were opposed admission to the British Association ostensibly on account of our name. We are, therefore, compelled to fight on the grounds chosen by our adversaries; and I for one am content to let the issue of the battle be determined on this ground.

I believe that whether it is policy or not, it is certainly now our duty to use no terms which are incapable of rigid scientific definition. Are terms of no consequence in science?

Before I quit this subject, let me say that, although we recognise in some of the active members of the Ethnological Society our scientific adversaries, I hope our future struggle will be conducted in a spirit entirely free from all personal animosity. I hope that we all value more the success of our science than we do the success of our society. And here let me add, that I believe some of the Fellows of this Society have just cause to complain of the treatment (in some cases nearly amounting to insult), which they have received from some other students of science. But, gentlemen, let us all try to follow the beautiful precept, "When ye are reviled, revile not again." We must remember that the dignity of scientific men should prevent them indulging in the schoolboy's amusement of throwing dirt at one another. We live, too, in an age in which scientific truth is painfully wrestling against the fetters which have hitherto held the human mind with an iron grasp. These chains are relaxing daily, and the partisans of dogmatism are becoming alive to their danger. All personal quarrels between men of science do an injury to the cause of truth, by showing that we are not above the petty feeling and jealousies of theological sects. There are some men who have shown themselves enemies to our Society, and who have reviled myself and other members in no measured terms, and I have been even charged with bringing facts and opinions before the Society from interested motives. No one can entertain feelings of greater respect than I do for real scientific honesty, whether it is accompanied with views in which I agree or not; but is it our duty to look into other men's motives? Will it not be enough for us that we honestly express our own real scientific conviction? I therefore take this opportunity of saying, that I shall not notice the personal attacks made on myself or

my motives, whether they come from the press, the pulpit, or the chair. No one can be more conscious than I am of my utter unfitness to preside over a society like our own. Nor do I attempt to deny that, since the formation of the society, I may have brought odium on it, which I shall not attempt to defend or palliate. All I can say is, that I have acted up to the best of my ability, and have endeavoured to discharge the duties you have entrusted to my care without fearing the censure or courting the praise of any man or of any body of men. My office has been no sinecure; but I can truly say that my labour has been one of love. Nor, gentlemen, am I disposed to look back on our work as a failure. We have done for England what some illustrious men failed to do for Germany. Amongst the objects contemplated by the German Anthropological Congress of 1861 was, "The foundation of a periodical as the organ of anthropologists, which might be the means of promoting the study of anthropology, and make more generally known what is done in this respect in various places." This, however, they did not attempt to carry into execution; but we have at least the credit of having made this attempt, and it is for others to express their opinion as to the success of what we well knew to be an experiment. Germany, however, was before this country in the foundation of a scientific periodical entirely devoted to anthropology. There existed, for instance, Nasse's *Zeitschrift für Anthropologie*, which lived from 1818 to 1830. Then there was the *Central-Blatt für Anthropologie* in 1853-4, but which ceased to exist after a life of twelve months. But, independently of the *Anthropological Review*, which, as a society, we merely patronise, we have our own *Journal* for the record of what is said at our meetings. The following opinion of Von Baer on the importance of this point is especially worthy of note. Von Baer, in his address to the Anthropological Congress at Göttingen, said (Report, p. 26), "Before Professor Wagner and I ventured to invite you, we had considered the various modes by which anthropology might be enriched and rectified. The *Bulletins de la Société d'Anthropologie de Paris* with their manifold contents were before us, and we asked ourselves whether something like it might not be effected in Germany. That which distinguishes and renders the transactions of that society so instructive consists in the animated discussions on the theories of the respective authors and the descriptions of travellers. These discussions rectify or amplify observations frequently resting on a very narrow basis. These transactions become the more instructive, as besides men who are well versed in zoology, physiology, anthropology, medicine, etc., other persons take part, such as naturalists, scientific travellers who have resided, or are still residing, in foreign countries, contribute to them. No German city offers such opportunity. Germany has no colonies. There is no want of men of science, but travellers in foreign parts, especially such who have long resided there, are rare. Hamburg is perhaps the only German town which contains many travellers from the various parts of the globe; but these are generally merchants who have only resided in the capitals of the respective countries. The Germans are, therefore, in this respect in

a less favourable condition than their neighbours on the other side of the Rhine; and greatly so when compared with their much favoured cousins on the other side of the Channel. They are, therefore, confined to collecting, digesting, and supplementing, besides the materials accessible to them, the anthropological observations and transactions of other nations."

There can be no doubt that this country does possess unrivalled advantages for the study of anthropology, and I cannot but trust that these advantages may be used by us in a manner they deserve. But as Rome was not built in a day, so neither can we immediately obtain results from our labours. The collection of only fifty skulls and five hundred volumes of reference may be considered a small result for two years' work. But we must remember that we have only really had a proper museum for six months, and that besides these skulls we have a variety of other objects, all throwing light on our science. We must also remember that all these, together with the five hundred volumes, are donations, and that we could increase our museum and library to any extent, had we the means to do so. The special subscription now raising already amounts to £92, and this will enable us, together with other means at our disposal, to have a collection of works on anthropology which will be at least unrivalled in any library in this country.

In my opening address, I asked you to measure our labours not by our professions, but by our acts. I will even now not indulge in a speculation as to what we may do in future; but as regards the quantity of matter which we have caused to be printed during the past two years, you will perhaps allow me to say that it amounts altogether to two thousand seven hundred and ninety-six octavo pages. And as to the contributions to this work and its intrinsic value, any one acquainted with the literature of the subject must be convinced that our undertaking cannot fail to forward the cause of anthropological science. Every Fellow, too, of the Society must feel a just pride in the work of a Society which enabled the German scientific press to declare that Dr. Waitz's writings were not appreciated in Germany, although they were fully so in England. Had we not published a translation of a part of this work, it is not too much to assert that Dr. Waitz would have died without knowing that his labours were fully appreciated.

The past year has not been at all remarkable for the publication of anthropological works. On general anthropology the most important are Herbert Spencer *On the Principles of Biology*, and Draper *On the Intellectual Development of Europe*. Max Müller has issued a second volume of *Lectures on the Science of Language*, and we have had a translation of Professor Broca's little work on *Human Hybridity*. I must also mention a little book by M. Maire, entitled *L'Homme de la Nature et l'Homme de la Civilisation*.

Of works on historical anthropology, we have a new and cheaper edition, with considerable alterations, of Dr. Daniel Wilson's *Prehistoric Man*, and Carl Vogt's second volume of *Lectures on Man*. On this subject there have also been published the important researches of Messrs. Lartet and Christy, *Sur les Cavernes de Périgord*.

On descriptive anthropology we have had that most important and

valuable work of our Vice-President, entitled *A Mission to Dahome*. This is a work which must be recognised as the classical authority on the Dahomans. Captain Burton has added to the value of this work by giving a chapter containing his opinions on *The Negro's Place in Nature*, which should be consulted by all who are anxious to arrive at the truth on that subject. In this department there has also been published Vambéry's *Travels in Central Asia*, Baines' *Explorations in South-West Africa*, Grant's *Walk through Africa*, Michie's *Overland Route from St. Petersburg to China*.

Abroad we have had Werner's *Reisen der Preuss. Expedition nach China, Japan, und Siam*. Hochstetter's *Neu-Seeland*. Zimmermann's *Inseln des indischen Meeres*. Vogt's *Nordfahrt Entlang der Norwegisch. Küste, nach dem Nordcap*. Erkert, *Atlas ethnographique des provinces habitées par des Polonais*. Mathieu de Fossey, *Le Mexique*. Moure, *Les Indiens de la province de Dato Grosso*. Reuchgaric, *La Plata, Mœurs, Coutumes, etc.* Baril de la Heure, *L'Empire du Brésil, monographie de l'empire sud-américain*. Wortambers and L. de Rosny, *Tableau de la Cochinchine, rédigé sous les auspices de la Soc. ethnographique, avec une introduction par Paul de Bourgoing*. Dally, *Sur les races indigènes et sur l'archéologie du Mexique*. Delarue, *Le Monténégro, histoire, description, mœurs et usages*. Godard, *L'Espagne, mœurs et paysages*.

Very few works have been published on comparative anthropology. We have had Professor Kingsley's *Lectures on the Roman and Teuton*. The first volume of Carl Vogt's *Lectures on Man*. A second edition of Pouchet's *Plurality of Human Races*. A valuable article by Professor Daniel Wilson on *The Physical Characteristics of the Ancient and Modern Celt of Gaul and Britain*.

In Germany, we have had Zimmermann's *Malerische. Länder u. Völkerkunde*. The *Bibliothek der Länder u. Völkerkunde*. Hoffmann's *Encyclopädie der Erd., Völker und Staaten, Malerisches Universum oder Reisen um die Welt*. Hoffmann's *Die Erde u. ihre Bewohner*. Reichenbach, *Völker der Erde*. Berghaus's *Die Völker des Erdballs*. Oeser *Bilder aus dem Völkerleben*. Das Grosse, *Völker und Naturleben, Physiognomische Züge aus fernen Welttheilen*; Dieffenbach's *Vorschule der Völkerkunde*, and many others.

The forthcoming year, however, bids fair to supply the deficiency of the past one.

On general anthropology there is announced an English edition, by Mr. Bendyshe, of the *Life and Anthropological Works of Blumenbach*; and a volume of *Memoirs* read before our own Society. The publication is also contemplated of a translation, by Dr. D. H. Tuke, of the important Memoir of M. Gratiolet, on the *Convulsions of the Brain in Man and the Primates*; and Dr. Charnock, amongst other works, is engaged on a paper on the Basque language.

On historical anthropology there is announced a work on *Pre-historic Archaeology*, by Mr. John Lubbock; by one of our Fellows, Mr. Edward Burnet Tylor, a volume containing researches into the primitive history of mankind; and a translation of Gastaldi, *On the Marl Beds, and Evidences of High Antiquity in Italy*, by Mr. C. H. Chambers.

In descriptive anthropology, we expect a work on the inhabitants of the Viti islands by our Fellow Mr. W. T. Pritchard. We are also looking forward with much interest to the publication by the Paris Anthropological Society and by ourselves of general instructions respecting descriptive anthropology, which will be accompanied with plates, so as to insure a uniform description of the complexion, hair, and eyes.

On comparative anthropology we expect the sixth part of *Crania Britannica* of Drs. Davis and Thurnam, and Mr. Busk's work on *Crania Typica*. Mr. J. W. Jackson also announces a volume of *Lectures*; and we may also expect some contribution from Professor Huxley on the subject of comparative anthropology, on which he has recently delivered lectures before the Royal College of Surgeons and at the School of Mines. I understand that Mr. Luke Burke also meditates giving his present views on this subject. There is also announced a translation of the second volume of Mr. Collingwood's edition of Waitz's *Anthropologie der Naturvölker*, with copious notes and a preface by Captain Burton; and a translation by Mr. Alfred Higgins of Retzius's works on comparative anthropology. We also hope ere long to have a valuable contribution to this subject from our accomplished Fellow, Dr. Barnard Davis.

I have already trespassed so much on your patience that I have now no time to dwell on the important labours of our fellow anthropological students in other parts of the world. Our science has sustained a heavy loss in the death of our Honorary Fellows, Rudolph Wagner and Theodor Waitz: to the memory of both due justice will be done on another occasion. We ought to be encouraged in our work by the knowledge that both of these hard working anthropologists looked on the formation of our Society with the greatest interest. Rudolph Wagner most generously admitted that we had done for England what he and his associates had failed to do for Germany. He had promised, too, to contribute to our publications, and thus to show, by his example, that he was anxious to help forward the great work in which we are engaged.

My respected colleague, Mr. Collingwood, is preparing an obituary of Theodor Waitz; it, therefore, would ill become me to anticipate what he will have to say; but, from a lengthened correspondence of several years past, I know that he looked to England for the information necessary for the future development of anthropological science.

Gentlemen, great things are expected of us from our scientific brethren on the continent, owing to the unusual opportunities which we enjoy for prosecuting our science. I fear we may not be able to realise all these expectations, but let us all do our best, and all work to aid the development of the Society, either by contributing papers, or by making others interested in our work, and thus increase our numbers and resources.

I have consented to allow myself to be again nominated for the important office of President, in the hope that during the next year we may increase our members from four hundred and fifty to double that number. I shall then be able to resign to other hands the conduct

of a Society which could only then be ruined by prostituting the objects contemplated in its formation, viz., the establishment of a reliable SCIENCE OF MANKIND.

Mr. BOLLAERT moved—"That the thanks of the Society be given to the President for his address, and that it be printed." His task, he said, was very brief. The President had, in a discourse replete with the most exhaustive information, and indicating his profound study of the subject, pointed out the relations between the science of anthropology, ethnography, and ethnology. In his own researches in South America, many years ago, he had been much hampered by the terms used by various authors. If he had then possessed such lucid definitions as had that day been laid before them, he would have been placed on the proper track for future investigations. He would not expatiate on the great interest which Dr. Hunt took in our science, and the constant hard work he brought to bear on every possible matter connected with the Society.

Mr. REDDIE, while heartily seconding the motion, said that there were errors both of omission and of commission in the President's address. The error of commission of which he had most to complain was the fact that the President had used expressions respecting himself and his own labours, in which no member would agree with him. The tone of opinion on the continent respecting our Society was most favourable; and he thought the President had shown great modesty in forbearing to allude to his own labours, by which this success had been achieved, and which had so much tended to advance the interests both of science and of the Society. He had also omitted to mention the fact that the majority of the books in the Library had been presented by Dr. Hunt himself. When the whole of Dr. Hunt's address should be printed, he hoped that the facts therein published, relative to the respective merits of the words Anthropology and Ethnology, as well as to the reciprocal position of the Ethnological and Anthropological Societies, would amply justify the decision which had been arrived at, to reject the absurd terms which were proposed by the Ethnological delegates, and to lead Fellows of the Society never again to attempt to waste their time by philandering with our sister with the pretty name!

Carried unanimously.

The PRESIDENT then moved the following resolution—"That this meeting is of opinion that it would be advantageous to the interests of anthropological science, that a special section should be formed in the British Association, to be devoted especially to anthropology; and that an address to the President and Council of the British Association be prepared, embodying the substance of the resolution."

Mr. BOLLAERT begged to second the resolution. He hoped the members of the British Association who originally opposed the Society would soon see the error of their ways, and give to it that support and assistance for which its important objects and powerful numbers qualified it.

Mr. REDDIE thought it might be possible to adopt a middle

course. It was undoubtedly a great triumph for Mr. Carter Blake after the Newcastle meeting, to be able to tell the Society in his report that all the original papers proceeded from the anthropologists, whilst the ethnologists had nothing to employ the time of the Section, but stale papers previously read in London; and he thought that the same plan might be adopted again, and the anthropological papers containing sound science might be offered to Section E, and, if refused, be read at our own meetings in London.

Mr. CARTER BLAKE said that papers which treated on any purely scientific topic had the greatest difficulty in being received for reading in Section E. Those papers which were not likely to please the ladies who attended the section in such large numbers were rejected, and anything which would create popular amusement was selected to their prejudice. The most valuable papers were also sent from post to pillar in a highly ludicrous manner. He recollected at Newcastle a paper on some human remains from St. Acheul being sent backwards and forwards from Section C (Geology) to Section E (Geography and Ethnology), the secretaries of the former section stating that the remains belonged to so recent a period that they could not be considered as prehistoric, and the secretaries of the latter section alleging the reverse. It was merely by accident that the paper was read at all. This was what might be expected to be repeated at every meeting until they had a separate section for anthropology alone.

The motion was put to the meeting and carried unanimously.

The Scrutineers brought up their report, when it was announced that the following gentlemen were elected for 1865:

President—Dr. James Hunt. *Vice-Presidents*—Captain R. F. Burton; J. Frederick Collingwood, Esq.; Dr. Berthold Seemann; T. Bendyshe, Esq. *Secretaries*—George E. Roberts, Esq.; W. Bollaert, Esq. *Foreign Secretary*—A. Higgins, Esq. *Treasurer*—Dr. R. S. Charnock. *Council*—H. J. C. Beavan, Esq.; C. H. Chambers, Esq.; S. E. Collingwood, Esq.; Dr. George D. Gibb; the Viscount Milton; George North, Esq.; L. Owen Pike, Esq.; S. E. Bouverie-Pusey, Esq.; W. Winwood Reade, Esq.; James Reddie, Esq.; G. F. Rolph, Esq.; C. R. des Ruffières, Esq.; W. Travers, Esq.; W. S. W. Vaux, Esq.

Resolved, on the motion of Mr. M'CLELLAND, seconded by Dr. CHARNOCK,—“That the thanks of the Society be given to the Scrutineers.”

The President then declared the proceedings at an end.

JANUARY 17TH, 1865.

J. F. COLLINGWOOD, Esq., F.G.S., F.R.S.L., VICE-PRESIDENT, IN THE CHAIR.

Mr. COLLINGWOOD, on taking the chair, expressed regret at the illness of their President, Dr. J. Hunt, who was prevented on that account from attending the meeting.

Mr. BOLLAERT (Honorary Secretary), read the minutes of the previous meeting, which were confirmed.

The names of the following new members were announced. C. W. Eeles, Esq.; Dr. M. C. Furnell; D. W. Nash, Esq., F.S.A.; William Salmon, Esq., F.G.S.; Lieut.-Colonel the Hon. J. Stanley; Edwin Goadby, Esq.; D. Sydenham, Esq.; George Seymour, Esq.; R. Younge, Esq.; F. H. Hobler, Esq.

Local Secretaries. F. Carulla, Esq., F.A.S.L., Buenos Ayres; Captain E. Stamp, British Columbia; George Nesbitt, Esq., F.A.S.L., Newcastle on Tyne; Prof. W. Macdonald, St. Andrews (Fife); W. T. Pritchard, Esq., F.A.S.L., Birmingham.

The following presents were announced, and thanks were voted to the donors. Human Remains from Cowley (J. Hutchinson, Esq.): Skull of a Malay (J. Macclelland, Esq., F.A.S.L.): Morton's *Crania Americana* (Sir Charles Nicholson): Aguirre's *Voyage to El Dorado* (W. Bollaert, Esq.): *Wild Tribes of the Neilgherry Hills* (Dr. Shortt): a Stamping Press and several other articles (H. Burnard Owen, Esq., F.A.S.L.): Cast of Skull of *Troglodytes Aubryi* (M. Pierre Gratiolet): and the following by T. Bendyshe, Esq., F.A.S.L.: Parent-Duchâtelet, *De la prostitution dans la ville de Paris*; Marx, *Zum Andenken am J. F. Blumenbach*; Draper, *Intellectual Development of Europe*; Tulp, *Observationes Medicæ; Coadamiticæ; Scortia, De Natura et Incremento Nili*; Hall, *Primitive Organisation*; Blumenbach, *De Generis Humani*; Ditto, *Essay on Generation*; Ditto, *Beyträge zur Naturgeschichte*; Ditto (Duplicate copy of first part, ed. 1790); Linnæi *Amœnitates Academicæ*, ten volumes; *Systema Naturæ*, ed. 1756.

Mr. CARTER BLAKE, in the absence of the author, read a paper by E. SELLON, Esq., on the *Linga Puja, or Phallic Worship in India*. (This paper is inserted in the first volume of the *Memoirs*.)

On the motion of the Chairman, thanks were voted to the author of the paper.

Mr. K. R. H. MACKENZIE observed that the subject of phallic worship had not been hitherto much explored, and he thought it was desirable to ascertain how far the east and the west, as it were, synchronised in that respect. He entertained the idea that the western part of the old world had also suffered under the infliction of phallic worship as much as the East, and he suggested whether there were not certain landmarks which indicated it had existed in these islands.

Dr. BELL said he could point out an instance in which that worship was connected with the oldest forms of religion in this country. The

most ancient idol of which there were any remains in England was the image of Jack of Hilton, in the neighbourhood of Birmingham. It was evidently an idol, and on it the prominent feature of phallic worship was plainly evident. Near Durham also, and in several places on the continent, there are to be seen reminiscences of similar idols.

Mr. BENDISHE alluded to some observations which had appeared some time ago in the *Ethnological Journal*, a periodical formerly conducted by Mr. L. Burke, in which it was stated that there were certain nations in which phallic worship prevailed, and others in which it was not practised; giving, as it were, a race-character to that form of idolatry; and, as Mr. Burke was present, he thought it would be satisfactory to know on what ground that opinion had been founded.

Mr. LUKE BURKE said he could not at that distance of time, and without preparation, exactly recollect the train of ideas which were in his mind when the article was written. He presumed that it must have been implied, that in races that had attained a certain degree of elevation, it was not to be expected that such a worship would be established. The phallic worship appeared to have had a particular centre and sphere of diffusion, and there were regions in which no traces of it were seen. In America, for instance, there were no indications of it; and he could not recognise that kind of idolatry as a very ancient form of worship. He thought that a worship of that kind must be more prevalent among races who were not delicate, and that among those who had more regard to decency there were fewer traces of it. The people of America and of the north of Europe he placed among the latter class. In India, on the contrary, where the people do not come up to our ideas of refinement and delicacy in such matters, the phallic worship would be more acceptable, though the exhibition of the symbols did not suggest to their minds the same feeling of indelicacy as they do to us. The traditions of Greece and of Italy showed a great similarity to those of India. With reference to the statement respecting the contents of the Ark of the Covenant, he must say that he saw no evidence of a connection between the Ark of the Covenant and phallic worship. The Jewish religion belonged altogether to a different class of worship.

Mr. REDDIE regretted that the author of the paper, Mr. Sellon, was not present, as there were several points in his interesting communication on which it would be desirable to have further information. With reference to the last remark of Mr. Burke, he must say that he considered the allusion to the Ark to be the weak point of the paper. It was not shewn how the Ark of the Covenant had any connection with phallic worship; and he should like to interrogate the author as to the evidence on which he made such a statement, before it was accepted. With regard to the assertions of Dr. Bell respecting the remains of idols in this and other countries, which, he thought, indicated the former prevalence of phallic worship, it should be borne in mind what the author of the paper had said—that phallic worship was originally by no means an obscene rite. Some heathen nations might have accepted that symbol, and worshipped it merely as indicating the

generative powers of nature; but other nations had not had that excuse for adopting the symbol, and had associated with it obscene notions; and he suspected that some of the statues which had been alluded to might not have been intended as idols, but simply as dirty images. Mr. Reddie alluded to the circumstance of the discovery of certain manuscripts in France, which had got into the hands of a learned *savant*, l'Abbé Domenech, and he brought out a handsome book on the subject, and indulged in many speculations as to the meaning of the figures, but which turned out to be nothing more than the drawings of a very dirty little German boy. They should take warning by that mistake, and be careful not to mix up such indecent representations with phallic worship. The round towers of Ireland had been considered by some as similar symbols; but all such matters should be discussed with great care.

Mr. MACKENZIE said he had seen the book alluded to. It contained many curious things that might have led to the inference of connection with phallic worship, but it had, in fact, no such connection whatever.

Mr. CARTER BLAKE said, that though himself entirely ignorant of any particulars respecting phallic worship, he would appeal to some gentlemen present from whom the society might be enabled to obtain the reliable information that would, no doubt, have been given, if the author of the excellent paper before them had been present. He would ask Captain Owen, of the Bengal Service, and Dr. Bell, from the latter of whom he had on several occasions received valuable archæological information. Dr. Bell might be able to tell what there was approaching to phallic worship among the nations of ancient Eastern Europe; whether in Poland, Russia, or in the countries inhabited by Wendic peoples, there was anything to show that that worship had been practised among them. Mr. Blake alluded also to the work, *Etudes Anthropologiques*, by Dr. Boudin, in which the phallic worship and the worship of the serpent were described, as showing the extent of ophiolatry in ancient times. They had the fact that the worship of the serpent was disseminated among a great variety of people; that in some instances it was accompanied by rites of extreme obscenity, and that in others it was connected with high conceptions of divinity.

Captain OWEN said that he had constantly seen phallic worship practised at the Golden Temple at Benares, and many other parts of India; but in no case had he observed anything that could be called "obscene". The symbolic Lingamyon might be seen by any one unacquainted with the subject, without knowing what it was intended to represent. The acts of worship consisted principally in sprinkling holy water and in spreading flowers over the image. The ceremony was conducted in a serious manner, without levity. Only on one occasion had he noticed anything that approached the English idea of the indelicate, and that was on the outside of a temple at Almorah: the figures there sculptured partook certainly more of nature than propriety; but such things should be no more confounded with the form of worship than the grotesques on an European cathedral. His own opinion was, that many true and noble ideas have originated in

the brain of the philosopher; these the poets clothed in so strange a garb, that the sage can now with difficulty recognise his own. Poetry had much to be answerable for! With regard to the question whether phallic worship was practised in Europe;—he thought some traces of it might be found not only in France but in this country. He alluded to a stone that was regarded with great reverence in the cathedral of Chartres, which he considered to have been a phallic symbol. Its origin was unknown. It had formerly been in a vault or cellar under the church, to which vast numbers of pilgrims had resorted. Every visitor kissed the stone on the left side; the spot is said to be much worn in consequence. When the stone staircase leading to it had been quite destroyed by the footsteps of the devout, to save the expense of repairs the stone was removed and brought up into the body of the cathedral, where it may now be seen, he believed, by the curious. Thus probably the site of the building had first been rendered sacred by phallic worship! He was sorry to throw another stone North of the Tweed so soon after the case of the "child's jaw"; but he thought it highly probable that the ancient "Scone stone" of Scotland, on which the kings of Great Britain and Ireland were crowned, had formerly been closely connected with phallic worship. This was a subject for future inquiry and discussion. In one of the celebrated museums in Europe, there had been for many years exhibited a specimen of the lingam yoni, labelled "a Hindû fountain." A veil of poetry had been for a long time thrown over the subject, which he thought might now be dropped.

Dr. BELL made some further observations as to the former practice of phallic worship in the west; and again alluded to the image near Birmingham (Jack of Hilton) as being a decided indication of it. There were many other similar images in which the member had been evidently broken off. There might, he said, have been more philosophy and poetry in India than in the West; but when they looked to the ancient poets and historians, it could not be considered that they looked on the representation of such objects as obscene. As to the worship of the serpent, indications of it were to be found in Mexico, in Sweden, in the Baltic, and other parts of Europe; and he thought that the appearance of the reptile might have produced some part of the feeling on the subject.

Dr. SEEMANN expressed the opinion, that the worship of trees, of the serpent, and phallic worship were closely connected. The oldest form of worship was that of trees, and it gradually merged into that of the phallus; wherever the worship of trees prevailed there was always the serpent. When in the South Sea Islands he saw many of the phallic stones, but at that time he did not know what they were intended to represent; but when he afterwards saw the phallic images of India and Italy, he at once became aware that they were for a similar object, and he understood why the South Sea Islanders worshipped stones of that description. His belief was, that the obelisks of Egypt were intended for nothing more than phalli, and that the columns of the Grecian temples are nothing but a collection of the same. He had not seen any traces of phallic worship among

the American Indians, though there was serpent worship in America; which had been taken there by the negroes. In Japan the temples for phallic worship were similar to the temples of Venus in Greece.

Mr. BURNARD OWEN said, that among the most ancient monuments in England and Wales representations of the serpent were found, but in no instance was there anything to authorise the supposition that they were traces of phallic worship. In every case in which the image of the serpent was found, it was accepted as an emblem of eternity. In his opinion there was no connection between serpent- and phallic-worship. The American worship of the reptile could not be regarded as an indication of phallic worship. The image of the serpent was regarded also as an emblem of wisdom and as a protector from evil.

Mr. LUKE BURKE could trace no connection between the worship of the serpent and phallic worship. The two appeared to him to be entirely distinct. Neither could he perceive any connection between the veneration attached to stones generally and the worship of the phallus. The first idea connected with the emblem of the serpent was that of fire, afterwards it was regarded as an emblem of water, and subsequently as eternity; but those were distinct ideas from its mythical character. Stones were also considered symbolic of different things; it was at one time symbolic of power, of air, and of other attributes of Nature, but the phallic worship was entirely distinct from the veneration with which stones were regarded.

Mr. BOLLAEERT observed, that as Mexico had been alluded to in the course of the discussion, he would remark that he had been through the whole of that country, and through the greater part of South America, and he had never met with a single instance of phallic worship there. It had indeed been mentioned by one of the followers of Cortez that he had seen that worship practised in Mexico. That was, however, only a single instance, and he was inclined to attribute that representation to the priests, who did not hesitate to invent calumnies against the natives. In North America, he believed it had been stated by Mr. Catlin, that he saw the representation of a large virile member; but admitting that to be the fact, it did not prove that phallic worship was practised. He had not however, himself, seen anything like phallic worship in America; he had, indeed, seen some pottery with figures of an indecent character, but that was not connected with worship. As to the round towers of Ireland, he could not believe that they had any relation to phallic worship; he conceived that they were merely gnomons to indicate the hour of the day by their shadows. The serpent in South America was worshipped as a kind of god by some of the people, but it did not constitute a particular form of worship.

Mr. WALLACE said, that from what he had seen in his travels among savage nations, he was inclined to think that the practice of making indecent figures was connected with race character. Through the whole of the Valley of the Amazons he saw numerous figures cut on the rocks, but among them there was nothing indecent, nor any indication of phallic worship. Among the Malays also he saw

nothing of the kind, and those people he considered possessed similar mental characteristics to the South American tribes. But in the Papuan races the case was very different. These people resemble those of India, and in their representations of the human figure the parts of generation were always prominently indicated. He referred to Dorey, in New Guinea, a representation of which village is given in a recent work by Sir Charles Lyell, as being an illustration of the Swiss lake-dwellings. The largest building in the place, a council-house, was decorated with human figures, in which the parts of generation, both male and female, are very large; and in the front of the house there were the figures of a man and woman in the act of copulation. That was the grossest example of rudimentary phallic worship that he had seen. Whether similar representations were to be found in Africa he was unable to say.

Mr. R. B. N. WALKER, who had recently returned from Western Africa, stated that indecent images were very common there. He particularly referred to some that he had seen at Porto Novo, but whether those images were intended as objects of worship he did not know.

Mr. BROOKES thought that figures ought not to be called indecent because they were nude, and that it was unjust to savage nations to call them indecent for exhibiting naked figures, when in the Crystal Palace and in various other places in this country nude figures were exhibited. The phallic worship was the remains of a worship which was, no doubt, sacred when first instituted, though it might now be abused. The originators of that worship had reasons for so doing, which, to them, were moral reasons. We had gone beyond that stage of civilisation, and thought it absurd and indecent to worship serpents and the phallus. There were traces, however, of serpent worship in the Jewish writings of the Bible, and traces of that, and of phallic and other primitive forms of worship, had been handed down and were still to be found amongst Christians of the present day.

Mr. BOLLAERT explained, that when he used the term indecent he did not mean simply representations of the nude figure, but such as represented a man having connection with a monkey.

Mr. ANTONIO BRADY said there was evidence in the *Museo Borbonico*, Naples, that phallic worship came down as late as the Christian era. Some of the images there collected were so gross, that even in that loose country they were considered too indecent to be seen; they were excluded from the general public, and it required a special order to get admission to see them. In the temple of Isis, Pompeii, there was an image, every part of which represented a human penis. There are also in the above museum representations of the grossest bestiality, not only of the connection of mankind with mankind, but of bestiality too shocking to think of. Phallic worship was but a phase of animal sensuality which has continued to the present time, and images of the generative organs are still worn as amulets or charms.

Mr. B. OWEN said it would be a remarkable stretch of imagination to suppose that everything indecent was necessarily a proof of phallic

worship. In some of our own cathedrals there were indecent representations, but certainly no ground for connecting them with phallic worship. Some years since, at Bristol cathedral, his attention was called to bosses, which a gentleman informed him had been covered up to hide their indecent character.

Mr. MACKENZIE said they had no occasion to go so far to find evidence of phallic worship. He thought it was laying too great a stress on phallic worship, as indicative of inferiority of race, when they had so many indecent pictures from Pompeii and other places collected in this country.

Mr. CARTER BLAKE observed, that with regard to the remarks of Mr. Burnard Owen on the monuments in Wales, similar representations had been observed by Mr. Tate in the Cheviots, and by other authorities in Cornwall, as involute bodies of a concentric form, that might have been intended for a serpent or for anything else. He thought that the comparison of them with the pagan emblem of eternity (the serpent with a tail in its mouth), was exceedingly wild, as no mouths or tails were visible in them, and the serpent form was not particularly evident. They could not be adduced as affording an example of phallic idolatry. As to the connection between the worship of the serpent and phallic worship, it was distinctly pointed out in Dr. Boudin's work. It was among the West African races, relying upon the accounts of travellers, that this author showed that the worship of the serpent was often corrupted into the performances of impure practices. Dr. Boudin accordingly drew a certain connexion between the worship of the serpent and that of the phallus. As to the allusion to the Scone stone of Scotland being an example of phallic worship, he considered there could be no connection between them. The Scone was simply a rectangular stone with a very slight depression in the middle; and the legend attached to it was, that it was the pillow of Jacob in the Holy Land, on which he lay his head when he had the dream that is recorded. It would be a very inconvenient symbol for phallic worship. So far from seeing in this kind of worship merely the symbolism of metaphysical ideas, the practice appeared to him to be essentially sensual, and the immoral incarnation of man's most brutal passions—passions which were incompatible with the highest development of that moral nature upon which man's dignity could alone depend.

Mr. BURNARD OWEN replied that, in regard to the Welsh inscriptions, they were so clearly cut and sharply defined, there could be no mistake as to their character. The serpent was delineated in a circular form, the tail being brought round and placed in the mouth.

A paper was read by W. T. PRITCHARD, Esq., "On some Anthropological Matters connected with the South Sea Islanders." This paper is inserted in the first volume of *Memoirs*. The following note was received from Mr. Pritchard respecting his paper:—"The last marriage ceremony, of great chiefs, at Samoa, after the manner described in the paper, was that of the wedding of the chief *Pui-o-le-Maunga* (king of the mountain), and the princess *Tae-Laumei*, daugh-

ter of the chief *Sangapolutele*, of *Saluafata* (on the island of Upolu, and where there is a good harbour). It took place on the *malae* (square), at Maoto-Pasito'otai (also island of Upolu). If you go and like to make a talk, the above will give you matter. I forgot to name these parties in the paper. I saw the operation and the ceremony as a whole."

Mr. MACKENZIE, in reference to the latter portion of the paper, regarding circumcision, related the following circumstances which had happened to a friend of his, a very distinguished traveller. This friend wished to go into the wilds of Arabia, and to enable him to do so he intended to disguise himself as a Moslem. To carry that object into effect, he understood it would be necessary that he should be circumcised. He, therefore, consulted Dr. Pereira about the matter, and that gentleman, being a Jew, performed the operation. When his friend arrived at Constantinople, he attempted to enter one of the mosques; and, to remove all difficulty, he exhibited himself to show that he belonged to the true faith; but the operation had been performed according to the Jewish method, and not in the manner practised by the Mohammedans, and he was kicked out of the place.

The following paper was then read:—

On the occurrence of Syphilis in a Monkey. By EDWARD LUND, Esq., F.R.C.S.E.

[Communicated by Dr. F. Royston Fairbank, Loc. Sec. A.S.L.]

To FREDERICK ROYSTON FAIRBANK, Esq., Local Secretary to the *Anthropological Society of London, etc., etc.*

Manchester, 13th June, 1864.

DEAR SIR,—The only remarks I have to make in sending you these specimens of diseased bone from a monkey, for exhibition at the next meeting of the Anthropological Society of London, will refer to the manner in which I became possessed of them, and the inferences which I think may be drawn from the appearances they present.

Some months since, a person, who is in the habit of preparing skeletons of animals and stuffing birds, etc., for museums, called upon me to say that he had the skeleton of a monkey which had died of syphilis, and that the state of the bones indicated the constitutional effects of that disease, and that I might have the skeleton, or the greater part of it, if I liked. He further stated, that the penis of the animal had been almost entirely destroyed by ulceration, that the hair had fallen off in patches from several parts of the body, and that the frontal bone, as well as some of the long bones, were completely carious.

On inquiry at the Zoological Gardens at Belle Vue, near Manchester, where the animal had died, I learned from the man who for many years had had charge of the monkeys, that it was quite a generally believed opinion, that these animals are occasionally subject to syphilis, or of some disease attended by ulceration of the genital organs, and propagated by sexual intercourse. He

pointed out to me, in the same collection as the one in which the male animal had died, a female monkey which he said was so affected; and as far as I could observe, the vulva was surrounded by several rather large condylomatous growths, attended by an abundant sero-purulent discharge. The cage in which these animals were placed, was rather small in proportion to the number of inmates, and other cages and dens being in close proximity to it, the ventilation was imperfect and the general arrangements not such as to conduce to the health and constitutional vigour of the animals.

Now it is well known, that animals, such as monkeys, when kept in menageries, are very liable to die from strumous disease, especially from tubercular pulmonary consumption, and we have here in this particular instance an illustration of how far cohabitation, under circumstances unfavourable to health, may engender a cachectic state in which the genital organs are diseased, and that this condition may be regarded as the first step in a degeneration, which, by frequent repetition, would at last culminate in true syphilis.

I am aware that a theory has been promulgated, that struma in infancy and early youth is but syphilis diluted through many generations, manifesting itself in a distant offspring; but this assertion has not, to my knowledge, been sufficiently supported by observation to be in any way accepted. Syphilis and struma are both *cacheziæ*, both are due in some way to defective nutrition or to imperfect vital power, and are always aggravated by the persistence of those external conditions which are at variance with the laws of health. It would seem, therefore, as if animals pent up in small cages, and cohabiting promiscuously together, as monkeys are so prone to do, might form in the vitiated secretions of their genital organs a *materies morbi* communicable among themselves, capable of absorption, and, by poisoning the general system, of impairing the nutrition of the skin, the bones, and other structures. I do not say that a poison similar to that of syphilis can always be so produced, but I think the circumstances here briefly narrated will suggest the idea that the essence of such a disease as syphilis was originally developed through these agents, and that it would be more likely to have occurred among the closely-packed members of large communities, whether of animals or of human beings, than among the denizens of the forest or the plain, or the untutored specimens of savage life.

I send you with this five of the long bones of the creature, the lower jaw and the skull, but the latter, as you will perceive, has been very clumsily mended with putty or some other cement; and if these specimens should be considered worthy of a place in the museum of the society, I shall have great pleasure in presenting them for that purpose.

Believe me to be, dear Sir, very truly yours,
EDWARD LUND, F.R.C.S.E.,
Lecturer on Anatomy, etc., etc.

The subject of the above report was a "Chinese bonnet monkey"
—*Macacus sinicus*. F. R. F.

Mr. MACKENZIE observed that it was well known that monkeys are subject to tubercular disease, and to other diseases to which man is subject; and he considered it, therefore, very probable that they were liable to syphilis.

Mr. BOLLAERT said the case brought forward by Mr. Lund was the only instance of the kind with which he was acquainted.

Mr. REDDIE hoped that some medical man was present who would be able to say whether there was any direct evidence from the bones on the table that the animal had suffered from that disease.

Mr. CARTER BLAKE regretted that no medical man was present that evening, but he begged to quote the opinion of Dr. Pearson, published in 1798, in *An Inquiry concerning the History of the Cow-pox*, which had a direct bearing on the question. Dr. Pearson said, "The cow-pox poison and the hydrophobic poison are the only specific morbid matters to the human animal economy which are clearly proved to be derived from brute animals; for there is only small probability on the side of the opinion that the syphilitic poison is from the bull; the small-pox from the camel; and the itch from the dog."—"J. Hunter failed in attempting to excite the syphilis in a dog by inoculating him with the poison of the gonorrhœa and of a syphilitic ulcer. Camper attests that in the most malignant epizootic murrain, which spread most rapidly among oxen, yet other animals, such as sheep, horses, asses, dogs, etc., were not affected by associating with the distempered oxen; nor even by feeding with them in the same compartments of a stable." In a note to the above, it is added: "Berrier of Chartres asserts that monkeys, dogs, sheep, rabbits, oxen, and other animals are susceptible of the small-pox; but his evidence has not the weight of a feather against the contrary authorities. Swediaur asserts that monkeys are never affected with the syphilis, although in England they are subject to the scrofula, and that other animals are equally unsusceptible of the syphilis, although Pauw affirms that in Peru dogs are affected with this disease." But at the meeting of the British Association at Bath, Dr. Crisp had exhibited the skull of a monkey which exhibited the same character, but which his friend Dr. Crisp did not attribute to syphilis. The skull and bones of the monkey now on the table had been in the possession of the Society ten months, during which time they have been examined by several medical men, who said the appearance of the bones was compatible with the theory that the animal had been affected with syphilis, but it was a question they could not positively determine. He had no doubt in his own mind that the character of the bones viewed were compatible with such a theory, and he saw no *a priori* reason why man should not share diseases with other and lower animals.

The CHAIRMAN (Mr. Collingwood), after having proposed the thanks of the meeting to the author of the paper, directed attention to the skeleton of a full-grown Pampas Indian, from the neighbourhood of Mendoza, which was exhibited on the table, and had been presented as a contribution to the Society's museum by Major Rickard, through Mr. Bollaert, and would form the subject of a detailed memoir by Mr. Carter Blake.

Mr. CARTER BLAKE stated that the skeleton was the first of a South American Indian that had been exhibited in any European collection.

Thanks were then voted to the donor.

Mr. BOLLAERT read the following extract of a letter from Major Rickard to himself respecting the specimen on the table :—"San Juan, Jan. 20, 1864. To W. Bollaert.—I am looking up Indian relics, and have tumbled upon some good places to dig. I have found arrow points, pottery, etc.; and am going to open some tombs very soon. I secured the bones at Mendoza of two skeletons of Indians complete, dug up on a battle-field, where a battle had been fought forty years since. A small skull and part of a skeleton of a boy, nine years of age, pure Indian, vouched for by Dr. Day (now at Woolwich), who cut off the head and boiled it. I have packed all in a box, and sent it to Chile, to be shipped home to you for the Anthropological Society. I shall send a lengthened description very soon. I have charged several to get me the brains of Indians, and inject with spirit. I have no doubt I shall soon obtain them."

The meeting then adjourned to the 31st instant.

JAN. 31, 1865.

DR. JAMES HUNT, PRESIDENT, IN THE CHAIR.

The minutes of the last meeting were read and confirmed.

The names of the following new members were announced :—Dr. J. M. Middleton, J. T. R. Groves, Esq., F. E. Blyth, Esq., R. S. Stone, Esq., H. G. James, Esq., W. Wilson, Esq.

Local Secretaries: Hyde Clarke, Esq., LL.D., Smyrna; J. L. Lucy, Esq., F.G.S., Gloucester.

The following list of presents was read, and thanks were voted for the same :—Man's Nature and Development, by H. G. Atkinson, Esq. (the author). Casts of heads of five members of an idiotic family from Downham, in Norfolk; and two Australian skulls (H. G. Atkinson, Esq., F.G.S.) Australian skull (E. Canton, Esq., F.R.C.S.) Skull found within the precincts of Louth Abbey, Ireland (Captain Montgomery Moore). Journal of Botany (Dr. Seemann). Von Baer, über Papuas ü. Alfuren; Die Makrokephalen; and Crania Selecta; Blumenbach, *De Genetis Humani* (T. Bendyshe, Esq.) Forty-fourth Report of Leeds Philosophical Society, and Wright on the Early History of Leeds (the Society). Trans. Geological and Polytechnic Society of Yorkshire (the Society). The following objects by R. B. N. Walker, Esq., F.A.S.L.:—Cap of grass from Loango; ditto from Sierra Leone; grass cigar-case from Sierra Leone; pipe-bowl from Loango; pipe-bowl from Porto Novo; hair-pin from Gaboon; and two ivory carvings from Loango.

Mr. R. B. N. WALKER having been called on by the President to make some observations on the ivory carvings and other objects pre-

sented by him, said that at first sight the ivory carvings appeared to have some relation to phallic worship; and after hearing the interesting paper on that subject at the last meeting, it occurred to him that they might have some interest if placed in the Society's museum. He was inclined to believe, however, that the indecent character of those and of other works by the natives of West Africa, proceeded from the naturally warm and prurient imaginations of those people, and that they were not associated with worship of any kind. The people of Loango were very clever in works of the description which were on the table. There were two caps made of grass, one from Sierra Leone, and the other from Loango; the latter, which was much ornamented, was worn as a mark of distinction; and he had another, of much superior workmanship, which was presented to him on being invested with certain honours by the King of Loango. Among the other articles on the table was a large ornamented ivory hair-pin, which was used by the native women of Gaboon and Camme to scratch their heads; for their hair being only dressed once a month, or less frequently, and then in a very elaborate manner which they were careful not to derange, they were obliged to use an article of the kind exhibited.

Dr. G. D. GIBB read a paper "On the essential Differences observable between the Larynx of the Negro and that of the White Man." (This paper will appear in the *Memoirs*.)

The thanks of the meeting were given to the author of the paper.

Mr. HOLTHOUSE was called on by the President to make some remarks on the subject, but he said it was so long since he had examined the larynx in negroes that he could only confirm generally the statements of Dr. Gibb.

Mr. CARTER BLAKE said that the author of the paper gave for the first time some accurate facts as to the larynx of the negro compared with that of Europeans, but there were certain considerations to which M. Pruner-Bey and other writers had directed attention, that required to be further investigated. In M. Pruner-Bey's work on the negro the following important passage occurs:—"M. Eschricht has found the muscles of the larynx very strong, the crico-thyroides are especially large; he has moreover found that a portion of the fibres of these last muscles ascend to the internal surface of the thyroid cartilage." And M. Pruner-Bey then added the conjecture, "may this be a trace of the internal crico-thyroid muscles of the hylobate apes?" He should be glad if they could have some accurate information on the point, whether the deviation was really in any way homologous with the muscle described by Raffles in the Siamang. With regard to the question whether the peculiarities described by Dr. Gibb in the larynx of the negro prevail also in the gorilla, the chimpanzee, and the ouran outan, he should like to hear whether the larynx in those animals had been examined to ascertain this fact. It might be expected *a priori* that the vocal chords would be different, as the noise made by these apes is so different from the sound of the human voice. Cuvier and other writers on comparative anatomy are silent as to the muscles

of the larynx in many apes. As to the confusion which Dr. Gibb noticed prevails between the descriptions of the cartilages of Wrisberg and that of Santorini, it might perhaps be explained by supposing that the difference between the cartilages had not been observed, for in some of our best manuals of dissection no mention is made of the Wrisbergian cartilage.

Mr. D. W. NASH observed that the most interesting part of the question related to the function of the voice, and whether the difference observed in the structure of the larynx of the negro and European enabled us to trace any difference of species. Three principal distinctions had been pointed out by the author of the paper; but were they sufficient to make anthropologists move in that direction? The views expressed by Mr. Woolner certainly deserved attention. It seemed natural to conceive that the difference between the quadrumana and man should be sought for in the organ that most distinguishes man from the lower animals; but it would be fallacious to seek to ascertain that difference only by the structure of the vocal chords, for the power of speech does not depend so much on the power of making particular sounds as on the power of appreciating them. The quadrumana might possess organs adapted for the purpose, and there might be no anatomical reasons to prevent the gorilla from speaking, as some birds have been taught to utter words, but they want the power to appreciate and understand the value of the sounds; and it must be to the brain they should look to distinguish that power. The brain of the lower animals does not enable them to make the requisite applications of the sounds. Though the paper was one of great interest, he doubted whether it showed that the differences in the larynx of the negro and the white man were sufficient as indications of distinction of species. In conclusion, Mr. Nash remarked on the want of a more accurate and definite anthropological terminology, and he directed the attention of the Society to that subject.

Mr. MACKENZIE coincided with Mr. Nash in the desire to see a more accurate and comprehensive terminology adopted in anthropological science. He proposed that they should form a committee to promote the design of publishing an anthropological encyclopædia. Though it might not be possible for any single member to complete such a work satisfactorily, they might all contribute towards it by sending to their assistant secretary, Mr. Blake, any ideas that occurred to them. Mr. Blake, he knew, took in every thing like blotting paper, and he would be able to transfer those ideas and make them available for the purpose. A recording office was wanted for the collection of suggestions and facts, and he thought that they could not do better than for each one to contribute his quota to the formation of a work that was so much wanted for the promotion of anthropological science.

Mr. BENDYSHE remarked, that it had been said by Mr. Spurgeon, in one of his sermons, that whatever was recorded on earth was recorded in heaven; and he should be glad if their Society had a recording angel to note down all the facts relating to their science, and that they should find them all recorded there. But, unfortu-

nately, in this world it was very difficult to collect and record information systematically; but it was very desirable that everything which was worth record should be properly written down.

Mr. BOLLAEET said he, as a believer in the Polygenistic idea, had mentioned in his paper on the "Past and Present Populations of the New World," that the comparatively unprolific character among themselves of the Mestizos from Spaniard and the Indian woman, in all probability is caused from the great difference in physiological characteristics, and he had mentioned that he hoped comparative examination would be made on the organs of generation of the white and red man species. We had some observations on the differences of brain in the Indian, but these observations on the larynx of the negro was a grand commencement of the true physiology connected with the various species of man.

The PRESIDENT observed that the practical application of the differences pointed out in the paper between the larynx of the negro and European, as indicating the European and African to be distinct species, must be considered on some future day; but they had that evening only to deal with simple facts. The great attention that had been paid by Dr. Gibb to the structure of the larynx rendered his communication very valuable. He (the President) had derived great pleasure and instruction from hearing it; and he thought it impossible to dissent from the statements that had been made. The observations respecting the cartilages of Wrisberg were important, and if not contradicted, must lead to further inquiry into the quadrumana; and the remarks of Mr. Nash respecting the distinction established by the power of speech deserved further consideration. He had been for a long time convinced that distinction of voice was of the highest value as the basis of deductions regarding distinction of species; and there was little doubt that a negro could be distinguished from an European by the voice. He was therefore prepared to agree with the deductions and observations made by Dr. Gibb. A single marked character, he thought, if constant, would be sufficient to establish a distinction between the European and African. He would not, however, go into the question that evening.

Dr. GIBB, in reply to the observations made on his paper, said that with regard to the remarks of Mr. Blake, he had observed an alteration in the position of the negro's thyro-arytenoid muscle as compared with that in the white man, and that portion of the muscle in contact with the upper and inner surface of the thyroid cartilage, would be in accordance with the opinions of the anatomists mentioned by Mr. Blake. As to the differences between the black and white races of mankind, that was a question on which he was not prepared to say anything. He could not say that there was a greater resemblance between the larynx of the negro and quadrumana than in Europeans. There was an analogy, but it was not sufficient to enable him to draw any inference of distinctive difference. At the meeting of the British Association at Bath, he had confirmed the researches of Battaille in relation to the minute anatomy of the thyro-arytenoid muscle; he approved of the name *triceps laryngea*, and he hoped future anatomists would adopt that term. He considered it one of the most

remarkable muscles in the human body. Necessarily, from the altered position of the ventricles in the negro, there must be corresponding differences in these muscles; but in his paper he had mainly confined himself to the three essential points already described. As to the question whether the gorilla, chimpanzee, and ouran outan had been examined by the laryngoscope, he observed that it was impossible to make observations with that instrument in the larynx of those animals in a living state. He had not extended his observations to other races of mankind, but if the opportunity occurred he would do so. His idea was, that those cartilages he had pointed out as invariably present in the larynx of the negro, existed in some other races of mankind, but not in all.

Dr. PEACOCK then read a paper *On the Weight of the Brain and Capacity of the Skull of a Negro*. [This paper is inserted in the *Memoirs of the Society*.]

The thanks of the meeting having been given to the author of the paper,

Dr. PEACOCK made some observations on the various substances employed to ascertain the capacity of skulls. He said it was most important that in all such measurements the same substance should be employed by all anatomists. Some employed sand, others shot, and others again used pepper-corns or millet seed, the use of which various substances was liable to occasion diversity in the results. He had tried them all, and objections might be raised to each; but, though in the measurements given in the paper he had used millet seed to correspond with the observations of Tiedemann, he preferred sand as least objectionable. Whether millet seed or sand was best might be matter of doubt, but it was at all events most desirable that the same kind of substance should be employed by all.

Mr. MACKENZIE made some observations with reference to the importance of having a standard mode of measurement. Sand was not perhaps the best, and a better substance might be found, but he thought the suggestion of Dr. Peacock was so valuable that the Society ought to adopt a resolution to try and obtain a good average standard of measurement.

The PRESIDENT said that the Council of the Society were engaged in forming instructions for their local secretaries, with the view of getting all anthropologists to work on one uniform plan. It appeared to him that there was less objection to dry sand than to other substances. He hoped that ere long general instructions on the subject would be prepared; they were now collecting data, and when they had all the facts before them they would be able to come to a decision. As to the paper that had been read, the history of the specimen exhibited was not sufficiently satisfactory to enable them to draw any sound inference; but the facts mentioned were of considerable importance. A great difficulty had been found in obtaining specimens of pure negro skulls; and unless there were an authentic history attached to a skull it was uncertain whether it was the skull of a pure negro or otherwise, for the negro races were much mixed.

Even Dr. Nott, when residing among the negroes, had great difficulty in procuring a genuine negro skull. They were indebted, however, to Dr. Peacock for his paper, though they could not found any generalisation on the case brought forward.

Dr. PEACOCK said there could be no doubt that the skull exhibited was that of a genuine African. The skulls of negroes vary very much even amongst the genuine races, as European skulls differ; but he felt sure that the specimen on the table was that of a pure negro, though he did not know of what race. Referring to the discussion on Dr. Gibb's paper on the larynx, he said he considered the facts bearing on the difference of the organs of the white man and the black as of great importance. Dr. Gibb had mentioned that the distribution of the arteries was different in the negro from the European race, and he thought it probable that it would be found on careful comparison that in the system generally there were minute distinctions.

The following paper was also contributed by Dr. Peacock :—

Memorandum on a Skull exhumed at Pavenham, in Bedfordshire. By T. B. PEACOCK, M.D., L.R.C.P.

The skull, together with other bones, was recently exhumed in a gravel-pit on the property of Joseph Tucker, Esq., at Pavenham, in Bedfordshire. Three years ago several skulls were found; last year one was exposed, and altogether parts of eleven skeletons have been found in the same place. The bodies had been buried in the gravel, trenches being apparently dug just so deep as to contain them, and then covered with the soil which was about two feet in depth. The skeletons were laid flat, some had their heads to the north, but others were in all directions. Along with the bones were found some large iron nails and pieces of iron, six or eight inches long, possibly the remains of swords or spear-heads, and some pieces of pottery.

The skulls, with the nails and pottery, were sent by the Rev. S. Ram to Dr. Rolleston, of Oxford, and are now in the Radcliffe Museum. The long pieces of iron were thrown back into the pit, and covered with soil.

Dr. Rolleston regards the pieces of pottery sent to him as decidedly Roman, and states that they are "well burnt and of fine finish, but not quite of the colour of Samian ware." The skulls, he says, have not "the rough and worn appearance in general, nor any of the special characters ascribed to British; the teeth are much worn, but in other respects they present such characters as are found in true Roman crania."

The skull exhibited to the Society is imperfect, wanting the bones of the face, but the calvaria is complete. The frontal region is somewhat narrow and low, and the parietal regions are flattened, the sagittal ridge prominent, and the vertex somewhat pointed. The sutures are entire. The cranial cavity is large, being capable of containing seventy-two ounces eight drachms of sand, by avoirdupois weight, indicating a capacity of eighty cubic inches, or of 1310 cubic centimètres.

The longitudinal diameter is seven inches and a half, the trans-
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verse five and a half; the height from the external auditory foramen to the vertex is five inches, and the circumference twenty inches.

Two years ago, some pieces of pottery, consisting of the handle of a large vessel and a small jar were found in the same gravel-pits. The former is composed of a well-burnt material of a dark colour internally, but pale on the outside. The other is a small vessel about five inches high, and which, when entire, must have had a mouth not less than four and a half or five inches wide. It is of a brown colour on the outside, and consists of a dark material, mixed with small white or chalky particles. It has been roughly moulded by the hand, and has no ornament upon it, but is marked on the outside by rough grooves, following different directions, as if, when moist, it had been wrapped in straw. When first obtained it contained some dark carbonaceous material in the base.

The place from which these different skulls and pieces of pottery were removed is situated at the distance of about a mile from the present village of Pavenham. It is low ground, only a short distance from the river Ouse, and near a part of the river where the water is shallow, and a ford formerly existed. About half a mile from the spot, lower down the river, there is an ancient bridge, and remains, extending from the bridge to the present village, still exist in places of a paved road. The bridge is now called Stafford Bridge, but this is supposed to be a corruption of Staneford or Stanford.

The thanks of the meeting were given to Dr. Peacock for the paper.

MR. CARTER BLAKE said the evidences of antiquity presented by the skull on the table were very weak indeed. It could not be determined to be a Roman skull. Skulls found at Arrow, near Warwick, presented to the Society's Museum by Mr. George E. Roberts, coincided with the skull from Bedfordshire, and they had been calculated as having been buried about the date A.D. 1440. An idea prevailed that a Roman skull could be distinguished from a British skull by the wearing away of the enamel of the teeth in the one more than in the other, by eating different kind of food; but he thought no reliance could be placed on such a distinction. In point of fact, the Romans and Britons ate the same kind of food. In later times, it was known, for instance, that before the battle of Agincourt, the English soldiers were ordered to provide themselves with forty days' rations of parched corn. It was a very vague way of determining that a skull was that of a Roman by the wearing away of the teeth. A method of ascertaining the antiquity of human bones had been adopted by subjecting them to chemical analysis; and Professor Busk had mentioned some curious cases in which there were ascertained to be a large proportion of certain substances in some human remains of the greatest antiquity. No chemical test had, however, been applied to the remains on the table, and there could be little doubt that the skulls brought from Arrow would generally agree with them. He should be sorry to assign to those remains any remote date. They were not found associated with other ancient remains in the gravel-pit, and they

were not connected in any way with the gravel in which they were deposited.

Dr. SEEMANN remarked, in reference to the deceptive evidence which the wearing away of the teeth affords, that the teeth of the Esquimaux, who live chiefly on animal food, are worn away to the gums.

Mr. BOLLAERT also made an observation on the character of the food in wearing away of the teeth.

Mr. WALKER observed that the food of the King of Dahome's army consisted of parched corn, and he remarked that it was a curious fact that the food of the Africans at the present day should be the same as that of the ancient Roman soldiers.

Dr. PEACOCK said that it was doubtful whether burial had been used or cremation: the bones were all found entire.

Mr. BENDYSHE then read a paper "On the History of Anthropology." (This paper is inserted in the *Memoirs*.)

Thanks were given to Mr. Bendyshe.

Mr. MACKENZIE suggested that it would be better to defer any discussion on the paper until it had been printed in the proceedings of the Society.

The PRESIDENT directed attention to a work just published by the Society, the *Life and Writings of Blumenbach*, which had been translated and edited by Mr. Bendyshe. That was not the place to express an opinion on the very able manner in which the work had been brought out, but he believed that it would be found more valuable than any other work that had been published by the Society, and that it would do more for the establishment of anthropological science in this country.

Mr. BENDYSHE having briefly acknowledged the vote of thanks, the meeting adjourned to the 14th of February.

FEBRUARY 14TH, 1865.

THE PRESIDENT, DR. JAMES HUNT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The following list of presents was announced as having been received:—Grindon, *Nature, and Phenomena of Life*. Burton, *Handbook of Overland Explorations*. Quatrefages, *Metamorphoses of Man and Lower Animals* (H. J. C. Beavan). *Archæological Journal*, vols. iv, v, (H. Burnard Owen, Esq.) *Collection of Photographs of Negroes* (Dr. Hunt). Garbiglietti, *Relazione sul Cranio di Neanderthal* (Dr. Barnard Davis). *Beschrijving van een oost-Indischen Idiotenschedel* (Dr. Halbertsma). Waitz, *Die Indianer Nord Amerikas* (Dr. Hunt).

The names of the Fellows elected since the last meeting were then read, as under:—John Meyer Harris, Esq.; John Jones, Esq.; William Robinson, Esq.; Captain William Kincaid; R. E. Dudgeon, Esq., M.D.

The PRESIDENT announced the formation of an Anthropological Society at Madrid, and mentioned that the Council of the Anthropological Society of London had determined to render all the assistance in their power to the new society, to which they would forward copies of all their publications from the commencement. He congratulated the meeting on this proof of the progress of anthropological science in Europe, and hoped that the new society might be the means of helping on the cause of science.

Mr. MACKENZIE then read the following paper.

A few Notes on Fetish Worship in Egypt. By KENNETH R. H. MACKENZIE, Esq., F.S.A., F.A.S.L.

As every fact, however slight, which illustrates the condition of the human mind, and therefore becomes important to anthropologists, is worthy of record, I beg to submit the following few notes upon the subject at the head of these lines to the Society.

I had the extreme honour and pleasure, during the protracted and final visit to this country of my friend Mr. G. R. Gliddon, of being closely associated with him, and derived from him many interesting facts in relation to anthropology and its kindred sciences. Of some of these facts I made notes at the time, and only regret that I did not register more of them. The extraordinary vividness possessed in conversation by Mr. Gliddon, however, must be my excuse; so many novel views constantly fell from his lips, founded upon his accurate memory and discriminative powers, that the listener was fascinated and bewildered by the luxuriant pictures presented to the mind. Indeed, the death of Mr. Gliddon, in itself so premature and sudden, has deprived us of one of the most active anthropologists yet known. A pioneer of science, it would be superfluous to enlarge upon his unwearied and enthusiastic labours; it is only to be regretted that he did not survive to be among us now that the importance of anthropological studies has been recognised so heartily by the great body of scientific men. Mr. Gliddon would indeed have rejoiced to see how indefatigably in various ways the Fellows of this and other societies are increasing and systematising our stores of knowledge.

His own hearty self-sacrifice to the cause of science in its most extensive application was universally known. He affectionately raised, in *Types of Mankind*, an enduring monument to the memory of the illustrious Morton, and I may, therefore, be perhaps excused if I imitate him by recording as a sort of mural tablet the expression of my own esteem for his personal good qualities, and my regret for the loss of so valued a worker in the fields of anthropology. During the rule of Louis Philippe, an attempt was made to start an Anthropological Society in Paris. Mr. Gliddon was one of the promoters of the enterprise, and I still possess the printed statutes of the proposed society, with my lamented friend's inscription to me on the cover. The government then existing took exception to that society on political grounds, and refused its sanction to the statutes. Since that time, science has received more enlightened support, and at the capital of France we have an able coadjutor.

Some loose papers have lately turned up in my records, and con-

tain a few brief notes of facts mentioned to me by Mr. Gliddon, and I now beg to transcribe them.

"November 2nd, 1856. Gliddon informed me last night of the following instances of Fetish worship still existing in Egypt.

"At Cairo there lived an old woman in Gliddon's Egyptian time, who made her living by attending upon women in labour, with a strange bundle tied up in rags, which had been handed down to her from her family, and which was supposed to possess very tranquillising powers under such circumstances. This ragged bundle, when opened, proved to contain a number of ancient figures and mummy statues in very fine preservation. From their very excellent condition Gliddon was anxious to acquire them, and he offered the old woman three or four hundred piastres to part with them. Among them was a bronze Osiris in very fine condition, and the rest were the ordinary mummy figures. But as the old woman made her bread by hiring out the bundle at times of labour for a few paras, she would not sell them.

"Very often men used to come to Gliddon at the time he was making his collection of serpents with great quantities of them in bags and baskets, and Gliddon inquired what in the world they could do with them all. 'Some of them,' was the reply, 'we sell to the apothecaries, others to the women, and by far the greater number.' They were used as philtres in cases of illness, or for aphrodisiac purposes (see the case of viper broth), and the serpents themselves were regarded with feelings of religious reverence, as in times long passed.

"Gliddon further stated that almost all the Fellahs upon the Nile, though Arab Mohammedans by religious profession, violated, in their domestic observances the pure monotheism of the Arab by keeping with them idols and images of a Fetishistic nature like the Teraphim.

"At Echmîn, on the Nile, the ancient Panopolis, or Chemmis, where Herodotus witnessed the Priapic processions,—'for which,' says that historian, 'the women gave a sacred and mysterious reason'—there still exists in the tomb of a sheyk or saint, a black basalt phallus, which has almost lost its priapic form from the kisses of the Arab women, who visit the shrine in the hopes of stimulating fecundity. Gliddon was wont to draw great attention to the invariability with which traces of these earlier forms of religious faith were to be found in Egypt."

Mr. Smith, an American gentleman residing at Thebes, more recently informed me that the primeval burial rites were still in use among the natives; and that the Coptic funerals are but copies of the monumental processions of the ancients.

I have thrown these few facts together not because there is anything very novel in them, but merely that they may be preserved as additional instances of the wide-spread belief in charms and Fetiches common to the semi-civilised races of the East.

The thanks of the meeting having been given to the author of the paper,

Mr. MACKENZIE rose to make some observations on a conversation

respecting the late Mr. Gliddon, which he had had with Dr. Hunt; he was, however, stopped by

The **PRESIDENT**, who said it was not regular to report and make remarks on a private conversation. The subject of the measures to be taken in honour of the memory of the late Mr. Gliddon must be discussed on another occasion, when he had no doubt it would receive that testimony of respect which it deserved. There could be no doubt that Mr. Gliddon had done much for the advancement of anthropology. The fact mentioned at the end of the paper bore evidence to the importance of his labours for the benefit of the science. There would be great difficulty if they were to enter then into speculations as to the best means by which the object proposed could be attained; he, therefore, thought it better to reserve the matter for future consideration.

SIR CHARLES NICHOLSON doubted the correctness of some of the statements in the paper, especially those relating to the Copts. The Copts were amongst the most ancient Christians; and he did not think it likely that they would conform to the practices mentioned. He had never seen such himself; and they were not noticed by any other writers. As to the objects used as charms, such observances did not amount to fetish worship; the same superstitious usages obtained among savage tribes all over the world, and they had no reference to worship. He could hardly, therefore, concur in the theory stated. Mr. Gliddon might be said to have been the first to give a view of Egyptology in America, where he delivered popular lectures on the subject; but he had not much claim to be an original discoverer. His chief merit consisted in having given a popular view of facts that were then beginning to be developed.

MR. MACKENZIE, in reply to the observations of Sir Charles Nicholson, said that it was due to the memory of Mr. Gliddon to state that his researches, as well as his efforts for popularising the science, were greatly estimated by Egyptologists proper; and he had several letters to that effect. Mr. Gliddon's anthropological theories formed no part of the present communication.

The following paper by Dr. Shortt was read by Mr. COLLINGWOOD.

An Account of a wild tribe inhabiting some parts of Orissa, and known as "Juags" and "Bathuas", or "leaf wearers". By **JOHN SHORTT, Esq., M.D.**, Zillah Surgeon, Chingleput.

In the years 1855-6 I was placed in medical charge of the Ganyam Trigonometrical Survey, and took the field with that department. During our peregrinations in the jungles of Orissa, we came on several hill tribes located in the tributary Mahals of Cuttack. In a "Medical Topographical Report of Modern Orissa", that I published in the fifth volume of the *Indian Annals of Medical Science*, some notice was taken of the various tribes I then met with. From the *Indian Annals* I now draw the present account of the most interesting of the people I then met with, for I am sure it will prove of interest to the Anthropological Society of London.

In submitting this paper I would more especially draw the attention of the society to the peculiar conformation of the lower jaw

which, like that of the bull dog, underhangs in the majority. I am not aware of this deformity, for I can call it nothing else, having been noticed among any race by other observers, nor can I find any notice of the malformation to which I allude in any work that I have had access to.

The accompanying drawings are very good representations of their general conformation and dress, beyond that they do not go. They have been drawn for me by a friend from rude sketches I took at the time, and altogether I consider them excellent representations of these strange people.

These people are found inhabiting the most distant and wild parts of the tributary Mahals of Cuttack; those I fell in with were in the tributary estates of Keonjur, Pal leyra, Denknal and Hindole. The largest village I came across was in the district of Keonjur. I believe leaf-wearers did and still do exist in some parts of the eastern and western coasts under a different name.

These people, while they style themselves *Juangs*, the surrounding natives call them *Pathua*; both these words are corrupted from Hindustani, Juang being a corruption of *jungla*, wild; and Pathua, from *Paita*, a leaf, and literally, leaf-wearers. These people are at once recognised as having the Mongolian type of countenance; they have a well-formed globular head, with an expanded forehead, large and rather expressive eyes, a somewhat triangular or wedge-shaped face, high cheek bones, depressed nasal ridge with widened alæ, fleshy lips and a pointed chin, and thirteen out of twenty that I examined were underhung, the latter varying from a few lines to an inch and a quarter; they have a copious head of hair, but a very scanty moustache and beard, some having only a few straggling hairs about the face.

The dimensions of twenty men were as follows.

Age.	Height in inches.	Circumference in inches around the					Remarks.
		Head.	Neck.	Chest.	Arms.	Thighs.	
35	63½	21	13	32½	10½	18½	Underhung.
35	65	21	13	32½	10½	18½	Do.
20	63½	20½	13½	31½	9½	18½	Do.
40	60½	21	12½	32½	9½	18	
30	59½	21	12½	31½	10	18	Underhung.
30	62½	20½	12½	32½	9½	17½	
40	61½	20½	11½	30½	9½	17	Underhung.
35	64½	21½	12½	34½	9½	18	
45	60½	21	13	33	10½	18	Underhung.
31	58½	20½	12	29	9½	16	Do.
25	56½	19	11	28	8½	16	
30	59½	20½	12½	30½	9½	17	Underhung.
25	59½	20	12½	30½	9½	18	
25	60½	20½	13	31½	9½	17	Underhung.
30	61½	20½	12½	32	9½	17½	Do.
35	61½	20½	12½	32½	10½	18½	Do.
30	62½	20½	11½	32	9½	18½	Do.
40	63½	20½	12½	32½	9½	18½	
25	62½	20½	12½	33	10	18	
20	63	20½	12½	33	10½	18	Underhung.

I had the opportunity of examining only three old women, and the following is the result :—

Age.	Height in inches.	Circumference in inches around the					Remarks.
		Head.	Neck.	Chest.	Arms.	Thighs.	
60	64	21½	11½	29½	9½	16½	
70	60	20	10½	25	7½	12½	
74	56	20½	11	25	6½	15	

The average of the men was, age 31½ years, height 61½, head 20½, neck 12½, chest 31½, arms 9½, and thighs 17½ inches; the mean of the three women was, age 68 years, height 60, head 20½, neck 11, chest 28½, arms 8½, and thighs 12½ inches.

The men are well proportioned, active, and wear clothes like the Ooryahs, but their women wear no clothes, a few leafy twigs collected from the herbs, shrubs and trees from the jungles, being employed in their stead; these having been tied into conical bundles, are placed one in front and another behind the pelvis, and are fastened there by means of a string of clay beads, which goes around the waist several times; in other respects they are perfectly naked, and have not a single piece of cloth about them, though I have seen one or two with a strip of cloth three inches wide thrown across the neck and hung down like a scarf, but the majority have not even this. Both men and women wear long hair, which is combed over the head and tied at the back; the women are of the same make as the men, with a strong feminine cast of features, they are remarkably timid, running into their huts and shutting themselves in when approached. With a few kind words and the stimulus of a few pice, I managed to get some of the oldest among them out, who appeared very shrewd. Females are said to menstruate at fourteen or fifteen years of age, and never earlier, nor are they given in marriage prior to that period.

The marriage ceremony is thus conducted. The parents and relatives select a girl from amongst their tribe and apply to her friends. On obtaining their consent they start the next day, taking with them six measures of paddy, six or rice, and three pieces of cloth for presentation to the young woman's friends; this, I believe, is invariably done. The friends of the bride make a feast and serve them with boiled rice, vegetables, ghee, etc.; on these occasions, mutton, pork, and fowl are eaten; the marriage contract being ratified, the bridegroom and his friends return to their own houses, and on the third day go again with music, dancing and singing to fetch the bride home. When all her relatives and friends have congregated, the head man of the village applies huldee and oil to the bridegroom, and his wife does the same to the bride; after which, the former takes hold of the right hand of the bridegroom and the left hand of the bride, and placing them together ties them with a strip of bark; the parents of the bridegroom then advance and present the head man and his wife with a pice each, and unfasten the hands of the bride and bridegroom; this completes the ceremony. The couple then go

round to all the elders present and place a handful of rice and a piece of cutchoo at their feet and prostrate themselves, and receive their blessings in return. All present are served with cooked rice, etc., at the husband's expense, except the bride, who brings her portion from her mother's house. On the next day she bathes, and for the first time makes use of food cooked at her husband's place. Marriages are contracted generally among relatives, an uncle frequently marries his niece. On the woman becoming pregnant no ceremony is performed, but, at the period of her accouchement, she is placed in a separate hut for seven days; on the seventh she bathes and returns to her house, when her relatives assemble and make a feast. The midwife then ties a string around the child's neck, repeating the names of the ancestors of the tribe, and names the child after some one of the family.

On the birth of the child the navel cord is divided with a blunt piece of iron which is intended to represent a knife. The midwife rubs "the child" over with huldee and oil, extends its limbs, and with the palms of her hands slightly depresses the nose, a practice which is performed daily for a fortnight or more with the view of making the nose flat. On the child's attaining ten years of age, whether male or female, it is put out of the house at nights and not permitted to sleep with its parents. Each village has a large hut erected about its centre in which all the unmarried males and widowers sleep at night, and there is a similar building occupied by the unmarried women; these buildings are met with in every Juang village. Widows are permitted to live in concubinage if young, but should her keeper also die, she must be content to remain single for life. With reference to families, plurality of births are said to occur occasionally, and families of ten or twelve children are common; the natives say that the females are in excess of the males as five to four.

Children are suckled sometimes for years, but when a woman continues to breed she contrives to wean her first previous to the birth of the second. Chastity is encouraged to a certain extent; crim. con. is rare, but it has occurred. In all such cases the woman is punished and the man takes another wife. Polygamy is only permitted in the event of the man having no family by the first wife, in which case a second and third marriage may be contracted. They have nautches at their weddings when the males and females dance and sing together to the beat of tom-toms; on these occasions they decorate their heads with birds' feathers, etc.

The sick are carefully attended to, different kinds of roots and herbs are administered by some one of their tribe who pretends to a knowledge of their use, the old women in particular are said to be adepts in medical knowledge; in all cases medicines are preceded by some trifling superstitious ceremony. The dead are universally subjected to cremation, no ceremonies being performed beyond that of bathing and fasting, and all their old chatties being thrown out for fresh ones. The ashes of the dead are thrown into some stream. They have a language of their own which seems to belong to the Ooryah dialect, and most of them can talk Ooryah; they have no

priests, their children are untaught, and they have no written language. Traditional stories and songs are handed down from generation to generation. They have only one cooked meal, which consists of boiled rice seasoned with herbs, and is eaten at night. In the morning the men, women and children start for the jungles, in search of wild fruits, roots, etc., which they use for food. Several varieties of the wild yam are abundant in these parts, and are eaten roasted. They do sometimes cultivate a few of the common vegetables, as also tobacco, of which they are particularly fond. It is powdered and placed between the lower lip and incisor teeth, when, from the pressure and irritation caused perhaps by the tobacco, the gums appear to get absorbed and the lower incisors fall out at a very early age; the want of pressure from the underhanging of the jaw may perhaps act as another cause in displacing these teeth. Both males and females are fond of ornaments; the former wear bead necklaces, some of which are of wood and different kinds of seed; they have a cord hanging loose from the neck strung with several little brass ornaments of various kinds, some of which are hollow and contain some wild root intended as a charm against disease, etc.; they also wear massive bracelets of brass rudely filigreed. The women have three streaky marks tattooed on their forehead, and wear ear and nose rings of brass, but it is only widows are permitted the use of bracelets of the same metal; from their necks they suspend ten or fifteen large strings of glass beads of all sizes, formed into a cord and extending as far as the pelvis. Around their waists they wear immense quantities of clay beads, to which are fastened their leafy coverings. These beads are made by themselves of plastic clay, which is abundant in the neighbourhood; bits of clay are rounded and threaded with a fine sharp bamboo pin, and whilst so strung they are rubbed on the shell of a bottle gourd which communicates to them a handsome polish, so much so, that they look as if they had been glazed. Whilst being polished, the beads become elongated, after which they are sometimes coloured, either with turmeric or lac, and then placed in an earthen vessel and roasted over a slow fire, when they become tough and retain their polish.

With reference to the origin of this tribe there are two stories current amongst them; the first is, that Juggernaut, or the supreme ruler of the Universe, formed male and female at the creation of the world, and placed them on one of these hills; in course of time the woman disobeyed her husband's command, for which the goddess Parvuttee cursed the woman and enjoined her to wear leaves all her life instead of clothes. The other story is that a Rishee and his wife resided here, and that their gods, Paramasperan and Parvuttee were pleased with their devotional exercises; Parvuttee in particular, for the especial care the woman took of her husband, presented her with a cloth. On a second visit some time after, the goddess found that the woman in plastering the floor of the house with cow's dung to avoid soiling her cloth had taken it off and tied on some twigs, whereupon Parvuttee growing angry, said, "I was pleased to give you a cloth that you should wear it, this you have thrown aside and

taken to leaves, therefore all your sex shall henceforth wear nothing but leaves, and should they ever disobey my commands they shall immediately be carried away by a tiger." Ever since, "as the legend goes", this practice has been carried out, even the female children in arms have their covering of foliage, so that none of them go about naked as is the custom among other tribes; the threat of being carried away by a tiger seems to have been quite effectual, for no matter what wealth they acquire, they tenaciously adhere to their leafy dress, which is indiscriminately gathered fresh every day from the jungles and tied with strips of bark into conical bundles for use.

The religion of this tribe can scarcely be said to belong to any system; they entertain some indistinct ideas which they carry out in trifling superstitious ceremonies; they have no idols, nor have they any particular mode or place of worship; they have some rude notions of a Supreme Being who is said to be present everywhere; they are fond of animals, and rear cattle, goats, pigs and dogs, and the villages abound with poultry which are of a very small kind, evidently a species of bantam, having short legs and top-knots; they make use of animal food of all sorts, not excepting even the cow; dogs and cats are in abundance about the villages, and even these are of a smaller description than those met with elsewhere.

This tribe is looked upon as the outcast race of the province; they cultivate the soil on the declivity and neighbourhood of hills for which they pay no rent whatever, but when their services to the state are wanted they give them readily, and while so employed, receive a little rice for their daily subsistence. The produce of their labour is taken to the low countries and bartered for beads, ornaments, etc. It consists of a coarse kind of rice, oil nuts, mustard, horse-gram, and other dry grain. They are evidently of a peaceful character; the only weapons about them being the bow and arrow, and a *langhee* or axe for cutting wood. Their huts are built after the same style as those of the other tribes in these remote districts, except that they are lower in height and of smaller size; they have no doors, save a piece of bamboo matting fastened on with a strip of bark. The largest village I saw contained from about fifty to seventy houses, the others never exceeded eight or ten huts irregularly clustered together. It is said that throughout the province there are some fifty villages of sizes, and that the male population of the tribe muster about seven hundred. Their huts are generally built on the declivities or at the foot of the hills isolated from all others, and the form of government with them is patriarchal.

Mr. BOUVERIE-PUSEY observed that the name of Juggernaut and of other Buddhist deities, mentioned in the paper, shewed that these wild tribes possessed at least some notion of religion.

Sir CHARLES NICHOLSON said, with respect to the religion of these wild tribes of India, it was known that the people of Orissa worship a great serpent. They were one of the wildest types of savages. Several British travellers mentioned, one hundred and thirty years ago, that they had received authentic accounts of the existence of an enormous

serpent, which those people worshipped and made offerings to. There was also evidence that, during the last seventy or eighty years, this serpent was still worshipped; and if so, it was a curious fact as to the age of those reptiles. There could be little doubt that a kind of corrupt Brahminism was also mixed up with the religion of that people. He regretted that the author of the paper had entered into details on matters that might have been dispensed with in that Society. Their object was rather to investigate the physical conditions of different races of men, than to consider their manners and customs; and he should have liked to have heard, instead of that information, some more anthropological specialities respecting those tribes.

Dr. SEEMANN stated that many of the South Sea Islanders wear leaves for clothing, and that they also resemble the tribe described by Dr. Shortt, in the custom of sending the young men and women out of the tents of their parents at a certain age, making them sleep in separate habitations from that of their parents. In Viti and in the neighbouring islands that practice prevails.

The PRESIDENT remarked that, as to the question of the importance in anthropological researches of ascertaining the manners and customs of a people, he was of opinion that such accounts were of great importance to the progress of anthropological science. The valuable communications to the Society by Dr. Shortt were, he considered, generally too brief; but in the one just read he had given a table, in which the heights and dimensions, and other particulars strictly anthropological, were stated, though it had been omitted in the reading. As to the remarks on the manners and customs of the tribe, he thought them of great value in promoting the study of comparative anthropology, which was of much importance in attempting to arrive at correct conclusions respecting the relations of different races.

Mr. MACKENZIE concurred with the President, that too much stress could not be laid on the importance of having accurate accounts of the manners and customs of different tribes. There were often shades of difference so minute that they could not be distinguished without the closest examination; and the science of anthropology, though it had made long and extensive strides, was still in its infancy, and required the aid of observation of other peculiarities besides those of physical constitution. Many most important deductions might be made from a comparison of the customs of different tribes; which ought, therefore, to be carefully regarded. It was a curious fact, which had been mentioned to him by the late Mr. Walter Savage Landor, that in Italy, on the banks of the lake of Como, there were within that limited district seventeen dialects of Italian spoken. It was important, therefore, to bring the study of language to assist their inquiries, as indicating variations among different tribes of people of which we know so little.

Captain OWEN considered that the three marks on the foreheads of the women of the tribe noticed in the paper, might be traced to adhesion to the female principle; the orthodox distinction of that sect being a red mark in the centre with a white or yellow line on either side of it; and that they might connect these wild people with that

very ancient form of religion, of which those marks were the only remaining symbols.

Mr. REDDIE thought it desirable to have the fullest details. He agreed with the President in the opinion that the manners and customs of a people should not be lost sight of; for anthropologists did not limit their investigations to physical characteristics. The peculiarities in the manners and customs of different peoples give a clue to their common origin, or to their original traditions. It was a curious fact that the practices or traditions of most savage tribes have some connection with a serpent and with the wearing of leaves. He should be very sorry if the manners and customs and traditions of a people should be considered as not belonging to anthropology.

Mr. BOUVERIE-PUSEY thought that psychology, also, should be taken into consideration in descriptions of the condition of different peoples.

Extracts from a paper contributed by Dr. Shortt, "An Account of some Rude Tribes, the supposed Aborigines of Southern India", were read by Mr. COLLINGWOOD.

Thanks were given to the author of the paper.

Dr. SEEMANN read a communication from M. Vambéry, *On the Dervishes and Hadgis of Central Asia*, which he said had been placed in his hands for translation about a couple of days before by the author of the paper. (This paper will be published in the *Memoirs*.) The reason which induced M. Vambéry, who is a Hungarian, to venture to penetrate Central Asia was to endeavour to find out the affinity of the Hungarian language with the Asiatic. The studies and the objects he had in view were principally philological; but he gave an interesting account of the hadgis and dervishes and of his adventures in that almost unknown region.

Mr. BOUVERIE-PUSEY wished to know the relation of the dervishes to the sofees. Are the dervishes and sofees the same? The latter were said to be indifferent to all creeds; and have been charged with practising strange orgies. Was it so?

M. VAMBÉRY said that a sofi means a man who despises all earthly things and lives solely in the contemplation of God. Such a superior being is, however, only supposed to exist, and is never to be found in the East; he exists only in writing. In Persepolis, indeed, he heard there was a dervish who, though rich, had abandoned all the luxuries of life, and had lived there for three months in contemplation. That was the only instance he had known of any one who was so convinced of the value of contemplation as to sacrifice all enjoyments for its sake.

Mr. MACKENZIE inquired whether he had not also found some questionable Hadgis, who, though professing to have made the pilgrimage to Mecca had never been there.

M. VAMBÉRY replied that he himself was an instance of the kind.

Dr. SEEMANN observed that in M. Vambéry's book, which had just been published, giving an account of his explorations in Central

Asia, he had not entered into the curious question of the amount of affinity of the Hungarian language with the languages of the people with whom he had been connected in his travels. He was anxious to know to what part of the world the investigations of M. Vambéry led him to believe the affinity of that language could be referred.

M. VAMBÉRY said it had been supposed that the origin of the Hungarian language was Finnic; but the latter had undergone so many changes that there could not be found the same originality in the roots of the words as in the Tartaric languages. The latter were very like the Hungarian, far more so than the Finnic. In the Finnic language nearly all the roots had been changed; but in the Hungarian language they had been unaltered. The striking resemblance in the language of the Hungarians to that of the people in the East, showed the connection of the nations with each other. He believed they were originally of one family, and that the Huns, Tartars, Chinese, and the Mongolian races generally were derived from the same stock.

Sir CHARLES NICHOLSON inquired whether any traces of Buddhism were discovered among the Tartars in Central Asia. Among the Finns, traces of that religion had been found, and there were evidences of its having penetrated to the extreme north of Europe.

M. VAMBÉRY replied, that among the Turcomans in Central Asia fanaticism was so strong, that if Buddhism existed he had not been able to perceive any traces of it. In China, Tartary, and among the Mongolians he had observed, were instances of that religion.

Sir CHARLES NICHOLSON asked whether there were any traditions among the people as to the physical changes which it was known the face of the country had undergone in Central Asia. It was well established by historical accounts that the river Oxus, which now flows into the sea of Aral, at one period flowed into the Caspian sea.

M. VAMBÉRY said that as his object in visiting Central Asia was philological, he had not paid much attention to the peculiar physical characters of the country. The inhabited portions of Central Asia were situated on a plateau of high land surrounded by deserts that were supposed to have been formerly covered with water, and it was conjectured that the now inhabited country was an island in the midst of a sea. It was a very interesting question which deserved the consideration of the Geographical Society.

Mr. BOUVERIE PUSEY inquired what was the opinion entertained by M. Vambéry respecting the accounts given by Dr. Wolff.

Sir CHARLES NICHOLSON observed that whatever opinion might be entertained as to the veracity of the accounts given by Dr. Wolff, there could be no doubt that he did a great and noble thing in going a second time to Bokhara at the hazard of his life, to rescue two European travellers.

M. VAMBÉRY said Dr. Wolff was the cream of the dervishes; and passed as a very wonderful man. There was no doubt he did a great thing in going twice to Bokhara; but he was very clever in relating histories that he never saw. M. Vambéry adverted to some of the adventures recounted by Dr. Wolff as being very clever and curious, but at the same time very improbable.

The PRESIDENT after expressing his thanks to M. Vambéry for attending the meeting and answering the many questions that had been put to him, said he was pleased to announce that M. Vambéry had promised to give them shortly another paper, on the subject of the Calmucs.

The meeting was then adjourned.

FEB. 28TH, 1865.

THE PRESIDENT, DR. J. HUNT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed.

The names of the following gentlemen who had been elected Fellows and Local Secretaries since the last meeting were announced:—

Fellows.—Charles Reade, Esq.; Thomas Moss, Esq.; A. Hecter, Esq.; H. Reginald Moore, Esq.; Charles Nice Robertson, Esq.; Robert A. Drew, Esq.; J. William Warden, Esq.; C. Outley Groom Napier, Esq.; Commander John Murray, Esq., R.N.

Local Secretaries.—Edward Peacock, Esq., F.S.A., North Lincolnshire; E. Foxton Firby, Grewelthorpe, Ripon; Rev. E. Spooner, D.D., Brechin; J. M. C. Mills, Esq., Madras.

The following presents were announced, and thanks were voted to the donors:—Petzholdt, *Das Buch de Wilden* (Dr. B. Seemann); Huxley and Hawkins, *Atlas of Comparative Osteology* (Do.); Wilhelm, *Manners and Customs of Australian Savages* (Do.); His, *Bevölkerung des rhätischen gebietes* (the Author); Bible in Mpongwe Language (R. B. N. Walker, Esq.); Photographs of Africans from Gaboon (Do.); Godet, *History of Bermuda* (J. W. Conrad Cox, Esq.); René Descartes, *Les Passions de l'Ame* (Do.); Schomburgk's *British Guiana* (H. J. C. Beavan, Esq.); *Irrationale of Speech*, by a Minute Philosopher (Do.); Barber's *Tour in South Wales and Monmouthshire* (Do.); Skull from Furness Abbey (J. Morris, Esq.); Buddha and his Religion, by W. Lucas Sargant, Esq. (the Author).

The PRESIDENT announced that in addition to the above presents the Society had received a donation of £50 from Mr. Bouverie Pusey for the library and museum. He proposed a separate vote of thanks for this donation, which was heartily accorded.

The PRESIDENT said he regretted to have to state that the illustrious French anthropologist, Professor Gratiolet, had died since the last meeting of the Society. He had received a letter announcing the sad event from M. Pruner-Bey, the President of the Anthropological Society of Paris. He was sure the Society would join with him and the Council in expressing their regret at the loss which their science had sustained by the death of Professor Gratiolet.

The PRESIDENT read a portion of the letter; but when it was understood by the meeting that the portions omitted were complimentary to

the President and to Mr. Blake, there was a call for the whole, which was then read *in extenso*, as under :—

"28, Place St. Victor, the 23d Febr., 1865.

"MOST EXCELLENT SIR,—I hope and wish from all my heart that these few lines may meet you in good health. First of all, I have to beg you to be kind enough to express to our honourable Society my warmest feelings of gratitude for the generous gifts she has favoured me with, viz., the two last fascicles of the *Review* and the fine translation of Professor Vogt's memorable work. I have to thank in a double point of view : first of all, by the means you put kindly in my hands I am able to rejoice in our Society's progress and to admire free discussion on every object touching man on free England's soil ; and, secondly, such publications as yours furnish always a very large stock for my own information.

"Unfortunately I have in the same time a very painful—yes, a woful duty to fulfil. Our amiable and most eminent Fellow, Professor Gratiolet, has been ravished from us prematurely and unexpectedly amidst the most successful exertions to serve anatomical science generally and anthropology specially, in a most decisive way. Still, amidst our lamentations I must not forget to tell you, that his last work on the myology of anthropomorphous simiæ is to be published.

"Yesterday was a very great one for my little self. M. Dupont, who directs, with the assistance of the Belgian government, the scientific exploration of the bone-caves in that country, was kind enough to submit to my inspection two very remarkable and authentic human skulls belonging to the period of the reindeer, which lastly has been palæontologically and archæologically illustrated in a classical way by Mr. Christy and my venerable master M. Lartet. We wanted only complete human skulls, and now they also are found ; and so we have a solid point to start from, which will us enable perhaps to find out the proper place for human osseous fragments belonging to epochs preceding and following that of the reindeer. All that I am authorised to pronounce about the mentioned skulls is, that they are *not Aryan*. It is to be expected that all details about this memorable discovery, in my eyes the most important made till now in European ethnology, shall soon be published by the endeavours of MM. Dupont and Van Beneden. I hope still more : there are perhaps a thousand caves more to be explored in Belgium ; and, as my young friend, a worthy disciple of our venerable M. Onalius d'Halloy, is a very great geological scholar, particularly in the diluvial past, I trust that before long we shall get by his zealous endeavours the man as he was at the period of the mammoth and rhinoceros. If I am authorised to make any induction from what I saw with my eyes till now in human palæontology, how many learned professors' dreams will vanish, how many wild speculations will go to rest for ever ?

"May I ask it as a favour, sir, that you may be kind enough to present my best regards to our worthy friend Mr. Carter Blake ? It is with the most cordial satisfaction that I see in the *Review* and elsewhere what a mighty champion of science and truth has to be acknowledged in this gentleman.

"Finally, most excellent sir, my best, my warmest wishes for your prosperity; and above all for your precious health.

"Believe me, sir, yours respectfully and truly,
PRUNER-BEY."

The PRESIDENT then directed attention to two Peruvian mummies on the table, which had been sent by Mr. Helsby for the Society to purchase, but which offer, however, the Council had declined. He requested Mr. Blake to describe the mummies and their condition.

Mr. CARTER BLAKE said the mummies on the table were those of two Peruvians: one being that of a female about fourteen years of age, and the other that of a child. They had been brought from Arica on the coast of Peru, where the bodies had been preserved simply by desiccation under the influence of the atmosphere, which in that part of Peru was remarkably dry. When first taken from the ground, the mummies were very dry and in a good state of preservation; but they have since imbibed moisture and were in a state of decomposition, for which reason, he believed, they had not been purchased by the Council. He thought, indeed, that they could not be preserved above two or three months longer. This was the first time that such a mummy had been placed before a London society. Mummies were found in other parts of South America, especially amongst the Muyscas of New Granada, but the bodies were not generally extended as in that on the table; some being interred with the head thrust between the thighs, and in other different positions. He said he should take proper measurements of the body and of the skull and bones, with specimens of the long hair, before the mummy was removed; in other respects, it was of little anthropological value.

Mr. D. W. NASH said he should not have supposed that the atmosphere in Peru was sufficiently dry to preserve a body without artificial means.

Mr. CARTER BLAKE stated that Arica, whence the mummies came, is on the sea-coast, which is very arid; and that mummies had been also preserved by desiccation at a very high level far inland. He regretted that Mr. Bollaert was not present, as he was fully acquainted with the subject and had obtained similar remains.

Dr. SEEMANN, who had visited Peru, said that the climate of the coast is excessively dry, and that sometimes no rain falls there for five or six years; but there was a dense mist occasionally. In such a climate the bodies might be easily dried without the aid of artificial heat. In the South Sea Islands, where the bodies of the natives were preserved by desiccation, the operation was conducted over a fire.

Mr. CARTER BLAKE added that there were only two great races near Arica, the Aymarás and the so-called "Collas"; and that probably the mummies exhibited belonged to the former.

[The effluvium from the larger mummy was so offensive, owing to its state of decomposition, that it here became necessary to remove it.]

The following communication on human remains from Cowley, contributed by Mr. Hutchinson, was read:—

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On some Human Remains from Cowley, near Cheltenham. By
J. HUTCHINSON, Esq.

24, Pall Mall, 7th Dec., 1864.

DEAR SIR,—At the suggestion of Dr. Bird of Cheltenham, I beg to send you a box containing some skeleton remains which were found at Cowley, about six miles from Cheltenham, where I am forming some ponds. They were found, the remains of three together, lying north and south, and not a vestige of anything in the shape of a nail or metal near the spot. Since these were discovered, the remains of other three skeletons have been found, but so decomposed that there was nothing worth preserving. The place where I am making the waters is traditionally called the Holywell; but why, none of the old people know, it having gone by that name in their forefathers' time. It lies at the bottom of a wood, and the bones were found from two and a half to three feet from the earth's surface. Dr. Bird thinks they are the remains of the Ancient Britons.

I am, yours very faithfully,

C. Carter Blake, Esq.

J. HUTCHINSON.

MR. CARTER BLAKE said the measurement of one of the skulls corresponded with those found in the long barrows in Wiltshire. The other was much shorter. The forehead in both was very high, and in the former there was great compression in the parietal bones, which form, he considered, had been produced by pressure sideways. The skull had probably, however, been originally a dolichocephalic one. One of the tibiae was "sabre-shaped", like those of the human remains found at Gibraltar; that character, however, was not very rare. One of the bones exhibited marks of erosive action that might be supposed to have been produced by the cutting of a flint implement; but if the marks be compared with those made by rats, nothing could be inferred from them than that they were caused by rodent action.

MR. D. W. NASH stated he knew Cowley very well. It lies on a low bottom, and is often flooded, and he never saw a vestige there of a barrow or tumulus, though there are many on the neighbouring hills. There was nothing, indeed, about Cowley to indicate antiquity, and he felt convinced that there was no evidence in the human remains found there to warrant the supposition that they belonged to the ancient Britons.

The following paper was then read:—

Notes on the Physical and Psychological Condition of the Inhabitants of Viti, Tonga, and Samoa. By WILLIAM T. PRITCHARD,
F.R.G.S., F.A.S.L.

THE progress of the natives, though undoubtedly great and wonderful for the length of time they have been under the influences of civilisation, is as yet comparatively so limited that the closest and most continuous observations and comparisons are required to mark the results in physical and psychological investigations. Nevertheless, whilst ever keeping before me the proposition that physical pecu-

liarities and mental developments undergo changes only in the ratio of the progress of cultivation,—a proposition which narrows the field of observation within very circumscribed limits,—I have been able by assiduous observations and minute comparisons to detect and to trace certain changes in the physical peculiarities and mental developments of these islanders, which may be interesting to those who devote their time and energies to the elucidation of questions pertaining to the human races.

The people amongst whom my observations and comparisons have been made are the Papuans inhabiting the Fiji group, and the Malay-Polynesians inhabiting the Tonga and Samoa groups, and the Atoll grouplets and detached islets scattered between the equator and the southern tropic, and longitude east 175 degrees and west 150 degrees. At the same time, the intercourse I have had with the Polynesians of the Pacific generally, leads me to believe my remarks apply to them all, since the same influences, conditions, and contingencies are found to prevail in all the groups and islands in a greater or less degree.

In the normal state of the inhabitants of the region I have defined, physical and psychical influences, in the proportion of their respective force, combined to generate and to preserve a certain standard of intellectual capacity and physical development. The greater or less force with which these influences were brought to bear upon individuals resulted in the creation of classes—the chiefs, the priests, and the commoners.

The chiefs are finer looking men than the commoners. Intellectually and physically they are superior. The contour of their features is more striking, more definite—the skull altogether larger. This superiority is attributed by superficial observers to the supposed fact that the chiefs do not work, and to the partial fact that they feed better and more regularly than the commoners. It happens, however, that the chiefs *do work*, and that the contributions of food are contingent upon their active participation in the labours of their tribes; and that food, though first formally presented to the chiefs, is by them subsequently shared with the people, from policy as well as in compliance with custom. Custom requires the chiefs to work more or less with their people; and the object of the custom is, by taking the lead in every work, to stimulate exertion. Custom requires the heads of families to take a prominent lead in every work in which a family is concerned. In tribal affairs the chiefs take the lead, as the heads of the people; in family affairs, the chiefs take the lead, as heads of their families. And as a chief takes the active lead in all tribal affairs, and willingly shares the labours of his family, so is he popular, so is he supplied with food. Ancient custom has assigned the duty of supplying the chiefs with food, in Samoa to the Tulafale, in Tonga to the Matabule, in Fiji to the Matanivanua, the landholders, and as such the heads of families in each group respectively. But custom has also ruled that an inactive, indolent chief, who holds back from putting his hand to all that the tribe undertakes, has but little food carried to him by the landholders. And a subordinate, or a near relative (usually a brother or nephew), whose willing activity

and prominent skill attract attention, becomes the *actual* leader and chief, and as such receives the contributions of food. At the same time, however, in obedience to that traditional reverence for the persons of their hereditary chiefs, which is inherent in all the islanders of the Pacific, the inactive, indolent chief may still be allowed to retain the official name and title,* divested of the attributes. Thus, then, while ancient custom has ordained contributions of food for the chiefs, the actual supply is contingent upon and is regulated by the active, prominent participation of the chiefs in the workings of the tribes.

The true cause of the intellectual and physical superiority of the chiefs is in the fact, that as leaders, their mental faculties are more continuously active than those of the commoners. For it is their province first to conceive, then to plan the execution, then to effect the realisation of all the workings of their respective tribes. In other words, the chiefs are the sources and centres of thought and of action in their given spheres. The result of this continuous mental activity is a higher intellectual development; and the physical character corresponds to the intellectual condition, according to the proposition of Prichard.

The priests are physically inferior to the chiefs; intellectually they are compeers. And I think the skulls of the priests, as a class, will be found even larger than the skulls of the chiefs. The few I examined and compared in Fiji were certainly larger than any of their race. The priests have not the active bodily habits of the chiefs to develop their sinews and muscles; but to develop their heads, their cranial capacity, they have as much, perhaps more, mental employment. They are continuously occupied in the conception and development of new schemes and tricks to gull the people. It is the object of their lives to override the intellect of the people, and to harmonise their priestly enunciations and denunciations with the designs, the intrigues, the ambition of the chiefs, in order to maintain their priestly supremacy. The priests and the chiefs designedly work into each others' hands to support each others' position and power. The supremacy of the chief is the supremacy of the priest, and the supremacy of the priest is the supremacy of the chief. And this, though, perhaps, developing only what appear crude absurdities when measured by our standards of intellect and civilisation, requires positive continuous mental activity, in fact, a *degree of mental culture*, with its consequent psychical influences. And the result of these psychical influences is the enlarged cranial capacity of the priests. I have heard the complaint by missionaries in Fiji, that the priests are the most stupid of the natives; that they evince less capacity for mental improvement and external civilisation than any others of their countrymen; that they are the last to learn, and the dumbest to appreciate the beneficent teachings of Christianity and the social enjoyments of civilisation. That they *are* the last to embrace

* It is a peculiarity of chieftainship in the islands of the Pacific, that the official name and title never die; reminding one of our maxim "the king never dies".

Christianity, and to follow in the track of civilisation is quite true. But this is *not* because they possess less intellectual capacity than their countrymen. On the contrary, it is just because they possess *more*. They possess the intellectual capacity at once to apprehend the aggressive nature of the teachings of Christianity and of the ethics of civilisation, as well as the beneficent social results which attract the burdened and priest-ridden commoners. They are quick to foresee that inevitably their power must wane, that inevitably they must fall from their commanding supremacy, as the new influences and associations introduced by Christianity and civilisation advance. And they are slow to commit the suicidal act. This is the true secret of their apparently dogged perversity and blank obtuseness.

The proposition of Courtet de l'Isle, "that the capacity for civilisation and the intellectuality of races corresponds with their physical *beauty*," is not maintained in the case of the islanders under consideration. The Samoans and Tongans (Malay-Polynesians) possess greater physical beauty than the Fijians (Papuan). But the Samoans and Tongans do not possess a corresponding greater capacity for civilisation, nor have they more intellectuality than the Fijians. If there is a difference it is in favour of the less comely Fijians. The Samoans and Tongans are physically well made, handsome people. In physical beauty, so far as well rounded limbs and symmetrical, fully developed figures, conform to physical beauty, they are unsurpassed in all the Pacific, or perhaps anywhere else. Yet they did not, in the respective conditions of the two races anterior to the appearance of the white race, possess as many native arts, or as great manufacturing skill, or as keen an ingenuity, as the Fijians. The Samoans and Tongans knew nothing of the manufacture of pottery, nor did they display the appreciating knowledge of commercial economy which in Fiji assigned the manufacture of certain articles to districts best adapted to their production, and whence arose an inter-tribal commerce, one district bartering their special productions, according to their wants, with another. Nor do the Samoans and Tongans even now evince a readier susceptibility to instruction and civilisation than the Fijians. In one aspect, indeed, the Fijians are decidedly before their neighbours. For they offer the better prospect of realising a local supply of labour for the requirements of civilisation, not merely because they are more numerous, and are located on more available islands, but because, already prepared by their inter-tribal commerce and competition, they can more readily understand and appreciate the equity of the principle of *quid pro quo*. And as they become successful labourers in the service of civilised employers and capitalists, their progress in civilisation will unquestionably outpace that of their more comely but less commercial, and therefore less industrious neighbours.

There is a certain physical resemblance pervading the inhabitants of the Atoll or Lagoon islands, and a certain physical resemblance pervading the inhabitants of the larger and mountainous islands, which distinguishes the one from the other. In other words, coincident with certain distinct but defined local exterior influences, are

found certain distinct but defined local physical peculiarities, which peculiarities distinguish from each other, as they are subject to those influences, people who are indubitably proved by the evidence of physical affinities, oneness of language, and similarity of traditions, to belong to the same race. As an illustration, compare the natives of Ellice's group, or of the Union group, both Atoll islands, with their neighbours of Samoa, a mountainous group. At once the inhabitants of the low reef islands are distinguished from the inhabitants of high, mountainous islands. In the Atoll islands the natives live wholly on fish and cocoa nuts. Having no mountains from which the moist land breeze of the night sweeps down to the coast, they are exposed only to winds which cross the ocean. Having no extent of country to roam, their bodily exercise is limited to the conduct of their canoes and the practice of fishing within the circumscribed bounds of their reefs. Separated into small detached communities, they have but few incentives to competition, but few sources of rivalry. In the larger and mountainous islands the natives have a greater variety and choice of food, both as to quality and quantity. They are exposed to the damp of the nightly dews, and to the cold of the moist land-breeze which the mountains never fail to send down the valleys to the lowlands and to the coasts after every hot, sultry day. They have mountains, hills, and dales to roam, and long coast-lines to traverse by land or by water. And with this modification of climate, this difference in the mode of life and diet is found a corresponding difference in the physical development of people of the same race. Do these relative influences effect the difference? Do they act singly and independently, or equally and in combination? Without professing to solve these points, I merely record the ultimate fact,—that the existence of these influences, in their relative force, is coincident with certain differences, in their relative degrees, in the physical development of people of the same race; and that the degree of difference is always commensurate with the degree of external resemblance pervading and assimilating the inhabitants respectively of each class of islands.

Natives born since the introduction of Christianity, and reared under the immediate influence of the teachings of the missionaries and of the incipient civilisation which has resulted from intercourse with traders, have more fully developed foreheads and cranial capacity than the natives born and reared under the old influences and associations. Let two natives be placed together, the one born and brought up under the new associations and influences which have accompanied Christianity and civilisation; the other born and brought up under the old associations and influences; the difference in *physical aspect* is at once evident. Take a Samoan born under the improved associations and influences, educated at the missionary institution at Malua, where mental development is facilitated by withdrawing the pupils from the old associations and influences, and domiciling them within the precincts of the college grounds, where their energies are further stimulated by competition and contact with each other. Compare his skull with the skull of a Samoan born, and

reared under the old associations and influences; an incipient difference in the form of the cranium is just perceptible. The cranial capacity of the former is just appreciably greater than that of the latter. Accepting the skull of the latter as showing the true prevailing form in the uncultivated condition, or rather and more precisely, in the condition of mental culture and intellectual development corresponding to the condition of the race anterior to the introduction of civilization and its influences; the incipient enlargement of the cranial capacity perceptible in the other skull seems to corroborate "the view taken by Müller and Engel that the shape of the skull is everywhere essentially dependent on mental culture, and *changes with it*," (Collingwood's Waitz; *Introduction to Anthropology*, page 79.) The crania of the *children* of the natives born and reared under the improved moral and intellectual condition, when these children (the second generation under the new development) are themselves under the direct and immediate force of the new associations and influences, especially in the missionary connections, show a yet more appreciable improvement of capacity, than the crania of their parents. In the next (*the third generation*) the metamorphosis will, I think, be positive, definite, and unquestionable.

Take a group of natives born and reared under the old associations and influences, and a group of natives born and reared under the *immediate force* of the associations and influences introduced by civilization and systematic mental culture. A close comparison and a minute observation show that the mouth is somewhat smaller, the lips somewhat thinner, the head somewhat larger in the latter than in the former; the outline of the features and the physical aspect generally are improved. An air of intellectuality, the direct result of and in immediate connection with systematic mental culture, forces itself upon one's notice, when carefully studying the comparison. In making these comparisons, however, it is necessary to afford adequate allowance for the native practice of squeezing the heads of infants into a certain shape, a shape in conformity with their ideal of beauty.

As illustrative of the palpable susceptibility of these islanders, especially the Fijians, to the influences immediately and continuously bearing upon them, the fact may be noted that the natives trained by the missionaries for teachers and assistants receive so perfectly the impress of the peculiarities of the individual missionary under whom they have been taught, that it is easy to designate the instructor when the pupil is seen and heard in the pulpit. To know a missionary is to know the native teachers whom he has brought forward. The native affects and appropriates the delivery, the intonation, the gesture, the vehemence, the platitudes, the bearing, the gait, the whole manner and individuality of his missionary preceptor. The pupils take the mould of the instructors so precisely, that the type of their intellectual performances and physical action become almost completely assimilated. In Fiji this assimilation is perhaps more obvious than amongst their neighbours; occasionally it verges on the ludicrous, though it is always amusing.

The offspring of natives of different groups are more active, and

daring, and hardy than the offspring of natives of any one given group. Tongo-Fijians, or Tongo-Samoans, or Samoan-Fijians are respectively more active, more daring, more hardy than the pure Tongan, or the pure Samoan, or the pure Fijian. Wherever in any one group there has been an intermixture with natives of either of the other groups, the people are in every way physically and intellectually superior to the people of the districts of the same group where there has been no intermixture. In the eastern districts of Fiji there has been a large intermixture with the Tongans, an intermixture dating many generations back. In the western districts the intermixture has been so limited that it is hardly traceable; and the natives are in every way physically and intellectually inferior to their countrymen of the eastern districts. Leaving the coasts and forcing our way into the interior of Viti Levu, the coincidence is found that the people are inferior, physically and intellectually, to those of the coasts, and that there has been no intermixture with any of the neighbouring islanders, and scarce any with their countrymen of the coasts. These inland people compare unfavourably even with the natives of the western coasts, where the intermixture with exterior islanders has been on the most limited scale. As we advance from the eastern districts to the western districts, and thence to the interior, the features appear more ungainly, the foreheads more compressed, the occiput more developed. In other words, as we proceed from the large commixture of two groups, to the limited commixture, and thence where there is no commixture; or as we advance from the sea coast to the interior, a marked depression, physically and intellectually, is observed.

The general superiority of the inhabitants of the coasts is so well known throughout all the groups, that it is considered a reproach and an insult to be called an *inland native*. In Fiji the readiest and most emphatic form of expressing one's supreme contempt for another, and of disparaging his skill and prowess, is to apply the term "kai-vanua." So in Samoa, the pithiest epithet for an ill-mannered contemptible person is "uta-fanua."*

Making due allowance for the relative numbers of the populations (in Fiji 250,000, in Samoa and Tonga 43,000), there has been amongst the natives of the coasts of Fiji a larger importation and intermixture with natives of other groups than is found in any other single group.

Throughout the groups, white men have settled and married native women; and the progeny of this fusion of races,—locally called half-castes,—affords an interesting study.

The introduction of a foreign element has contributed to improve, or rather to modify, the original physical type—an improvement or modification which is discernible more or less clearly in different individuals according to the degree of resistance they possess to the collateral influences which surround them. These collateral influences are for the most part antagonistic to the full development of the

* Both these terms may be rendered a "native of the interior", and imply a lack of familiarity with the sea.

foreign element, because the offspring are born in the country of their mothers, where the circumstances and associations pertaining to the maternal element naturally predominate. The degree of improvement or modification is obvious just in the proportion that the subject has been from infancy in the society and under the influence of the father's race. The development is very clearly discernible in those half-castes whose parents have been domiciled with the paternal race in the white men's settlements and away from the immediate associations and continuous influences of the mother's tribe. The development is yet more obvious in those half-castes whose birth is subsequent to, and farthest removed from, the date of the withdrawal of the mother from her tribe and her submission to the superior influences of the paternal race, or the removal of the mother with the father into one of the contiguous groups where the mother has no relations, and where, therefore, the influences pertaining to the paternal race have the most decided force,—from the fact that the immediate daily associations emanate from, and rally round, the father as the sole head and stay of the family. In other words, the *paternal* type prevails over the *maternal* in proportion to the *activity and force of the influences* pertaining to the paternal race. In the *same* family, I have observed different degrees of improvement or modification of physical type. And I invariably found that the subject of the fullest development of the improvement was born and reared in circumstances in which the influences peculiar to the paternal race were permanently predominant, and the subject shewing the least degree of improvement was born and reared in circumstances in which the influences peculiar to the maternal race were permanently ascendant. Instances have come under my notice of an improvement in the contour of the features resulting, after the offspring—born, and in early childhood domiciled, among the mother's tribe—have been removed into circumstances where they were almost wholly in the society of whites and half-castes, and free from the immediate associations and influences of the maternal race.

The half-castes, as a class, are robust, hardy, and active—their intellectual capacities superior to those of their mothers and equal to those of their fathers. The offspring of white fathers and Papuan mothers (Fijians) excel the offspring of white fathers and Polynesian-Malay mothers (Samoans and Tongans), in *physical* hardihood and courage, while in *mental* capacity and development they are equal. There are peculiar influences which operate with unequal force and with distinctive results upon each of the maternal races in their native state; and these distinctive results are transmitted from mother to child just in the proportion of their development in the maternal races. The Fiji-Papuans are subject, from the very nature of the surrounding circumstances and associations, to influences which generate physical hardihood and courage—which circumstances and associations, with the concomitant influences, are absent among the Polynesian Malays. While both races are under the influence of customs and rites peculiar to the savage and barbarous state, while many of their customs and rites are similar, nay, even borrowed from

each other (the groups being so closely contiguous), local circumstances, arising from the distinctive character of the respective groups, so modify the local observance of these customs and rites, that the nature and the force of the influences evolving therefrom are different and unequal, and of course, therefore, produce different results, unequal degrees of development, in each respective locality. The Papuans of Fiji are born under rites and customs which, in their nature exacting and severe, in their observance impel to unremitting watchfulness and ceaseless exertion. This unremitting watchfulness and this ceaseless exertion beget physical activity, and this in turn begets physical hardihood and courage. The Polynesian Malays of Samoa and Tonga are born under rites and customs which, in their nature less exacting and severe, in their observance are less impulsive to unremitting watchfulness and ceaseless exertion. Hence there is less physical activity. And hence there is less physical hardihood and courage. Yet the rites and customs of both races, while unequally exacting and severe (the result of local circumstances and associations), are alike complex and multifarious, and are alike transmitted by oral tradition. Hence the influences which mould their *minds* and give compass to their intellectual capacity, are equal. Thus, then, while there are peculiar influences which operate with unequal force, and with distinctive results, upon the physical development of the two races, there are peculiar influences which operate with equal force, and with corresponding results, upon the mental development—especially exercising the faculty of memory. And these distinctive physical results, together with these assimilated psychical results, relatively descend to their offspring when women of either race become wives of white men, the ultimate general development being modified, however, as the force of current exterior influences encourages the paternal or the maternal type to prevail.

The children of half-caste women by white men are robust, hardy, active, and partake fully of the attributes of the paternal race. The characteristics of the paternal race appear more fully developed, and the characteristics of the maternal race more positively diminished than the degree of the intermixture would, by proportion, lead one to expect. That is to say, the *degree of development* of the paternal race preponderates over the *degree of infusion* of the paternal race. The maternal physical characteristics are stronger and more tenacious in the progeny of the Papuans of Fiji than in the progeny of the Polynesian Malays of Samoa and Tonga. The rough, harsh skin of the former, and the persistently frizzled, almost wiry hair, are more distinctly retained in every degree of infusion than the smooth soft skin, and the seldom wavy, generally straight, hair of the latter.

When half-castes intermarry, they are less prolific than when they marry into either of the parent stock. In the one alliance there is fruitfulness, in the other prolificacy. And I am inclined to think that they are more prolific when they marry into the paternal stock than when they marry into the maternal stock. That the half-caste women are as prolific as any other women, when married into the paternal stock, the rapidly multiplying progeny proves indubitably.

But when they marry into the maternal stock, they invariably desert their husbands before they have afforded the proper data for precise comparisons, from which to deduce positive conclusions. I know of *only two* instances in the three groups where separation has not quickly followed these marriages into the maternal stock. The most satisfactory instance is in Tonga, where the daughter of an Englishman by a Tongan woman has married a young Tongan chief, with whom she still lives, but without any notable fecundity. The other instance is in Fiji, where the daughter of an Englishman by a Fijian woman, has for many years been the wife of a Fijian chief. There is but one son living, and he can only be distinguished at first view from a pure Fijian by the circumstance that his hair is less frizzly and wiry. In every other respect, he presents, at first glance, no trace of the paternal white type. It is only the very closest examination that shews his skin is somewhat less harsh and rough than the pure Fijian. It should be observed, however, that it is impossible to know the actual result of the alliance in this instance; for it cannot be told to what precise extent the Fijian custom of destroying children before birth has been practised. It is perilous to evince, even in honest research, too much curiosity or interest in the family affairs of a Fijian chief.

The offspring of half-caste intermarriages are not as robust and active as their immediate parents. Many of them are better looking, that is, they develop more of the white features and contour than of the native. But they are physically less hardy than their parents; they are even difficult to rear. The colour of the skin is a shade lighter than that of their parents.

The skin of the Samoan and Tongan (Polynesian Malay) half-castes is softer and smoother than that of the Fijian (Papuan) half-castes. The characteristics of the Fijian skin seem regularly transmitted to all the half-castes of Fiji, while the hair seems sportively to partake sometimes of the one type, sometimes of the other.

The half-caste offspring of the Samoan women are better looking than those of the Tongan women, and the latter better looking than those of the Fijian women. There is a difference in their physical beauty—a difference which I trace to the greater importation of the Fijian element among the Tongans than among the Samoans. For it is the rough, harsh skin of the Fijian that chiefly marks the gradation. At the same time, though thus differing in physical beauty, the half-castes of the three groups possess an equal capacity for civilisation and a corresponding development of intellectuality.

The Tongan women are more prolific than the Fijian women, and the Samoan more prolific than the Tongan, when married to whitemen.

All the half-castes of the three groups are as subject to the local indigenous diseases as are the pure natives. There is a disease called “coko” (thoko) in Fiji, “tona” in Samoa and Tonga, which attacks the native children almost without exception. While the children of foreign residents are wholly free from it, the half-castes are just as subject to it as the pure natives. Where scrofula exists in the

mother's family, it invariably appears in the half-caste offspring. Those half-caste children only escape, in either case, who are wholly removed from intercourse with the maternal race and who are restricted to European diet.

The **PRESIDENT** proposed the thanks of the meeting to Mr. Pritchard, for his very careful and suggestive paper.

Dr. **SEEMANN** said he agreed with Mr. Pritchard in everything he stated. The chiefs were a very remarkable race. They might be considered the most genuine aristocracy existing in the world; for they were both physically and intellectually superior to the other natives. If any of the tribe wanted to do anything, they went to the chief, who excels in everything and gives his advice and his assistance to all who apply to him. In this manner, the chiefs kept up their superiority over the people. There is little in their dress to distinguish them; but they maintain their position solely by their superior qualifications. The priests are inferior to the chiefs, but they act together, and there is, indeed, a complete union between church and state. Of course it is very difficult for the missionaries, under such circumstances, to effect a change in them; hence it is that they consider the priests to be stupid. Nevertheless, in the Fiji Islands the priests sometimes find it to their advantage ultimately to go over to Christianity, and to become missionaries themselves. They cannot, however, forget their former practices, and when excited they sometimes go through the whole of their old antics. The superior beauty of the Tongan women to those in Fiji is very striking. Among the latter, the women are made to do all kinds of hard work; but in the Tongan Islands they are treated more as women are treated in England. He had little doubt, from the progress that the Fiji Islanders have made, that they will ultimately become a civilised people. A planter, whom he knew there, employed from two hundred to three hundred of the natives on his plantation; and some of them will even use a spade, to which the natives have generally a great dislike. The native missionaries endeavour closely to imitate the missionaries from Europe, and they do this with so much exactness that it appears to be mimicry, and is very laughable. The priests, he said, are generally related to the chiefs. He expressed the hope that the Society would have more papers from Mr. Pritchard, who had been so long in Polynesia as to have become intimately acquainted with the manners and customs of those people. Dr. Seemann added, in reply to a question from Mr. Chambers, that the native priests of the Fijis have certain mysteries and profess to be oracles, and that before the chiefs go on any expeditions they consult the priests.

Mr. **MACKENZIE** remarked, respecting the oracular utterances of the priests of the Tongans, that he understood that in one of the westerly islands there was a cavern which was visited by the priests for the purpose of consulting a divinity supposed to reside there, and they looked down a well for certain signs they expected to perceive. At that time the Tongans were at war with the Fijis, though now they are all in amicable relations.

Dr. SEEMANN observed that the Fiji islanders believe in the immortality of the soul, and they expect to live in the next world the same kind of life that they do here. They entertain the notion that everything, inanimate as well as animate, animals, and trees, and canoes, houses, hatchets, hammers, etc., has a soul.

Mr. REDDIE said he had listened with great pleasure to the paper, and he regretted that the author was not present to give still further particulars respecting that singular people, especially as to their physique and intellect. It was stated that there was a great difference between the inhabitants of the shore and those inland, the latter being represented to be very inferior. That state of things presented a remarkable contrast to what was found to be the case in Africa, where generally the natives in the interior were superior to those on the coast. It would be interesting to find out why the two cases should be different. It had been said that those on the shore laboured less, as their food could be more easily obtained; but it had been customary to suppose that the necessity for labour assisted intellectual development. He suggested that one cause might perhaps be the unhealthiness of the climate on the African shore, while in the Viti Islands the contrary might be the case, and the interior be more unhealthy than the coast. As to the cranial development of the people under the influence of Christianity and civilisation, he regretted that Mr. Bendyshe and Mr. Higgins were not present to hear that assertion; for they appeared to have adopted the opinion of Vogt, who had sneeringly referred to certain skulls of low development as "Apostle-heads." It was evident, from Mr. Pritchard's paper, that in those islands the propagation of Christianity had improved the form of the heads of the natives. It is a remarkable fact if, in the course of even a generation or two, Christianity has produced the marked effects described by the author of the paper. He should like to have heard whether the chiefs and priests are hereditary. He fancied that the superior physical development of the chiefs was the original cause of their occupying that position, and not the effect of it. In the case, for instance, of a chief being physically or intellectually degraded, would he maintain his position, or would not another man take his place?

Mr. MACKENZIE made some further allusion to the superstition existing in a certain group of islanders respecting wells, and their belief that Paradise is to be found at the bottom of a well.

Mr. DIBLEY, referring to that part of the paper respecting superior cranial development having been produced by teaching, he said it might be considered an indication that all races of mankind are susceptible of such changes in circumstances. The Negroes in America might be adduced as an instance. Those who resided in towns and were surrounded by civilising influences were superior in physical appearance to those in the plantations; the original thick lip of the Negro becomes thinner, and their noses more aquiline. Even among ourselves we see similar influences produce like effects. In the assertion of the writer of the paper, there might be seen the indication of a great truth—that the physical and intellectual capacities of man

could be developed into a higher order of being if circumstances permitted.

Mr. CARTER BLAKE said that, as to the question which had been raised by Messrs. Reddie and Dibley, whether the state of civilisation had any effect on cerebral capacity, he was in favour of the opinion expressed by Mr. Pritchard. He referred, in confirmation of that opinion, to the results of the examination by M. Broca of the forms of skulls in the cemeteries of the *Tribunal de Commerce*, *Cimetière des Innocents*, and *Cimetière de l'Orient*, at Paris, where they were clearly divided into three distinct periods. The oldest series of skulls consisted of those of the Carlovingian period, and they were of a lower character than those in the second series of skulls of individuals of the twelfth and thirteenth centuries; and the third series of skulls, which were of the earlier part of the last century, were still better developed. He saw no reason to doubt the doctrine that a greater amount of civilisation may produce a larger brain. As to the alleged "Apostle skulls" in Switzerland, which had been referred to, the statement on that subject showed how small an amount of fact sometimes serves for the foundation of a wide surmise. Certain skulls, as for example, the Hohberg skull, were found having a lower development than usual, but not essentially different from those existing in Switzerland. M. Vogt found these skulls slightly more apish, and suggested that they might be those of the men who introduced Christianity into Switzerland at an early period of history; and that gave him an opportunity, which of course he did not lose, to have a fling at certain doctrines. Professor Vogt admitted that the "simian" Apostle skulls belonged to a race whose representatives preserved their type down to this day; at the same time, he assigned to them an intermediate place between the skulls of Engis and Neanderthal, so called extinct types of human crania. Now, if either of Professor Vogt's theories was true, the converse one was erroneous; and Mr. Blake left the task to others to endeavour to extract the minimum of sense there might be in Professor Vogt's statement. The whole case was but one link in a chain of argument; and, in opposition to Professor Vogt, Mr. Blake thought that the skulls did not indicate migration from a foreign land, but that they were those of the original long-headed (so-called) Celtic population of Switzerland. The theory of the Apostle-heads afforded a curious example of the structure of hypothesis on a single fact, inaccurately observed, and illogically argued upon.

Mr. NASH said it appeared that M. Vogt had from a single fact derived wrong deductions; but when Mr. Carter Blake adduced Broca and the three series of skulls, it appeared that from that assemblage of facts there had been very wrong deductions. It was said that the skulls of the Carlovingian race were less developed than those in the middle series, and that the latter were less developed than the third. But he would ask, who were the people buried during the Carlovingian period? Could it be supposed that those who founded the Carlovingian empire would have a low form of skull? Such a kind of skull was more likely to be found among those who succeeded them, and

whose remains were deposited in the second stratum; and it might be expected that the third stratum would exhibit an improvement. So that as far as Broca's assertions were concerned, they could not receive his opinion of the subject, and it showed how little is really known about the matter. He thought that no reliance should be placed on Mr. Pritchard's opinions respecting the alteration in the form of the head by civilisation. He considered the only influence likely to produce a change was the infusion of new blood. He did not believe in the effects of education in altering the form of the skull. If an improvement in the character of the skull were produced by education, and the people were to relapse into their previous state, the form of the skull, it must be supposed, would resume its low character. The effect produced by the infusion of different blood is different. A mixture of races elevates the character of the lower races permanently; as might be said of the ancient people of this country.

The PRESIDENT said he was somewhat astonished at the form the discussion had taken. He could scarcely have expected, from the nature of the paper, that it could have led into a discussion as to the merits of Vogt, and on the origin of the term "Apostle skulls." It was not necessary in discussing such a paper to go into those subjects. The paper contained so many other facts of interest that he should confine himself to them. It exhibited a very careful observation of facts; but, at the same time, some of the opinions expressed were very speculative, and if the paper were allowed to pass without comment it might be dangerous to the progress of their science. Mr. Nash had very properly said it exhibited too much of an off-hand manner of treatment of important problems; and, though the observations were made with care, it must be borne in mind, that the opinions expressed were not formed until the author had returned to this country; and that the facts contained in the work of Dr. Waitz, translated and published by this Society, had induced him to write the paper. As to the size of the skull of the priests, it appeared that they were the last to embrace Christianity; therefore, it might be assumed, that they were more stupid than the rest; and, so far, the larger size of their skulls was opposed to the opinion of M. Vogt. Mr. Reddie wanted to know the reason why these skulls were better developed; but they were told that the priests were always scheming to maintain their authority, and that this exercise of the mind had improved the form of these skulls. Then, again, they were told that the cranial development of the children improved under the influence of civilisation with each generation, and that in the third generation the metamorphosis would be positive and unquestionable. He, however, disputed that opinion, as at present informed. He agreed with Mr. Pritchard with regard to the faculty of the natives for imitation, which was common, however, among all savage nations. The offspring of natives of different groups were said to be more active and hardy than the offspring of natives of any one group; and the same fact is even observed among ourselves. Then, again, as to the half-castes: the superiority of the offspring to their mothers, the preponderance of the paternal race in the developments of the children; and the fact that half-castes

when they intermarry are less prolific, are all important matters for consideration; but it must not be too hastily assumed that they are really facts, without further observation. The paper was no doubt valuable and interesting, and he hoped that Mr. Pritchard would contribute others on the same subject and be present when they were read to make further observations personally.

Dr. SEEMANN undertook to reply to some of the observations that had been made on the paper, which Mr. Pritchard had written at his request. He said he could confirm by his own observation the curious fact that the natives on the coast are a finer set of men than those in the interior. He ascribed it to the food on the coast being more abundant, and the people better fed; for there they had an abundant supply of cocoa-nut and fish. He, indeed, ascribed a great deal to the effect of difference of food. The Esquimaux, for example, were very different in different parts of America. In the west, where food was plentiful, they were tall and strong, many of them being six feet high; while in the east, where food was scarce, they were very diminutive. He thought there could be little doubt that mental culture produces great influence on the physical appearance of people, and that principally was what Mr. Pritchard meant to say. He did not agree with him in his remarks on the half-castes. With respect to the question whether the offices of priests and chiefs were hereditary, he observed that they are strictly so; but that when a man becomes distinguished by any act of daring or otherwise, he is allowed to marry a chief's daughter. In such a case, however, he himself cannot rise to the dignity of a chief, but his children may.

The thanks of the meeting were then given to the author of the paper and to Dr. Seemann for having induced him to contribute it, and for the explanations he had given.

The following paper was then read:—

Notes on Further Remains from Keiss, near Wick. By JOHN ANDERSON, Esq. (Communicated by GEO. E. ROBERTS, Esq., F.G.S., Hon. Sec. A.S.L.) With a Note on the Human Skull, by C. CARTER BLAKE, Esq., F.G.S.

Notes on the Weapons. Nos. 1 to 7 inclusive, are the contents of a kist from the "burial mound" (described by Mr. Laing) at Stain, near Keiss. The kist differed in no way from those previously opened. It was rudely formed of beach stones placed on edge and covered over, from four to six stones forming the length of the grave. The body had been laid, as in the others, on the sandy bottom. The sand was wet, however, and the skull would not lift. The weapons, etc., are two small spear-heads, two arrow-heads, a small hatchet-shaped piece of quartz, a deer-horn handle, and an oblong stone worn at both ends by use as a hammer or pestle. Both the spear-heads are rubbed or scraped to shape, the arrow-heads are only rudely chipped, and the quartz cutting instrument is fashioned solely by chipping. The finest spear-head, from its appearance at the helve, seems to have been inserted into a socket on the shaft. In the shell-

mounds, Mr. Laing found a number of short perforated cylinders of bone or deer-horn; and, looking at these spear and arrow-heads, it is obvious that one of the readiest methods of affixing them to a shaft would be by letting them into one end of such a short, light, cylinder of bone, which would only require to be tightly pushed on to the end of a rod and the weapon was complete, whether it was intended for throwing by hand or projection from a bow. Perhaps the deer-horn handle (?) found in this kist may belong to the quartz implement which lay beside it. If so, it may have served as a chisel or scraper for bringing up the edges and points of the weapons. The flat spear-head, especially, appears to have been so scraped rather than ground. The marks on it are those of erosion rather than abrasion; the scratches run parallel, and over the hollows as well as the prominences of the surface. I may add that this deer-horn handle (?) was unfortunately scraped by the knife of the workman who found it, to remove the incrustation, under the impression that it was a wooden tool he had found. I was not present at the opening of either of the kists whose contents I have sent. They were opened at my request by Mr. Sang, gardener, Keiss, after Mr. Laing had left.

Nos. 8 to 12 inclusive, were taken from a kist on one of the Bickle Hills (the "places of worship or sacrifice" mentioned by Mr. Laing), and are much ruder, and perhaps of earlier date than the former. The kist was more megalithic in character than the others; but it had been partially opened years ago, and the skeleton disturbed. At my request, Mr. Sang re-examined it, and found the weapons in the undisturbed sand at the bottom. It is curious that a chipped hatchet-like instrument of quartz (?) should occur again in this kist. The larger spear-head is extremely rude, and the smaller curiously curved. The large knife (?) struck from a boulder, may have done duty with difficulty for sacrificial purposes, but it does not seem a very effective weapon. The smaller knife (?) of sandstone, shows more adaptive ingenuity, as the natural fracture of the stone is brought to a keen edge throughout, by the other side being ground flat. The heavy round stone may have been a sling-stone. The hammer or pestle from this kist is remarkable for its shape and the exactly circular spot worn on one of its ends by use. The blows that produced these marks, one would think, must not only have been lightly delivered, but delivered upon something pointed. It is as if the person wielding the instrument exerted some skill, so as to strike always with the same force and a definite aim upon some other instrument. These hammers or pestles, of oblong shore pebbles, are found in the shell-heaps or connected with the dwellings, as well as in the kists; and the one sent by Mr. Peach from the "Pict's House" at Old Stirkoke, must have been intended for a child's hand. Its ends are more irregularly marked, as are also those of the less elegant one from the shell-mound at Keiss.

Nos. 17 to 20 inclusive, are from the shell-mound at Keiss. The knife-like instrument is very similar to one obtained from one of the kists subsequently by Mr. Gill of Blingery, near Wick.

The bone pin and flint chip, No. 36, are from Birkle Hill. The

absence of flint *weapons* in the grave, suggests the inquiry whether these be not anterior to the age of the finely fashioned flint weapons occasionally found in Caithness. Flints are not rare on the beach and in the boulder clay; and the surface of Birkle Hill is covered with chips, as if there had been a manufactory there. I found, also, an agate, rudely chipped into a hatchet form, among the flints. A few pieces of flint have been found in the shell-mounds; but, so far as I know, no manufactured flint weapons or implements.

In regard to the cannibal idea, the hypothesis, or rather inference, seems to be strengthened by the fact that the occurrence of detached portions of human remains in the refuse of the food of these aboriginal inhabitants of Caithness, *is the rule, and not the exception, so far as these refuse-heaps have yet been examined.* Mr. Rhind found them in a "hole among ashes and bones" at the Kettleburn "Pict's House", near Wick; Mr. Peach and myself found them among ashes and bones of animals in the refuse-heaps of shells, etc., at Old Stirkoke (if the pieces of skull now sent prove to be human, as I fancy they are); and Mr. Laing has found them in *two* shell-heaps at Keiss.

The skull sent was taken from a kist in the "burial-mound", which, unfortunately, was not examined for weapons, so that I am unable to say whether there were any along with it or not. J. A.

Notes on the Human Skull. The skull does not present any special affinity or resemblance to those described by Mr. Laing from the same locality, any more than is possessed by those of the existing races of North Britain. The skull is long, and the upper portion of the supra-occipital bone is very prominent; in this respect rather resembling the "kumbecephalic" skulls of Professor Wilson than do any of the other skulls from Caithness, or from the so-called "river-bed" skulls. The upper semicircular line and occipital ridge are well marked. There is no vestige of paroccipital, and the mastoid processes are exceedingly small; their diminution giving an undue apparent depth to the actually very deep postcondyloid foramina. The maxillary indicates a markedly orthognathic physiognomy. Slight supraciliary ridges overhang a moderately deep supranasal notch, not unduly deepened, as in the Shetland, nor really flattened, as in the other Caithness skulls. The nasal bones are well produced. Slight obliteration extends along the sagittal suture and around the upper corner of the lambdoid, which has contained a small *os trigetrum*. All the molars in place show marked signs of erosion. The mandible is rather slender, with a very high coronoid process.

I should doubt strongly whether the skull is not of a very modern age, and do not consider it to be allied to those described by Mr. Laing from Caithness, or to those from Shetland. C. C. B.

Thanks were given to Mr. Anderson and Mr. Carter Blake.

An abstract of a paper *On the Anthropology of Linnaeus*, by Mr. Bendyshe, was then read. The paper is inserted in the first volume of *Memoirs*.

The thanks of the meeting were given to Mr. Bendyshe for the paper.

The PRESIDENT proposed the thanks of the meeting to Mr. Helsby for having sent the Peruvian mummies to be inspected by the Society. He then stated that the number of Fellows of the Anthropological Society amounted to four hundred and seventy-two, and that they only wanted twenty-eight more to complete the number of five hundred. He hoped they should be able to do so before the 25th of March; for, in that case, they would be able, in accordance with the original resolution of the Council, to increase the salary of their assistant secretary and curator, Mr. Carter Blake, to whom the Society were very much indebted for his indefatigable exertions.

The meeting then adjourned.

MARCH 14TH, 1865.

THE PRESIDENT, DR. J. HUNT, IN THE CHAIR.

THE minutes of the last meeting were read and confirmed.

The names of the following gentlemen who had been elected Fellows of the Society since the last meeting were then read:—C. Brett, Esq., F.R.G.S., G. W. Barrington, Esq., John Cavafy, Esq., Rev. David Charles, M.A., F.G.H.S., Thomas Collings, Esq., Vicat Cole, Esq., C. William Davis, Esq., Conrad C. Dumas, Esq., M.A., John Ellerton, Esq., Colonel Lane Fox, Captain Edw. G. Fishbourne, R.N., C.B., A. Goldsmid, Esq., F.S.A., T. P. Heslop, Esq., M.D., G. A. Hutchinson, Esq., Captain J. Hastie, H. Whitfeld, Esq., Dr. C. F. Lewis, S. A. Letts, Esq., B. Backhouse Marson, Esq., F. B. Burnard Natusch, Esq., A. Vincent Newton, Esq., Matthew Paris, Esq., T. E. Partridge, Esq., A. W. Parsons, Esq., B.A., the Rev. S. G. F. Perry, M.A., Theodor A. Rosenbusch, Esq., R. Barclay Shaw, Esq., Lieut. E. Andrew Trevor, G. R. Tate, Esq., M.D., R.A., Captain A. C. Tupper, F.S.A., W. H. Wesley, Esq.

It was announced that the Fellows of the Society now elected amounted to five hundred and three.

The names of the following gentlemen who had been elected foreign local secretaries were then read:—M. de Köninck, Liège; M. A. Becquet, Namur.

The following list of presents was announced:—Zimmermann, L'Homme (H. J. C. Beavan, Esq.); the Pre-Historic Remains of Caithness (John Miller, Esq.); Kircher, China illustrata (J. W. Conrad Cox, Esq., B.A.); Linnæi Systema Natura, Rev. Dr. M. P. Clifford; Echelle Chromatique des Yeux (M. Broca); Sur les origines des Races d'Europe (M. Broca); Sur l'aphémie (M. Broca); a Goniometer (M. Broca); the Canadian Journal (the Editor).

Mr. W. WINWOOD READE then read the following paper:—

Efforts of Missionaries among Savages. By W. WINWOOD READE, Esq., F.R.G.S., F.A.S.L.

OF all sciences, gentlemen, anthropology is the most catholic and the most comprehensive. It includes all that can directly or indirectly contribute to our knowledge of man. We are human natur-

alists—we who labour in this wide, in this boundless field. It is our profession not only to scrutinise the structures, and to observe the habits of the various varieties of our species, but also to study those influences, physical and moral, which affect their bodies and their minds. During the young life of this society, which has been founded for the purpose of carrying out these researches more fully and of venting them more fearlessly than they have ever been before, the subjects which it has discussed have been anatomical or physiological, geological, ethnological, palæontological, archæological, philological, or zoological. The paper which I shall read to-night will not belong to any of these minor ologies. It rather belongs to that branch of anthropology which may broadly be termed social science.

We know that man is modified to a certain extent by the atmosphere in which he breathes. In the same manner men live in a moral atmosphere, which varies immensely in different parts of the globe, and of which religion may be said to be the oxygen, or universal gas.

Now there can be no doubt that we live in an air which is purer than that which permeates a savage people. This incontestable fact has induced some thousands of our enthusiastic, but ignorant, fellow-countrymen to adopt a wild scheme for the remedy of this evil. They endeavour to change the religious climate of whole continents by bottling up our moral atmosphere in missionaries, and in exporting it at a very great expense.

It is well known, in fact notorious, that some of the vessels selected for this purpose are not of the most cleanly character. There are many missionaries so ignorant, or so knavish, that no work of this kind, however feasible, could prosper at their hands. Evidence on this head will doubtless be offered you to-night. For my part, I shall content myself with showing to you that even when promoted under the most favourable circumstances, missionary enterprise is a wretched bubble, and that British Christianity can never flourish on a savage soil. I shall confine my illustrations on the present occasion to the region of West Africa, and my arguments will merit your attention at least thus far; they are solely and wholly based upon personal experience.

During my stay of five months in Equatorial Africa, those days which were not spent in actual travelling were passed beneath the roofs of two American missionaries, viz., Mr. Walker of Gaboon, and Mr. Mackey of Corisco. It was then and there that my eyes were fully opened to the absolute futility of Christian missions. Had these gentlemen been incompetent men, such as the Wesleyans of the Gambia, and with rare exceptions the Church of England missionaries upon the coast, I might have ascribed their failure to themselves. But they completely realised one's beau-ideal of what a missionary ought to be. They were men of practical abilities and cultivated minds; not only classical, but even Hebrew, scholars; they could speak with facility the dialects of the tribes among whom they laboured; they could build houses, sail boats, do everything in fact

which would force both whites and blacks to look up to them as superior men. If Saxon Christianity could be made to grow in Africa, these I was convinced were the men to make it grow. But it had failed to do so; and I attribute this failure not to them, but to that silly system to which their noble lives were sacrificed.

They had both in Corisco and Gaboon their congregations, which were very small. And I failed to discover that the members of this little band were more honest, more truthful, more sober, or more virtuous than their Pagan brethren. I found that my Christian servants, although they believed in Jesus, and refused to work on the Sabbath, and sang hymns in a very high falsetto voice, made mental reservations about the eighth commandment; and their wives, according to all that I heard and saw, were equally ready to infringe the seventh. In plain words, I found that every Christian negress was a prostitute, and that every Christian negro was a thief.

The missionaries allow that no moral change in their parishioners is perceptible to the naked eye. But said one of them to me, you cannot measure the amount of moral influence which our teachings exercise. He was quite right. You cannot. There is nothing to measure this moral influence by. It must be represented by x ,—which in algebra signifies an unknown number.

I will just give one instance, which will prove how little real power these missionaries can exert over Pagan superstition. In West Africa, whenever a man of importance dies, it is said that he died by witchcraft. The fetishman goes through certain rites, and ends by accusing some persons of the sorcery. The accused is subjected to an ordeal, which has been often described; and if the verdict be guilty, as is usually the case, is put to death with more or less barbarity. In Gaboon the French authorities soon abolished this ancient custom by threatening to hang all persons therein concerned, but in Corisco, Mr. Mackey has laboured during twelve years in vain to put a stop to it by arguments of reason and religion. While I was at Corisco I heard him plead without avail for the lives of a woman and her child condemned to death for sorcery. Now what is the use of a Christian mission if a man goes to church in the morning, and burns a witch alive in the afternoon?

Next, gentlemen, I shall examine into those causes which choke the growth of Christianity in Africa.

At first sight, there seems no reason why pagan Africa should not become, at all events, nominally Christian. The negroes are a people without any religion; they have certain practices and certain superstitious fancies, but they have no creed to which they cling, like the Mohammedans, the Buddhists, and the Jews. They suppose that each people has its own God: and that the white man's God is more powerful than their's, because the white men are so much richer than themselves. When, therefore, they are informed that if they will give up their God, and worship the white man's God, he will take them into the white man's heaven, they show no reluctance to do so; for they believe in a future state, as we do, though they do not pretend to know so much about it. Thus, when

the Portuguese first colonised Africa, the Jesuits counted their converts by thousands; so much so, that one of them wrote home to Europe from the Congo, complaining that, in the whole of that extensive empire, there was not a single negro who had not been baptised.

But it was soon discovered that, however readily they consented to be baptised (the more so as eating salt, which they are very fond of, was part of the ceremony) and to call themselves Christians, they utterly refused to give up their plurality of wives, and were very indignant, as well they might be, at the impertinence of these foreigners in making such a request. They could not see the connection between marriage and religion; and the wives, especially, were furious. Women are always the pillars of the church; and when these were withdrawn, the missionaries were ridiculed as madmen, and Congo relapsed into paganism.

The Protestant Church in Africa excommunicates such of its members as may be polygamists; and this alone will prevent Africa from becoming nominally Christian. A negro's social position is marked by the number of his wives; but, putting aside all these minor considerations, it is sufficient to say that in Africa polygamy is the natural state of married man; and he is warned by instinct never to abandon it. In England, polygamy would produce a frightful excess of population; but in Africa monogamy would exterminate the negro.

As for the dogmas of the Christian religion, how can a savage understand these? How can he be made to understand that there is only One God and yet Three? That the Old Testament is the word of a God who cannot change, and yet that this word is superseded by the New Testament? Imagine, for instance, a negro in the Gaboon. He sees the French Catholics and the American Protestants competing for converts like two rival joint-stock companies, and, being puzzled to know which sells the right article, asks advice of a free-thinking trader, who tells him not to bother his head about either the one or the other.

British Christianity, I say it again, can never grow in an African soil. By British Christianity, I mean that particular form which at present prevails, not only in Britain, but in Europe; which has decked the monotheism of Judah with the ornaments of pagan Rome; and which has smothered the pure precepts which Christ taught with a mass of rabbinical traditions. I do not say that Christianity in its Eastern form might not teach the negro honesty and truth, and elevate him from his degrading fetish-worship to a knowledge of the One God.

Nay more, I will actually tell you—and probably all of you here, with the exception of Capt. Burton, will be much surprised to hear it—that pagan Africa is at this very time being rapidly converted by Oriental Christians. Who are these Oriental Christians? you will ask. I reply, they are the Mohammedans.

Locke himself defined the Mussulman as a Christian heretic. Thus you see that, as far as terminology goes, I am not very far

from the truth. The Mussulman does not believe that Jesus Christ was actually God; he considers such a belief blasphemous—an insult to the Almighty; but he believes in him as a great prophet, as a greater prophet than Mohammed; and, though he calls himself a Mohammedan, as a disciple of Luther calls himself a Lutheran, he is a better Christian than we, who call ourselves by that name. The Mohammedan religion and the Christian religion are in spirit the same; in their political institutions they differ; those of the Christian religion are suited to Europe; those of the Mohammedan religion are suited to Asia and to Africa. Mohammed appeared as a Christian prophet among the ancient Arabs, a people who strongly resembled the Africans of the present day. The religious laws which he made, apply perfectly to the latter people. The Arabs were idolators, gamblers, drunkards, liars, and thieves, as the negroes are: he made laws against these vices. He did not attempt to oust polygamy and domestic slavery; he contented himself with restraining them. He limited the number of wives to four; he enjoined that slaves should be treated kindly, and that, under certain conditions, they should receive their liberty. He dealt with these institutions as the French legislators deal with prostitution; recognising it as an evil which cannot be suppressed, they license in order that they may limit it—a policy which we are commencing timidly to adopt. But let us give you facts, which are better than mere words. Every African traveller knows what enormous progress the religion of the prophet is making in that continent; beyond the scope of European eyes, a great reformation is taking place. I have travelled among the Mohammedan negroes. I have found them sober, honest, and truthful. I have found a school in every village, where a marabout teaches the Koran. I have found, in a word, the Mohammedan convert as superior to the Christian convert, as he is superior to the pagan savage. Such is my evidence, as a traveller in that country. I have found Christian missions not only inferior to Mohammedan missions, as a means of civilising negroes, but absolutely useless.

Now what can Europe do to assist West Africa? I reply that it can do nothing. The only manner in which we could elevate the negro would be by establishing a commercial mission, of which the churches should be workshops, and master artizans the priests. But, owing to the pestilential nature of the climate, all efforts of this kind would result rather in degrading the white man to a level with the negro than to elevate the negro to anything like our own standard. Thanks to the exertions of Mr. Adderley, we may soon hope to see the emancipation of the white men from this accursed coast.

I am well aware that there are certain people who will never believe that Christian missions are useless. Missionary enterprise is the romance of religion; and even Puritans, I suppose, must dash their lives with a little poetry. But to those who are really charitable, who are really desirous of applying their gifts to the best purposes, let me say one little word. I have been among the most

abject tribes of Africans, but never have I seen such real misery as I have seen in this city. When you subscribe your guinea to a foreign mission you defraud some starving Englishman of that money. Whenever you send a missionary abroad to such countries as West Africa, you sacrifice what might otherwise be a useful life, if he is a good man; and if he is an idle, ignorant, knavish man, unfit for anything else (as many of them are), you place a premium upon hypocrisy. As for the eternal welfare of the negro, I think the less that is said about that the better. No one will be rash enough, I presume, to say that God created these wretched creatures in order to punish them hereafter; and I have already shown that Christian missions do not tend to elevate them in the moral scale.

The PRESIDENT proposed the thanks of the meeting to Mr. Reade for the paper. (This was carried by a large majority, there being three hands held up against it.) He said it should be borne in mind that that was a scientific society, in which all facts bearing on the subject under discussion should be brought forward. The statements made were open to the strictest scrutiny, and however much any members might differ from the opinions expressed, it was right that they should be received with consideration, and be replied to if thought erroneous.

Mr. R. B. WALKER (of Gaboon) said he had resided fourteen years in Africa, and he could bear testimony to the truthfulness of the greater part of the statements in Mr. Reade's paper, especially as to the result of missionary labours in Gaboon. An American missionary who had been there for twenty-three, admitted that all his efforts had been utterly fruitless, and that he had not made one *bond fide* convert to Christianity. All who had been supposed to be converted had lapsed into paganism, and the more educated among them were the greatest villains. Such was the result of the American and English missionary efforts; and the French had not succeeded much better. One French convert applied to him for permission to rob him as others had done. The want of success of the missionaries he did not attribute to any individual fault of theirs, but to the system they adopted. They made polygamy the grand object of their attack before attempting to convert the negroes. They insisted that they must abandon their many wives before they could become Christians. The natives revolted at such a demand, and refused to become converts to a faith that required such a sacrifice in the first instance. Mr. Walker adduced several instances of pretended conversion to Christianity to obtain favours, and of the continued prevalence of pagan practices among those who were supposed to be converts to Christianity. He spoke in high terms of the Rev. Mr. Leighton Wilson, Mr. Walker, and the Rev. Mr. Mackey, who were missionaries at Gaboon; but their efforts, he said, to convert and civilise the natives had been entirely without any real good.

Sir GEORGE DENYS related an anecdote in reference to the preliminary requirement insisted on by the missionaries of doing away with polygamy. A certain bishop had taken great pains to convert an African chief, and he had induced him to put away several of his

wives, and thought he was on the point of becoming a Christian. The chief, however, insisted on retaining two of his favourites, but this compromise the bishop would not agree to. At length, however, the chief came to the bishop and told him that he had put away one of his two wives, and was ready to become a Christian. With this announcement the bishop was greatly pleased, but on inquiring what he had done with the wife he had put away, the chief said he had eaten her! Sir G. Denys said they had been told by African travellers that it was customary in some parts of that country for the natives to eat their aged parents when they became infirm and burdensome, thus summarily avoiding the necessity of a poor law; he thought it would be very desirable to give the natives a taste for beef and mutton before attempting to initiate them into the mysteries of Christianity.

The Right Rev. the LORD BISHOP of NATAL observed that many of the native Africans had already a very good taste for beef and mutton, and he believed the anecdote about the chief who had eaten his wife had been narrated originally about a New Zealand chief, and not an African. With regard to the paper, he thought that Mr. Reade had done good service by drawing attention to the results of missionary efforts in Africa. The people of this country were arriving at a great crisis in religious feeling, the effects of which might be extended abroad, and it was desirable to consider what should be done, more than is done at present, with regard to the conversion of savages to Christianity. He differed on some points from the opinions expressed in the paper. But it was important that missionaries should know the opinion on the subject of their labours of laymen who had resided many years in Africa, and had noticed their efforts from a different point of view from their own. The subject was one that required much consideration. He would not, therefore, venture to speak on it at that time, but would put his own views on paper, and at some approaching meeting of the society he would be glad to read them.

Captain BURTON said it is a pleasing task to comment upon the excellent paper with which we have just been favoured. There is open to our young society a wide field in the discussion and ventilation of those great popular questions which society at large seems to hold as settled, when no one has hitherto been allowed to answer them. Let the honour of the attempt be ours, and the anthropologist should assume as his motto the old line—

Homo sum, humani nil a me alienum puto.

I venture also to compliment my friend Mr. Reade upon his views of that branch of social science popularly known as missionary enterprise. He has also very properly preferred the abstract to the concrete style of treatment; and whilst he has denounced missions, he has not denounced missionaries. I shall follow in his steps, merely supplementing his West African experiences by a conscientious account, and necessarily a bird's eye view of my observations in Western India, the prairie tribes of America, and tropical Africa generally. By way of preface, a few lines may be devoted to considering the

motives which induce the public to subscribe so largely to the support of missions. In the fiery days of the Crusades, men armed themselves and rode forth to cure the soul of the infidel by spoiling his body—a peculiar proceeding, of which, unhappily, modern instances have not been wanting. In our softer times, men are content to pay for substitutes. Many mulct themselves for the best of motives, an earnest desire to carry out the commands of their faith. Many do so because it is the fashion, and because they love to see their names in print. Some look upon the missionary as the forerunner of the merchant. Others appear to think that such liberality “purifies,” as the Arabs say, their property. There are men whose principal profits in the African trade are derived from such abominations as selling pestilent rum, and supplying negroes with arms and ammunition wherewith to enslave or slaughter one another. Yet these men will subscribe largely to missions. With respect to the oft-agitated question of difference between the Catholic and the Protestant style of proselytising, I have offered an opinion in a work lately published (*A Mission to Dahome*, vol. 1, chap. iv). Against the former there is a common charge, namely, that though ardent and self-sacrificing; and though prompt to endure every discomfort, even that of celibacy, where it is least endurable, they are too accommodating to heathenism, and therefore they do not last. This may have been the case in the days when Jesuit and Jansenist contended for the conquest of the convert. But it is not so now. The French mission at Whydah has constantly incurred the persecution of the local Fetishmen, yet from April 1861 to the present date they have never made a convert. The Spanish missionaries at Fernando Po, established in 1858, have failed as notably amongst the Bube; they cannot even persuade the wild women around them to add another inch to their half-foot of attire. And what has become of the noble establishment which, in the sixteenth and seventeenth centuries attacked the superstitions of the Congoese? Their cathedrals and churches are level with the ground, their priests are dead, and here and there a crucifix hanging round a pagan’s neck, tells the tale of past times. When marching towards the cataracts of the Congo River in 1863, I asked my guide the meaning of a pot of grease tufted with feathers, and stuck in a tree. “That,” he replied, “is *Meu Deus*.” The words sounded peculiar. On the other hand, Protestant missions are described as being, like the constitution which breeds them, comfortable and feeble, offering salaries to married men, who, in squabbles about outfits, passages, re-passages, and conveyance of children, manage to spend about half a million per annum, which had much better be transferred to Connaught and to Western Ireland. The material upon which all missions practise may briefly be described as Christian, Moslem, and Pagan. The firstnamed is perhaps the most unmanageable; witness Abyssinia, to which I propose reverting. The Moslem, hardly less amenable to Trinitarian doctrine, is, as Mr. Reade has justly remarked, a heterodox Christian, in fact a modern Arian, and the nineteenth century lacks an Athanasius to put him down. The Arab Prophet or rather Apostle never pretended to found a new faith; his mission was

to restore to its original purity the religion revealed by God to man, through the succession of Adamical, Noachian, Mosaic, and Christian dispensations. The Pagans may be divided into two great families. The civilised, for instance, the Japanese, Chinese, and Hindus having various settled forms of worship, and mythologies more or less extensive, have rejected Christianity. The uncivilised, as the Africans and the American aborigines, have either accepted the new religion, like the tribes subject to the Amazon missions, or have ignored it, as in Africa. Mr. Reade has perhaps said too much when he sees no reason why the negro should refuse the faith of his masters. It is impossible, save to those who have dwelt long among these people, to understand the influence which Fetishism exercises over their most trivial actions. Nor does the negro, as a rule, believe in a future state. The abolition of polygamy is to him what it would be to us, a forbiddal of marriage. When we would instil our ideas into his mind, we are teaching him Euclid or Aristotle, before he knows what an alphabet means. The language of Holy Writ is a mystery to him. How express in Kiswahili grapes and thistles? In the pathetic passage, "O Jerusalem, Jerusalem, thou that slayest the prophets," the only intelligible expression is the slaying. During a residence of nearly eight years in Western India, I had an opportunity of seeing the effects of modern missionary preaching. Portuguese Goa was Christianised by the racks and gibbets of Albuquerque; and what the Church had taken to her maternal bosom the Inquisition kept there. At present, "the Mikonari log"—missionary folk—have succeeded with a few of the lower castes, and in the case of the higher castes have converted the Brahman into a Vedantist; have made a Monotheist of a Polytheist. He will eat beef, drink wine, and use paper; but beyond that his ideas are with the Essence of the Vedas. Splendid accounts of missionary successes have at times reached England. I do not accuse their authors of any dishonesty, but I assert that their pictures are unconsciously far too highly coloured. The general public account of missions to the Prairie tribes of North America is as follows:—The Churchman begins with zeal, and continues more or less long till he finds out that he is twisting a rope of sand. At length totally depressed by the deadening barbarism of the herd, he sinks to the condition of a comfortable married man, and he loafs about where forts and military camps promise him protection. Even the Mormons, who have worked such marvels amongst the mechanics of Wales and Northern England, have failed to bring the Yutas into the pale of the Church. And if they do not succeed, who will? And now to proceed to Africa. The head-quarters of missionary enterprise on the West Coast may be placed at Sierra Leone. Almost all the negro denizens of the "Red Grave" are Christians. The traveller expects therefore to find there a purer morality, a higher social state. But he is doomed to be disappointed. The churches, and chapels, and meeting-houses are crowded, the sabbaths are well kept as days of rest, and so they would be if there were 365 in the year. But there is neither honesty amongst men nor honour to be found in women; the hospitals are full of syphilis and gonorrhœa; and robbery is the

rule of life. Amongst the pure pagans such abuses are corrected by fire and steel, not so amongst these negro Christians. And despite their change of creed, the old superstitions are perpetually cropping out; the same man who worships at the little Bethel will adore Shango the Thunder God in the bush. Next in the chain are the Episcopalian missions furnished by Anglo-America to the Liberians. Near Cape Palmas resides a missionary bishop, a divine of exemplary piety, learning, and energy. Again, I agree with Mr. Reade in his eulogium of our transatlantic brethren. The American, totally unlike the Englishman, understands the negro before leaving his own country; he is a practical man, not a theoretical philanthropist; and he avoids both sets of extreme opinions. I have visited Congo and Gaboon, as well as Cape Palmas, and everywhere I have seen noble efforts wasted. The Kruman of Liberia is still one of the most thoroughbred pagan tribes on the West African Coast, his polity is an aristocratic republic, probably the worst form of government ever invented by man; and his life at home is a succession of petty slaughterings. Yet pagan and savage as he is, the Kruman has ever been *par excellence* the labouring man of northern tropical Africa, and those of Cape Palmas contrast favourably with their brethren of Sierra Leone. On the infamous Gulf of Guinea we find the Cape Coast missions, Wesleyans. They have orders not to interfere in politics, and have extended their operations to Komasi, capital of Ashante. You may imagine their success, when the king sacrifices a man per day, excepting only his birthdays. They have also tried a mulatto administration, and they found that it did not answer in a pecuniary sense. A little to the east lie the Basle missions, who systematically oppose the officers of government upon all points, who advertise their interests in the *African Times*, and who display an inhospitality somewhat exceptional.

On the Slave Coast we have at Whydah the Wesleyans, who contrast sadly with the Lyons mission. Our unfortunate ministers are mulattoes, whose wretched salaries compel them to support their large families by the sale of arms and ammunition, rum and urinals. Amongst them there have been scandals, into which I will not enter. Their neighbouring station is Badagry, where a single mulatto saunters through life amidst nonchalant barbarians, Popos, and others. The next in the chain is Lagos, celebrated for its quarrels between consuls and missionaries in olden days. It is the port of Abeokuta, where Episcopalians and Methodists, Northern Baptists, Southern Baptists, and now, I believe, Roman Catholics, offer difficulties to the negro in search of the best of religions. This "nearly Christian city," as some have miscalled it, is a den of abominations; human sacrifice abounds there, and its people, the Egbas, popularly called Akus, have made for themselves the worst of names from Sierra Leone to Brazil.

We now enter the ill-omened Bight of Biafra. It contains five great centres of trade, known as the Oil Rivers, and of these two, the Old Calabar and the Camaroons, have missionary establishments. The former are Scotch Presbyterians, the latter English Baptists,

under the wing of Sir Morton Peto. I can only say that these two rivers gave me far more trouble than all the rest of the coast. The Old Calabar displays abominations unknown to other negro tribes. The Camaroons is in a chronic state of murder. The arm of flesh, in the shape of a gun-boat, is invoked by these gentlemen with a regular periodicity when there is an excess of torturing and poisoning. There are frequent feuds between missionaries and merchants, as the former will interfere in local interests, often trade for themselves, and make a living by breeding dissensions. King Pepple of the Bonny River, who was baptised by a metropolitan bishop, in company with a wife, then dubbed Eleanor Queen Pepple, fired with desire to obtain such assistance, ordered his poet laureate to indite a hymn beginning—

“ O who shall succour Bonny's king ? ”

And applied to a lady well known for princely generosity for the sum of £20,000 to build houses and keep a mission. As that potentate's kingdom consists of a single mud-bank, upon which it is death for a white man to pass the night, I can hardly regret that he failed. The traders are delighted; they find the people bad enough without learning to forge acceptances, and to write to missionary papers garbled accounts, which are licked into shape at home.

I can speak only from hearsay of the Niger missions. That excellent traveller the late Dr. Baikie, thought it advisable to place the breadth of the river between them and himself. They are now directed by Bishop Crowther, by far the best specimen of African that I have yet met. He labours, however, under the disadvantages of a certain high priest; he has a family of sons who are as bad as he is good, and he firmly believes in their goodness.

Briefly reviewing the West Coast of Africa, I find the oldest seat of our English Christianity the most depraved of all the settlements, and generally a balance in favour of the pagans, compared with the native Christians. For the latter do not, as when adopting El Islam, drop their abominations of infanticide and human sacrifice, witch-slaying, and poison ordeals. Christianity floats on their minds, but Mumbo Jumbo dwells in their inmost recesses. Even in the Confederate States of America I found that slaves bred and born in the country had leavened their new religion with not a little of their old faith.

I need hardly enlarge upon the fate of the Oxford and Cambridge missions on the Zambezi River. Every one in the room knows as much about them as I do. But upon my return from Africa in 1859, a reverend gentleman called upon me, and after expounding his plan asked me to speak upon the subject. I consented, remarking, however, that he might like to hear what the spirit would move me to say. He assented. I informed him that my sentiments upon the subject were, that those who engaged in the enterprise might suicide themselves if they wished, but that it would be murder for them to take their wives and children. My reverend visitor observed that, under the circumstances, he would not trouble me to express my opinions.

With the last African or Mombas mission I am personally acquainted. Years ago this ill-fated establishment had spent a sum of £12,000, and what were the results. In 1857, when calling at the missionary station of Rabbai Mpia, near Mombas, I was informed that a wild-looking negro, whose peculiar looks caused me to get my bowie-knife handy, was "a very dear person to us; he is our first and only convert." "Yes," added the husband, with an amount of simplicity which might provoke a smile but for the melancholy thoughts that it breeds, "and he was prepared for Christianity by an attack of insanity, caused by the death of all his relations, and lasting five years."

I now come to Abyssinia, where the saddest tale of all remains to be told. Ethiopia, commonly known as Habash or Abyssinia, is a Christian empire, once rich and powerful, whose emperors derive their lineage from Menelek, son of Solomon by the Queen of Sheba, and "whose progenitors (to quote the words of a valuable pamphlet, *The British Captives in Abyssinia*, by Charles T. Beke, Ph. D., London, Longmans, 1865) received the Christian faith, and possessed a native version of the Holy Scriptures as early as the fourth century." Of course this land of primitive Christianity was a suitable field for missionary enterprise, even whilst the savage Gallas, Shangallas, Danakils, and Somal remained unconverted. The result was a mission, established by the Church Missionary Society. "The first missionaries, of whom Dr. Gobat, now Anglican bishop of Jerusalem, was one, arrived in Tigre towards the end of 1829; and the mission continued till 1838, when (as stated by Bishop Gobat) 'through the influence of certain members of the Church of Rome, opposition was raised against the missionaries by the Abyssinian priests, and they were compelled to quit the country, and return to Egypt.'" They took refuge in Shoa, and a Roman Catholic mission was forthwith established by Padre Giuseppe Sapeto, "who had for its head," I quote Dr. Beke, "Padre de Jacobis, a Neapolitan of noble family, under whose able directions it took deep root in Abyssinia, where it still exists, notwithstanding the disgraces and subsequent death of its amiable and accomplished chief, who, in addition to his zeal for the spread of his faith, was the prince of political intriguers."

The Chief Krapf, alias Theodore Emperor of Abyssinia, having firmly seated himself on the throne, granted the establishment of a new Protestant mission in April 1856. It was originated by the Protestant missionary Krapf, who had entered the country in 1842, and whose intolerance, bigotry, and interference with political matters had caused him to be expelled from Tigre and Shoa. This mission of lay handicraftsmen was supplied by the British and Foreign Bible Society with books and money to the amount of nearly £1000.

I need not dwell upon the disappointment of that enterprise. It is impossible to read the received version of the affair without perceiving that the arrogance of the Rev. Mr. Stern, who, unsummoned, would force himself into the king's presence, caused the detention and torture of Messrs. Stern and Rosenthal, and I

deeply regret to add, of my unfortunate friend Captain Cameron. After the last reports (Feb. 3, 1865) Dr. Beke concludes, "The condition of the captives was said not to have improved; but, on the contrary, death seemed to offer to them the only prospect of deliverance from their misery."

After this brief and cursory review of African missions, I would ask leave for a few words of present explanation.

The people of England is determined to missionarise, it will not regard failure; it considers proselytism a sacred duty. And how then to oppose it? And what arrogance is it to oppose a single voice to the united opinions of millions?

I reply, that it is our duty as travellers and citizens to relate the truth, however unpalatable. Moreover, that the voice of millions is apt to change its tone. The subject of slavery in the Confederate States has greatly altered in aspect during the last few years.

A facetious journal charges me with a rabid hatred against anything in a natural or an artificial black coat. This I deny. Many of my best friends wear artificial sables, and my only dislike to the natural article is when it is whitewashed. But I must sympathise with my friend Commander Charles Stuart Forbes, R.N., who in a bold and able pamphlet dared to contend that our slave-preventing squadron on the West Coast of Africa, which, not to take count of invaluable life and health, costs an over-taxed people nearly a million per annum, should be supported by voluntary contributions. And after some experience of the agricultural districts in Essex, to speak of nothing more, I would willingly see a fair proportion of the half a million now expended on missions amongst savages transferred to the Arabs of our cities, and to others who have the misfortune to be born without natural black coats in a civilised land.

Mr. J. M. HARRIS (of Sherbro) spoke strongly against the characters of the so-called Christian converts on the west coast of Africa, particularly at Sierra Leone, where he had resided for ten years. He said there was barely one among those he employed who did not rob him. He spoke, also, against the system adopted at the missions; and mentioned that one of the missionaries, who had married a black woman, was not allowed to stay in the mission. He to a great extent supported all that Mr. Reade had said respecting the superiority of the Mohammedan converts; and asserted that, among the natives, the Christian converts were worst of all.

Mr. CHARLESWORTH mentioned that, about half a century ago, there was a very great excitement in the religious world, on the arrival in this country of two New Zealand chiefs, who were announced to be converts to Christianity. They were taken about the country, to show what success had attended missionary labours, and what might be further accomplished if a certain amount of money could be raised. He said he was taken when a child to a missionary meeting, where these New Zealand chiefs were made an exhibition of. They could not speak a word of English, but they were exhibited as the first results of the successful attempt to evangelise the New Zealanders. They were introduced to George the Third as specimens

of the first converts; and they were loaded with presents of money, given under the idea that it would be expended in the purchase of Bibles and other books, to be used in converting the natives. The result of all these efforts was, that the two chiefs spent the money thus raised in purchasing muskets, gunpowder, and bullets; and, when they returned to New Zealand, they killed the people of the other tribes until they became masters of the island. He thought it was impossible to discuss the question of missionary labour without thus reverting to some of the effects that had resulted from it, which were anything but satisfactory. The exposure of such failures must, he thought, open the minds of the public to the fact that the attempts to make Christians of savage tribes were generally unsuccessful. The public might, indeed, say that it was their duty to attempt to evangelise the world; that they had a direct command to do so; and that they must leave the results to Providence. The answer to that expression of opinion was, that they have a command, also, not to throw away their lives uselessly. The command to evangelise was accompanied by promises of supernatural protection. But had any such protection been given to those who undertook to convert savages to Christianity? The case of Captain Gardiner was a striking instance to the contrary. He thought he had a "call" to take a body of men to Patagonia, to spread the Gospel among the natives. A ship was chartered; a band of devoted missionaries was collected to accompany him; and the result of the expedition was, that every one of them perished with hunger on the barren coast of Patagonia. They were found dead on their knees; and, from the papers they had left, it appeared that they had prayed fervently that foxes might be led into their traps for food, but no foxes came. Those who advocated the continuance of missionary efforts because they considered they were acting under divine command, might be met on that ground. If it were a command to be fulfilled, there were promises of supernatural support in carrying it into effect; and, as the support was not given, it might be assumed they were mistaken as to the command. That was, he thought, the common-sense view to be taken of the matter.

Mr. REDDIE said that, but for the speech of Mr. Charlesworth, he should have been puzzled how to address the meeting; for the facts asserted by Mr. Reade and by Captain Burton could not be assailed offhand by those who were not travellers, and who were as surprised as he was at what had now been stated. He confessed to feeling some disappointment that there had not been a proper issue raised on those facts, even admitting their accuracy. He protested, however, against Mr. Charlesworth's theory of missions; and believed there was no missionary of the present day who would admit anything of the kind, neither was any such pretence ever put forward. The whole history of the spread of Christianity contradicted Mr. Charlesworth's preposterous observations. He seemed actually never to have heard of the proverbial saying, that "the blood of martyrs is the seed of the Church;" and to have forgotten that Christ Himself and His apostles were persecuted. And, indeed, it would be

truer to say, that persecution, rather than "protection," is the destined lot of Christian missionaries. As to the paper that had been read, he should like to say a few words, first, on Mr. Reade's views of the foundation principles of Christianity. For his part, he did not believe that one God was three. That was a doctrine that the negroes, of course, could not understand; and one which Christianity did not teach. Neither did he, as a professing Christian, believe that the New Testament contradicted the Old. And it was rather to the credit of the negroes, if they rejected opinions such as these, which might be regarded as merely Mr. Reade's own false versions of the true Christian doctrines he was pointing at. There was only one true religion, which is fully developed in the Christian system, but which is not essentially different from that of the Jews. In fact, Christianity is Judaism perfected and "fulfilled." — But, apart from those incidental issues, he begged leave to take advantage of the statement that Mohammedism is a branch of Christianity, as refuting Mr. Reade's main proposition, that Christianity cannot be taught; for he tells us that Mohammedism is taught successfully. The grand distinctive doctrine of Christianity compared with heathen worship is the enunciation that there is only one God, and consequently that all idol-worship is false and absurd. In that fundamental principle Mohammedism and Christianity so far agreed; and, if there were any essential principle of civilisation more important than all others for elevating the human race, he thought it was to be found in the doctrine of pure Theism. That was the grand feature of Christianity, and that was the first thing that the heathen should be taught. As long as men are content to bow down to idols of their own making, as if they were gods, it was hopeless to expect moral elevation, or anything like true manly character. Surely it could never be meant to advocate the leaving of savages in such an abject state of degrading and irrational superstition! As regards the savage being probably unfit to learn at first all Christian doctrine, that of course might be so far true. It is nothing new to be told (if that had been what was meant), "Not to cast pearls before swine." And the great difficulty in dealing with savage races was very well known by missionaries, long before the attempt to convert them was made by Protestants. Labat, the famous Dominican missionary to South America in the seventeenth century, when asked what progress he had made, answered, "Very little; in order to make the Americans Christians, they must first be made men." Thus it has been said long ago, that you must civilise men before you converted them. It should be borne in mind that the full development of Christian truth had been reserved for a late stage of the world's history, viz., till the age of the apostles. In the low state in which the people of Africa are placed, they may be unable to appreciate Christianity all at once; or it might be that the missionaries had not adopted the most advisable methods of teaching Christianity; and the different forms of Christian faith brought before a savage people may have tended to obstruct their success. But, taking for granted the assertion that the Mohammedan religion is a development of Christianity, and that

the Mohammedans have succeeded to a great extent in converting the natives of Africa; it would be desirable to consider the methods they had adopted to effect that object, and whether it was advisable for Christian missionaries to take the same course. He could not, however, agree with the opinion that Christianity had made the people worse than they were; for he could not conceive men to be worse than the negroes were in their natural state. If the chief obstacle to the introduction of Christianity among the negroes of Africa were the persistence of the missionaries in the abolition of polygamy, —the main reason of their failure, now broadly stated—this, of course, should be taken into consideration; and, in fact, it is well known that the distinguished prelate present this evening had some years ago written on the question, whether it might not be desirable to tolerate polygamy among the natives to a certain extent. He should like to see, as the result of this discussion, the proposal of some principles as a foundation on which missionary efforts might be more efficiently conducted among savage tribes. Instead of that, the paper now read was at issue with general opinion as to its *quasi* facts, adverse to all Christianity in its tone, and practically worthless. Only a Mohammedan could possibly accept its conclusions consistently. He hoped that Bishop Colenso would throw some light on the subject, in the paper with which he had promised to favour the Society; and that the consideration of the causes of the alleged failure of missionary efforts in Africa might lead to the adoption of better methods of instructing the natives. He could not admit that it was a proper thing to leave ignorant people in a state of ignorance and brutality, and in the commission of such atrocities and abominations as had been narrated by Captain Burton. The question to be solved was, the proper method of teaching and improving them; and it was not enough merely to say that the missions had hitherto failed, and that the money expended in attempting to convert savages to Christianity had been wasted. If the Mohammedan missionaries had been so successful, let the Christian missionaries imitate them; and all they would have to do to be successful, would be to teach Christianity, so far as this is possible, in the same manner in which Mohammedism had been taught.

Mr. DIBLEY remarked, that it was generally agreed that the differences of belief among Christian missionaries was a great cause of their failure. The doctrine of the Trinity, the belief that one God was three, was a great stumbling-block to the natives. It appeared evident, indeed, that something very different must be done from what had been done hitherto, before the savages among whom missionaries were sent could be civilised and converted.

Mr. PIKE objected to the course which the discussion had taken, as he thought it was not the province of the Society to discuss religious matters; and that it was far better to leave them in other hands. The scientific bearing of the paper and of the statements that had been made was, that they were told certain facts as to the condition of the negroes, and the effects produced on them by the teaching of the missionaries. Now it was a remarkable fact, that the

opinions and dogmas, the teaching of which was commonly believed to have beneficial effects in this country, should produce a very different effect among the negroes; and it was a question deserving the gravest consideration. Respecting the cause of the difference—if difference there existed—there appeared to be at present great confusion, and they had not sufficient evidence to arrive at any safe conclusion on the subject; but the statements laid before the meeting might form the nucleus for the collection of other facts, from which collectively they might be able to make valuable deductions.

Mr. M'ARTHUR, as one of those who held up his hand against returning thanks for the paper, said he thought it right to explain why he had done so. He altogether differed from the author of the paper in the views he had expressed. Had he confined his remarks to the results of the labours of the missionaries, there would not have been much ground for objection; but when he described them as fanatics, fools, and knaves, he must say that that was very strong language, not justified by the characters of the missionaries in general. He knew a good many missionaries, and some of them were men as truthful, as well educated, as intelligent, and possessed of as much information as any one in that room; and he could never believe them to be rogues, fools, or knaves.

Captain BURTON explained that he spoke of the missions, and not of the missionaries.

Mr. W. WINWOOD READE also disavowed any intention of making accusations against the missionaries. So far from it, he had expressed his approbation of their character; and to show that his words did not bear the interpretation put on them by Mr. M'Arthur, he read some passages from his paper, wherein the conduct of some of the missionaries was praised.

Mr. M'ARTHUR, in continuation, said he believed that the author of the paper and Captain Burton believed what they had stated as to the results of the labours of the missionaries; but other persons, who had travelled in various parts of the world, had stated the reverse, and had expressed the opinion that they had found the missionaries of the greatest service. He himself had been in America, in New Zealand, and in Australia; and he had seen a great deal of the missionaries, and of the good they had done. Reference had been made to North America, and to the little that had been done by the missionaries there; and it had been said that many who professed Christianity did not know anything about it. In contradiction to that statement, he mentioned the fact that a North American Indian recently came to this country (who a few years ago had been running wild with his tribe), who had been converted by the missionaries, and now conducts himself with as much propriety as any gentleman in that room, and has been preaching in many parts of the country. From whatever cause it may happen that missionary labour has failed in Africa, it does not follow that it has failed in other parts of the world. Colonel Edwardes, General Havelock, and other officers in India, had given the highest testimony in favour of the efforts and the success of the Christian mission in that part of the British empire.

Then, again, in the Fiji islands the influence of Christianity had produced the abandonment of cannibalism to a great extent. In those islands there were 60,000 nominal Christians; and some of them, there was no doubt, were genuine and real believers of Christianity. In the island of Tonga, almost the whole population had embraced Christianity; and he had heard that the king of the Tongas, a man of great intelligence and shrewdness, had published a code of laws. In New Zealand, it had been said, not much had been done by the missionaries; but he believed that, if it had not been for them, the present war would have had much worse results. The presence of missionaries among savage men was very beneficial, as it set them a great example; but the missionaries could not do everything at once. It had been said by Mr. Reade, that it would be much better to give the money expended in missionary efforts to feed the starving poor at home. Now he (Mr. M'Arthur) contended, that the very men who advocate and support Christian missions, are the men who principally support the charities at home. If they examined the list of benefactors and contributors to benevolent institutions, it would be found that seven-eighths of them were those at whose expense Christian missions were sent out. He would not enter into the question of Mohammedanism and Christianity being on a par; but what he contended was, that Christian missions had converted and civilised many savage tribes. If it were believed that all religions were equally true and false, then, indeed, it would be useless to continue the efforts to make converts to Christianity; but if they believed in Christianity, and that it is superior to all other religions, then they were bound not to leave savage people in ignorance, but to enlighten them and do them all the good that was possible.

Mr. BOLLARST observed that, on the discovery of the New World, there were some 120,000,000 of the Red species occupying the country, which number has been reduced, since the introduction of Christian creeds, the sword of the conquerors, and the vices of European civilisation, to 12,000,000; and of those thus left few are but partially Christianised or humanised. He had great doubt whether the constitution of the native mind was capable of receiving anything like Christianity, as understood by Protestants.

Dr. SEEMANN said he did not object to a religious discussion in that Society, for the form of religion might partake of a race character; but he objected to the introduction of sectarian views. With regard to cannibalism, he believed the real history of cannibalism had not yet been told. The fact was, that many of the nations had abandoned cannibalism from their own conviction of its atrocity; for instance, he believed that, if the missionaries had not gone to Fiji, cannibalism would soon have disappeared. His own impression was not favourable to missionary efforts. One of the supposed most successful missions was that to the Sandwich islands. After the murder of Captain Cook they were abandoned for a long time, but about twenty years afterwards a great change came over the natives. They had found that their own system had completely given way, and tried to live without any religion whatever. The Americans then

sent a mission to the islands and converted them. But what was the condition of the people now? Every woman among them was a prostitute, and in about thirty years time there would not be one of the natives left. Morality was there at the lowest ebb; and he mentioned as an instance that a man connected with the missions offered his wife for two dollars. In many instances no doubt missionaries had done good, for any civilised person going among savages must do good. He preferred Protestant missions to Roman Catholic, because the Protestant missionary settling among the people with his wife and family afforded an example of civilised family life. It was not so with the Catholics. The priests could set no example of family life. They had no wives to take care of them, and they went about with their linen not clean, and their appearance generally not such as to excite respect. As to polygamy, he believed it was one of the greatest obstacles to the spread of Christianity. It was a practice which he thought ought to be tolerated in the first instance, and that it would die out in the second generation. It was a great crime for a man to put away his wives, who then became prostitutes; and for that reason he considered it desirable that polygamy should be allowed amongst the first converts.

Mr. R. B. WALKER, in confirmation of the observations of Mr. Owen, said he knew from experience that the converted natives of Gaboon were worse than the savages, their countrymen. The Christian natives who had lapsed into paganism were still worse. They compelled their wives to prostitute themselves, and they asked a higher price because they were Christians and wore a frock. The savages there, he asserted, became deteriorated by the efforts of the missionaries to convert them, and at Sierra Leone they were worse than any other savages in the world. The Africans were more than a match for Europeans in cunning, and were the greatest thieves.

Captain BURTON gave an instance of the results of abandoning polygamy by a chief on the African coast. The chief when converted was told he must put away all his wives but one. He did so, and as it is the practice of the native women when they are pregnant to avoid connection with their husbands, he was separated from his wife at the time. The consequence was, he became connected with other women and died of syphilis.

Mr. C. CARTER BLAKE said that, with the President, he considered religion to be an important anthropological characteristic of greater classificatory value even than language; he was, therefore, not sorry that they had had somewhat of a theological discussion. Mr. Reade had told them that Mohammedanism was a form of Christianity, but he had adduced no evidence in support of that opinion, with which he (Mr. Blake) did not agree. As to Draper's suggestive work on that subject, he must say that he and many others were not satisfied with the arguments advanced to support that view, but perhaps Mr. Reade might have some original arguments that might confirm or invalidate the assertion which he had borrowed from Draper and some mediæval writers. As to the non-success of Christian missions, it appeared to be clear that, in most cases, the diversity of religious sects and the

constant bickerings among the missionaries of different denominations in contending for the conversion of savages, coupled with the lack of any central organisation in Europe, were the real causes of the failure of missionary efforts.

The PRESIDENT said the paper no doubt treated of an important subject, though not perhaps in the manner that might be expected in a scientific body, and it must not be taken to indicate the tone in which subjects are usually treated in that society. The author had made some broad statements respecting Christian missions in Africa, which he was bound to substantiate. The question whether they did good or harm was open to discussion, but the opinions against them ought to be supported by something more than vague assertions. There might be some who dissented from the opinion that religion resembled oxygen, or any healthy gas, and others that missionary enterprise was a wretched bubble. Those were hard words and not facts. Then again as to the assertion that every Christian negress was a prostitute and every Christian negro a thief, there was no proof of those accusations. The author did not remain among them more than five months, and he could scarcely in that time have had personal experience sufficient to enable him to make those general charges. Again, it was said that there is no use in a Christian mission if a man goes to church in the morning and burns a witch alive in the afternoon. Now it was well known that some of the greatest criminals in this country had professed to be most religious, therefore it might naturally be expected that similar examples might be found among the negroes. The author referred to Captain Burton to confirm his assertion that the Mohammedan religion is the only one that is known to be making progress in Africa, and that one form of religion is suited to Europe and another to Africa. Now it was an open question whether Christianity is suited for Europe, for even that should not be taken for granted. With respect to what was called in the paper "British Christianity," he must confess he did not know what the author meant. The result at which Mr. Reade had arrived was, that Europe can do nothing to assist West Africa. That was, perhaps, a comfortable doctrine, and it might be philosophic, for it might be found that there was no practicable way of getting out of the difficulty. It had been asked, what was the effect of missions? That was a question which they must discuss thoroughly, and before they could come to a right conclusion they must examine carefully into the facts. Whether it is the duty of the people of this country to send out missionaries to Africa or to other savage nations to interfere with their customs and opinions, and to impose on them our system of religion and moral philosophy, or our notions of social science, was a question to be investigated; also if one religion be found not suitable to them, whether it would be our duty to propound another religion that was suitable. He would give no opinion on that question until they had more facts brought forward. He did not agree with Mr. Reddie nor with Mr. Dibley in thinking that there was only one form of religion that should be taught to savage people. As a scientific society it was their duty to look on all religions in the same manner.

It was a question of science to be considered in connection with race, and then they would have to consider whether it was the duty of any one race of men to impose their views on any other race. He considered the meeting was much indebted to Mr. Reade for his paper, which had given rise to so interesting a discussion, and to the Bishop of Natal for his promise to communicate a paper on the subject, on which the discussion might be resumed on some other occasion.

Mr. W. WINWOOD READE briefly replied. He said it was an astonishing fact that his paper should have received such gentle opposition from the speakers generally that evening, for if the opinions expressed in it had been announced two hundred years ago he should have been burnt alive. There had, indeed, been so little opposition that he had really little to reply. He saw only one way of civilising the African negroes, and that was by first taking possession of the country. Then this country would have the power to make laws against the savage practices of the natives, and to effectually suppress them. When that was done, in order to convert the negroes to Christianity, it would be requisite that all Christians should have the same opinion on the doctrines of religion.

The PRESIDENT announced that the council had come to the resolution that it would be desirable to give a farewell complimentary dinner to their Vice-President, Captain Burton, before his departure for South America, and to commemorate at the same time the completion by the Society of the number of five hundred members. He believed they should be joined in that demonstration by the members of other societies, and that a nobleman would preside on the occasion.

The meeting then adjourned.

APRIL 18TH, 1865.

THE PRESIDENT, DR. JAMES HUNT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed.

The names of the following gentlemen, who had been elected Fellows of the Society, were then read :—

Holmes Coote, Esq., F.R.C.S., R. M. Gage, Esq., P. Smith, Esq., M.D., W. Holmes, Esq., J. Marion Sims, Esq., M.D., John Hawes, Esq., F. Griffiths, Esq., M.D., John Anderson, Esq., M.D., Joel Emanuel, Esq., R. Hughes, Esq., T. Rudd, Esq., M.D., Rev. J. Roberts (Chaplain Scots Greys), the Right Hon. the Lord Houghton, N. E. Jennings, Esq., A. E. Crafter, Esq., Rienzi G. Walton, Esq., Ernest Hart, Esq., F.R.C.S., E. Walker, Esq., H. C. Walton, Esq., Algernon C. Swinburne, Esq., M.A., Tasker Smith, Esq., W. P. Belliss, Esq., Captain R. Hutchinson, F. Griffiths, Esq., H. Jeula, Esq., W. T. Howard, Esq., A. Gilmour, Esq., M.D., W. Hitchman, Esq., G.

R. H. Patterson, Esq., C. Borthwick, Esq., C. S. Bailey, Esq., J. Lawson, Esq., J. G. Faught, Esq., M.R.C.S., Rev. J. Mason, W. G. Smith, Esq., E. Bellamy, Esq.

The following list of presents was announced as having been received:—

De Luc, *Histoire de la Terre*; Wafers' Voyage in America; Leguat's *Aventures*; Klivius, *Iter Subterraneum* (T. Bendyshe, Esq.). Millot, *L'Art de procréer les sexes à volonté*; Dr. Sext, *Exposition of the Mysteries of Nature* (H. Partridge, Esq.). Choir Gaur (a work on Stonehenge); Model of Stonehenge (Captain A. C. Tupper). T. Seymour Burt, Esq., F.R.S., *Miscellaneous papers on Scientific Subjects* (the Author). *Eloge de Pierre Gratiolet*, by Dr. Paul Bert (M. Pruner-Bey). Berghaus, *Physikalischer Hand Atlas*; *Nieuw Guinea* (with Atlas) (T. Bendyshe, Esq.). Charnock, *Hand book to Spain and Portugal* (the Author). Vrolik, *Catalogue de la Collection d'Anatomie* (Professor Van der Hoeven). *Annotations on Sacred Writings of Hindūs* (G. Sellon, Esq.). Scudder and Capron on *Megalithic Cysts* (the Authors). Bust of Capt. R. F. Burton, V.P.A.S.L. (D. Gay, Esq.).

The PRESIDENT said the members of the Society might congratulate themselves on the election of thirty-six Fellows since their last meeting, and he wished to announce that notice had been given to the council of the intention to propose an admission fee of three guineas for future members, therefore those who wished to introduce new members should do so at once. No time had been named when such admission fee should be charged, but it was proposed to discuss the question at the next anniversary. He would only say that some members of the council were anxious that a higher fee than three guineas should be charged before that time. The President also stated that it was desirable that papers should be prepared for the next meeting of the British Association, which papers, if not read at that meeting, would be read at a special congress of anthropologists, to be held at the same time and place as the Association. He then called on Mr. Burnard Owen to read the paper of which notice had been given.

Missionary Successes and Negro Converts. By H. BURNARD OWEN, F.R.S.L., F.R.G.S., F.A.S.L.

THE paper which, with your permission, I lay before the Society this evening, has for its subject "*Missionary Successes and Negro Converts*". Perhaps I may be allowed to make a brief prefatory remark in reference to a statement made in a recent number of a London paper, viz., that I have been in communication with the Bishop of this Diocese, and some of the missionary societies. I can only say that this is an error. I have neither sought nor had the honour of any communication with his Lordship, nor am I the representative of any missionary body. For the statements of my paper I solely am responsible, as it emanated from myself alone.

Few subjects of late years have engaged greater attention than the

condition of the negro. Intellectually, morally, and physically has he been dissected, the subject alike of discussion and dissent with nations and philosophers; and when at last he had been left with, in the opinion of many, scarcely an attribute to raise him above the brute creation—some having almost questioned if he had a soul to save—we are told the discovery has been made that he is not suited to the reception of Christianity, especially as propounded by African missionaries. No reason is assigned for this; but the assertion, with many others of a similar kind, is made in a paper recently read before this Society by Mr. Winwood Reade, who gives forth to the world, in no hesitating or diffident language, the result of his African experiences.

The brief residence of five months amidst the scenes he describes, might scarcely, in the opinion of some, qualify Mr. Reade for the task he has undertaken of correcting our views as to the working of African missions; but when we find his statements are corroborated by Captain Burton and Mr. R. B. Walker, the latter of whom has resided for fourteen years on the coast, we are induced to examine more carefully the grounds upon which these gentlemen have formed their opinions, and considered themselves authorised to pronounce missionary labours as useless.

It would have been more candid, had Mr. Reade, Captain Burton, or Mr. Walker informed us at the outset from what point of view they had sketched their picture of African life and manners; which recognised creed, if any, claimed the honour of their membership; or whether, like the "free thinking trader", they "bothered their heads" about none at all, satisfied to believe alone in themselves.

Certainly the Baptists cannot safely reckon upon Mr. Walker as one of the pillars of their church; and the Wesleyans would see little reason for accepting either Captain Burton or Mr. Reade as the exponents of their polity.

The sum and substance of Mr. Reade's paper (I regret I cannot call it argument) may be briefly stated as endeavouring to show, first, that the effort to Christianise the negro had proved "a wretched bubble", resulting in manufacturing the male converts into thieves and liars, and the female into prostitutes; secondly, that the Christian missionaries had entirely failed in making any real converts; leaving us the inference that the negro, owing to some hitherto unknown peculiarity, is not adapted for the reception of Christian tenets except in a Mohammedan form. As apart from the question at issue, I shall not attempt to discuss what Mohammedanism is or is not; but to its practical workings I shall refer hereafter. To the labours of the Baptists and Wesleyans I shall with pleasure refer, for they can render a good account of their stewardship, African as well as American negroes attesting their proud success in the battle with paganism. Upon the labours of the Church of England missionary I shall more particularly enlarge, and I am bold enough to believe I can, in the case of all three denominations, adduce such testimony as will effectually disprove the conclusions arrived at by Mr. Reade.

The first consideration that occurs to us, is the condition in which we find the negro; and certainly in no part of the habitable globe can we rest our eyes upon a more dreary or unpromising field than that in which the evangelist has to sow his seed. Ages of degeneration and barbarism, without one enlightening example, have reduced these wretched creatures to that state in which the learned look upon them as only the link between man and the brute; in which even civilised inhabitants of this Christian land could, without repugnance or remorse, traffic in their bodies as freely as they would have bartered the cattle that stocked their fields. Then to increase, if possible, the debasement of this degraded race, for four hundred years the slave-dealer pursued his unholy calling, engrafting upon pagan ignorance and sensuality the worst abominations of his own European civilisation, and, in exchange for the slaves he carried to distant lands, leaving with his gold a train of vices behind him, whose enormity would be incredible, were it not, alas! for too many well authenticated records of their existence.*

No single idea in their degraded superstition furnishes a foundation upon which a purer faith might be erected. Their belief in a Supreme Being is too vague or too erroneous to avail in the instruction sought to be conveyed. They have some notion of the spirituality of the soul, but held with others utterly incompatible with a correct idea of its immateriality; nor do they appear to have a just conception of its immortality.† The most salient features in their religion are the powers of the Evil Spirit and his ministers, whose protection or forbearance must be obtained by incantations or sacrifices, not alone of animals, but even of human beings.‡ They look upon their fetishes or charms as the securest means of preservation,§ and they cling to this idea with the greatest tenacity. It is a curious feature in connection with the boasted success of Mohammedanism, that the converts of that sect still adhere to their ancient custom, and the sale of these greegrees is to the teacher of that faith a fruitful source of gain.||

It was in this most unpromising sphere that the missionary commenced his labours; and, as if circumstances were not already sufficiently discouraging, he met on every hand jealousy and opposition, the last culminating, "at the instigation of the slave-dealer, in the destruction by fire of the churches, schools, and stores"¶ erected with such toil, and cemented with the life-blood of their builders. Nor was this all. When the missionary, despite oppositions, dangers, and persecutions, had gathered around him those whom he fondly hoped would be the nucleus and seeds of that Church which should evangelize and civilize the great region of Tropical Africa, he found his efforts foiled by European example and European means. What

* East's Western Africa, p. 229.

† Beecham's Ashantee and the Gold Coast, pp. 182, 183.

‡ African Missions, No. 1, p. 23.

§ Walker's Missions in Western Africa, p. 13.

|| East's Western Africa, p. 114.

¶ African Missions, No. 1, p. 21.

availed it that he should preach chastity and purity, when his fellow-countrymen scoffed at both, and practised neither; when the Bible that he presented was met by the rum-bottle of the trader, whose whole life was a violation of those laws which the missionary inculcated, and whose example was such, that well might the heathen exclaim, "Why preach to us, or expect us to believe, when your own countrymen refuse to receive the message you bear, or to live by the rules you lay down!"

To spiritual blindness and mental ignorance add a pestilential climate, and you have a faint picture of the obstacles in the path of civilization.

Let us now look to results, and the harvest gathered from this unpromising field.

Prior to 1816 the missionary efforts had been feeble, and, from want of funds and teachers, totally inadequate to the great work they had undertaken. Their attention had hitherto been directed to some scattered tribes on the coast; but in that year they wisely decided to make the colony of Sierra Leone the scene of their labours, and from this centre they trusted the rays of enlightenment might be more effectually diffused for the benefit of the whole of Africa.* The colony of Sierra Leone especially called for their labours. It was here that the liberated negroes, representatives of upwards of one hundred different tribes and languages, might be brought under a milder influence than that which had hitherto regulated their actions, and returning to their distant homes, might carry back with them that knowledge which alone could make them wise. Agreeably to the plan of Sir Charles M'Carthy, districts were allotted, with missionaries for each.

Of the progress made in three short years, we may judge from the letter of a lady, who, writing from Regent Town in April 1819, says: "I could not believe it possible that so glorious a progress could have been made as we have beheld. The love which the people manifest among themselves, their anxiety to make known the Gospel to others, and the fervour of their prayers, are worthy the admiration of all Christians. They may almost be said to dwell in love; a dispute is seldom known amongst them; every one has cast off his gree-gree, and nearly all are become worshippers. Once naked savages, they are now all decently dressed, and flock together in crowds to the house of prayer. . . . Gree-grees are no more to be had in Regent. I have endeavoured to get some to send to friends in England, but have searched in vain."†

We are also told the negroes have become industrious, and skilled so far in various trades, as masons, carpenters, tailors, blacksmiths, etc., that upwards of six hundred maintain themselves, "relieving the government from all expense on their personal account." Many of their heathenish customs have been forsaken; "not an oath had been heard in the town for a twelvemonth, nor had any been seen drunk; attendance on public worship is regular and large, on an average 1,200 or

* African Missions, No. 1, p. 21.

† Mrs. Kesty's Letter, W. A. Johnson's Life, pp. 109 and 106.

1,300 negroes.”* The schools had proportionately increased, and numbered over five hundred scholars. In the same year, the Government Report† records the improvement which had taken place. In 1821, Sir C. McCarthy declares, that to the indefatigable exertions and virtuous zeal of the superintendents and missionaries, are attributable the civilization of the liberated negroes.‡

The improvement at the schools of the different towns was noticed by Major Gray, who says that the progress of the students, particularly those of the high school at Regent’s Town, in arithmetic, geography, and history, evinced a capacity far superior to that generally attributed to the negro.§

The Report of the year 1822 is equally favourable. The Chief Justice of Sierra Leone, at the September quarter sessions, observed “That ten years ago, when the population was only 4000, forty cases were in the calendar for trial, now the population is upwards of 16,000, there are only six. It is remarkable that not a single case for trial is from any of the villages under the superintendence of a missionary or schoolmaster.”|| At these quarter sessions some of the liberated Africans sat as jurors, “to the entire satisfaction of those concerned.”¶ The reports of the African Institution for 1821, 1822, and 1823, and other public documents, all speak favourably of the progress commercially and morally.**

In a report of a committee of the House of Commons in 1842, we find unequivocal testimony to the exertions of the missionary, both Episcopalian and Wesleyan, and the visible intellectual, moral, and religious improvement.

Dr. Livingstone, writing in 1858, describes the Sabbath to be as well observed, in his opinion, as anywhere in Scotland. He says, “Looking at the change effected among the people, and comparing the masses here with what we find at parts along the coast, where the benign influences of Christianity have had no effect, ‘the man’ even ‘who has no nonsense about him’ would be obliged to confess that England had done some good by her philanthropy, aye, and an amount of good that will look grand in the eyes of posterity.”††

Does not testimony such as this, from sources so unquestionably above suspicion, effectually disprove the assertion, “that the effort to Christianise the negro had proved a wretched bubble.” Can these people, declared to be sober, industrious, and practically religious, susceptible of intellectual, moral, and religious improvement, be the prostitutes and thieves Mr. Reade would lead us to believe?

My own opportunities of judging of negro character, and the influence of religion on those brought under its teachings, enable me to affirm without hesitation that the work of conversion is neither uncertain nor merely nominal. Though I do not pre-

* Walker’s Sierra Leone, p. 66.

† P. 133.

‡ Walker’s Sierra Leone, p. 139.

§ Fox’s Wesleyan Missions, p. 185.

|| Fox’s Wesleyan Missions, p. 188.

¶ Ibid. Ferguson’s Letter on the Character of the Liberated Africans at Sierra Leone, 1839, p. 13.

** Fox, p. 187.

†† Letter to Sir Roderick Murchison, March 30th, 1858.

tend that every negro is an Uncle Tom, around whom English readers have been too apt to throw a shade of romance, and draw a picture very unlike the reality; yet I have seen proofs of such real spiritual enlightenment, such a persistent rectitude of principle and practice as would not only shame many a white professor of religion, but would at once convince the most sceptical that these negroes could not only receive but retain, and that too under severe trials and temptations, the lessons of the Gospel. The docility, gentleness; and humility of the negro have been severely tested by years of oppression, which would have aroused in the prouder and more revengeful European a widely different feeling than that which governed the manumitted slaves of our West India Islands, who could and did repay the past ill-treatment of their old masters by dedicating to them the results of their first week of free labour.

The case of Bishop Crowther is an effectual refutation of the assertion that the native African is incapable of being raised to a very high standard of intellectual advancement. Does the request of another native minister (the Rev. G. Nichol) betray incapacity for education? He desired a friend to send him from England some books, foremost on the list of which was Alford's Greek Testament, next an Arabic Lexicon, Maunder's *Treasury of Universal Knowledge*, Maunder's *Biographical Treasury*, Melville's *Sermons*, Spurgeon's *Sermons*, etc.

To the Church Missionary Society he applies for two first-rate university men to superintend the studies of the African theological students, adding, "It will not do to send men of ordinary capacity now-a-days; our students are too well taught in their Greek Testament not to catch their professor tripping if he displays insufficient knowledge."* That this assertion is not unfounded the Freetown Grammar School examinations in 1859 conclusively show. The governor, expressing his astonishment at the intelligence of the pupils—"I had no idea that you had such youths," he said; "they can learn anything."† The intelligence and quickness of the negro child is very great.

One writer cites the case of the mission-schools on the Coast of Africa as affording ample evidence, "In the short space of ten months several Timanee children have learnt to write and read fluently, not one of whom had previously seen a book." Nor is this a solitary case. It may safely be affirmed that there is not a single efficiently conducted mission school on the whole of the western continent which does not furnish similar instances; nor is this aptness to learn confined to the more elementary branches of knowledge."‡ The same remarks are also applicable to negro schools in Jamaica.§ The quickness with which they learn has been described as amazing;|| as well as their ability to acquire anything that requires attention and correctness of manner. The Rev. J. Ramsay, in his *Essay on the*

* African Missions, No. 1, pp. 34, 35.

† Church Missionary Society's Report, 1859.

‡ East's Western Africa, p. 104.

§ Ibid., p. 325.

|| Beechman's Ashantee and the Gold Coast, p. 286.

Treatment and Conversion of African Slaves,* says that "Nothing in the turn or degree of their mental faculties distinguishes them from Europeans." A statement fully borne out by other competent judges.† Duncan, in his *Travels in Western Africa in 1845 and 1846*, expresses his belief "that were Africans educated, and their morals properly attended to, they would become an example to countries who have for centuries enjoyed the advantages of civilisation;"‡ but that the counteracting influences are great, for the pupils, "when out of school and mixed up with the uneducated population are exposed to every vice in practice." The African, convinced of his ignorance, is as anxious to receive as the missionary is to impart instruction;§ mothers overcoming their religious prejudices in the desire to obtain for their children that information of which they themselves are destitute.

I have alluded in the first part of this paper to the obstacles thrown in the way of the missionary by his own countrymen, not least among which is the importation of spirits. In the year 1841, according to the returns laid before the Parliamentary Committee on Western Africa there were exported to Senegal, Sierra Leone, Windward, and Gold Coasts 101,424 gallons of spirits alone, and this independently of the various kinds produced in the country, will enable us to form some idea of the grounds for the complaint of the missionary, that his difficulties are not solely of an African origin. The merchants not only import, but they assist in the consumption of these spirits by gratuities of liquors before they commence their trading. In this respect, at least, I must admit that the precepts of Mohammedan teachers (though even in this instance there are exceptions) are better than the practices of the mis-named Christian merchant. We must not, however, be led away by the idea that the Mohammedan priest is always governed by the law of which he is the representative; for, as Major Gray remarks, in reference to the kingdom of Bondu, the enactments of the Prophet are interpreted by the Imams or priests, who, being much under the power of the king, decide, in all cases where his majesty's interest is concerned, in his favour. Neither must we suppose that the doctrines of the Koran are received intact. Many of the pagan superstitions of the country are everywhere, in a greater or less degree, blended with them,|| whilst the evidence of Captain Clapperton and Major Gray shows that, as with the Felâtas and people of Bondu, those brought under its teachings, whilst they keep up the appearance of religion outwardly, have little of its inward influence.

* P. 246.

† Vide Rev. Richard Watson's Works, vol. ii, pp. 94, 95; Prichard's Researches into the Physical History of Mankind, vol. ii, pp. 347, 348, etc.

‡ Vol. ii, p. 303.

§ In a letter to Sir T. D. Acland from Captain Trotter of the Niger expedition, the writer states: "In my late visit to the Niger, both chiefs and people called loudly to have instruction sent to them. Their consciousness of their own inferiority, combined with a desire for improvement and knowledge, was very remarkable."

|| East's Western Africa, p. 123.

Whilst upon the subject of Mohammedanism and its boasted adaptation for the African, I cannot refrain from giving the opinions of some travellers fully informed upon the subject of which they were treating.

In a country where, upon the oft-quoted computation of Park (and which is said to be rather under than over the truth), three-fourths of the entire population are in slavery, it would be fancied that no extraneous aid was needed to extend the system. But we find that Mohammedanism is an active principle in this as in other cases of mischief, for "that religion," to quote the words of Major Gray, "not only gives an apparently divine authority to the practice, but instils into the minds of its proselytes a conviction that all who are not, or will not become, Mohammedans, were intended by Providence and their Prophet to be the slaves and property of those who do."

The Mohammedan teachers have been described as "the agents of perpetual mischief to the best interests of the people," whilst for proofs of their ignorance and imposture, I would refer those who feel an interest in the subject, or may be inclined to doubt the justice of, to *Sketches of a Missionary's Travels*, by the Rev. M. Macbriar, a Wesleyan missionary, or to the *African Memoranda* of Captain Beaver.

Mr. Baker, Wesleyan missionary, speaking of the inhabitants of the Gambia, charges Mohammedanism with having "made the people of that district the worst of men—utterly debased in their morals." Numerous other authorities can be cited in support of these assertions.

As I believe Mr. Reade is the only one who entertains the idea that the African is in any way benefited by polygamy, it might perhaps be deemed unnecessary to discuss the point, but as I have within the last few days received a communication from the Rev. J. F. Schön, a missionary of the Church Missionary Society, who has spent sixteen years on the West Coast of Africa, it may not be uninteresting to give his opinion upon the subject.

"Mr. Reade maintains," writes Mr. Schön, "that in Africa polygamy is the natural state of married man, and that he is warned by *instinct* never to abandon it. I reply, in the first place, that even in countries where polygamy is sanctioned, *there are more men that have but one wife than there are that have many. Many have abandoned it voluntarily from the conviction of its unsuitableness to them as human beings, not only as Christians.* Mr. Reade admits that polygamy would not do for England, because 'it would produce a frightful excess of population, while monogamy in Africa would exterminate the negro.' This argument is altogether fallacious. Monogamy is more favourable to the increase of population than polygamy. Polygamy is unnatural even in Africa; for there too it will be found that the sexes are in equal proportions, and that the excess, if any, is rather in favour of the male sex. Whence then are *four* women to come for one man? And if there be some who have many wives, there must be others who cannot get one. That such is the fact I have ascertained from many persons, and from various countries. The King of

Port Lokkok had upwards of one hundred wives, as he told me, and when I asked him how many children, he replied, about seventy or eighty—he could not mention the exact number.

“The number of children is certainly large for one man, but is it large considering the number of wives? Would not the children have been much more numerous if each woman had been married to one man? King Obi, at Aboh, showed me an immense building, fitted like a sheep-fold, for his wives, and told me he had one hundred and ten; but on being asked how many children, he replied twelve.

“Mr. Reade wishes to make us believe that ‘the wives especially were furious’ at the very idea of abolishing polygamy. If he had any knowledge of domestic life in Africa, of the miseries to which women are subjected through this unnatural institution, he would never have made this assertion. How many of these unhappy creatures are annually put to death by their tyrants (husbands they ought not to be called, because they have not married, but bought or captured them) on account of real or suspected infidelity? How many men are prevented from marrying on account of the scarcity of women? How many men are castrated in most of the royal towns in Africa.* The King of Idda had a great number of these fat eunuchs about his court, and some of our men could not be prevailed upon to visit his town for fear of being subjected to the same indignity. What is the chief burden of their national traditions, proverbs and stories, but to relate the jealousies, discords, and domestic quarrels between the many wives of one man, and the straits to which himself and his offspring are reduced by this unnatural institution. I have a great many such stories in my possession, related to me in their own languages, and they have often been used with good effect against the advocates of polygamy.

“I am convinced in my own mind, and from personal observation, that there is nothing in the case of polygamy in Africa that will not yield to the light of Christianity. Christianity has abolished it wherever it has been introduced.”

On inquiry, I think it can be easily found that the negro in a state of nature is far more addicted to theft and drunkenness than can be justly charged upon the Christian converts; and though we find in ancient laws of some of the tribes severe penalties attaching to crimes, yet they do not appear to have had the same salutary effect as the milder persuasive plan of Christianity.† The picture of Timanee character drawn by Major Laing is assuredly far from a pleasant one.

Some of the ancient laws of the African tribes, if not powerful enough to prevent crime, were at least framed to punish it. In Yoruba an unchaste young woman is branded with disgrace, and her character

* Surely no castrations would ever have been performed, had it not been to remedy the great difference in the number of the sexes caused by several wives being held by one man.—H. B. O.

† East's Western Africa, p. 69.

suffers for ever. Adultery is fined with a heavy sum of cowries. Murder is punished with death. Manslaughter, even if attended as an accident, may escape with a heavy fine. Serious theft punished with death; petty, with whipping and fine; if habitual, liable to be sold away out of the country;* whilst the conduct of children towards their parents might with advantage be imitated in this country.

Let us now consider the results of missionary labours at the different stations, and that regard was had to real and not nominal conversions is shown by the fact, that at Sierra Leone nearly thirteen years elapsed before they could report more than the baptism of one convert; they were "strongly inclined to believe that the whole of the heathen population of the colony *would press to the baptismal font, if we would receive them there on the understanding that baptism is of all gree-grees the best.*"† In 1816, the first admitted communicants numbered only six;‡ in 1848 the West African mission could point to 2000 as the fruits of their toil.§ And here it may not be amiss for me strongly to impress the different plan of action pursued by the Romish and the Protestant Churches. With the first an inward conviction of sin and sense of their spiritual necessities was not material—as long as the body was in the ranks of the Church it cared little as to the soul. With the Protestant Churches, I speak not of the Episcopal alone, the endeavour was made to bring home to the understanding and the heart of the savage the lessons and hopes of the Gospel; and when, as far as human judgment could decide, such an impression had been made, producing such a conversion as authorised the admission, the proselyte was formally received into membership. How marked the contrast alike in the numbers and results of Romish and Protestant conversions in Africa.

In 1490 the Catholic missionaries had free scope allowed for their exertions in Congo, so that 100,000 of the subjects of that kingdom are related to have been baptized in one day!|| Every thing was auspicious for the establishment of the faith, yet dwindling gradually away, the natives reverted to the paganism they had abandoned only in name, and for many years past not the least vestige of this "holy Catholic faith" has been found on the banks of the Zaire;¶ whilst the Protestant Church has, on the contrary, been year by year extending its usefulness and its influence, widening its ramifications on every side.

Commercial prosperity kept pace with the extension of Christianity. The amount of merchandize imported into the colony of Sierra Leone in 1817 exceeded that of the previous year by £39,286. Every part of the coast from Sierra Leone to the Gaboon can boldly proclaim the success of missionary enterprise. It is unnecessary to detail each step of the journey, but the statistics of results speak for themselves.

* Hutchinson's Impressions of Western Africa, Letter from Rev. S. Crowther, p. 276.

† Walker's Sierra Leone, p. 308.

‡ Jubilee Volume, p. 136.

§ Jubilee Tract, No. x, p. 13.

¶ Fox's Wesleyan Missions, p. 137; Walker's Missions in Western Africa, p. 146.

¶ Fox, p. 138.

The Wesleyan report made up to 1851,† shows:—

Stations or Circuits	-	-	-	-	12
Chapels and Preaching Places	-	-	-	-	60
Missionaries, and assistant ditto	-	-	-	-	15
Catechists	-	-	-	-	20
Day-school Teachers	-	-	-	-	97
Unpaid agents, or Local-Preachers	-	-	-	-	89
Sabbath-school Teachers	-	-	-	-	195
Day-schools	-	-	-	-	42
Scholars attending the same	-	-	-	-	3557
Total number of Scholars, deducting those who attend both Sabbath and Week-day Schools	-	-	-	-	4723
Full and accredited Church Members	-	-	-	-	5997
On Trial	-	-	-	-	800
Reported as attending the ministry of the Missionaries	-	-	-	-	14464

The settlement of Sierra Leone, which has engaged so much of our attention, presented the following returns in 1862 to the Church Missionary Society's labours:—

Communicants	-	-	-	-	3932
Native Lay Teachers	-	-	-	-	14
" " Clergymen	-	-	-	-	11
European Lay Teachers	-	-	-	-	7
" " Clergymen	-	-	-	-	9

The following may be taken as the aggregate for the West Coast of Africa under the returns of the same society in 1864:—

	Sierra Leone.	Yoruba.	Niger.	Total.
Communicants	1300	.. 1053	.. 41	.. 2394
Native Lay Teachers	12	.. 42	.. 11	.. 65
" " Clergymen	5†	.. 4	.. 2	.. 11
European Lay Teachers	6	.. 4	.. —	.. 10
" " Clergymen	8	.. 10	.. —	.. 18

In the year 1862-3 there were transferred by the Church Missionary Society to the Native Church in Sierra Leone nine native pastors and 2650 communicants, being the result of its labours.

The United Presbyterian Church of Scotland sent missionaries to Old Kalabar in 1846. They established three stations—Duketown, Oldtown, and Creek town. The Europeans consisted of four ordained clergymen and their wives, with catechists and assistants.

They have been labouring with good effect, and had in 1858 about 200 children in daily attendance at the mission schools, and between twenty and thirty of the native youths have been baptized. Various new stations were contemplated. "At all the stations they are labouring energetically." † "Of this region," Mr. Hutchinson says, "none in Western Africa had more need of Christianity than here where so many native diabolical doings still prevail."

In Yoruba, to the laws of which I have already alluded, success attended the Christian missionaries.§

* Fox's Wesleyan Missions, p. 605.

† Three have since been ordained, making eight.

‡ Impressions of Western Africa, etc., by T. J. Hutchinson, Her Britannic Majesty's Consul for the Bight of Biafra and the Island of Fernando Po, 1858, pp. 165, 166.

§ Ibid., p. 276.

For other denominations the reports of 1860 and 1861 return:—

English Baptist Society.—Western Africa:—			
	Missionaries	-	6
	Members	-	69
American Episcopal.....	Missionaries, including one Bishop	-	4
	Colonist and Native	-	6
	Lay and Female Assistants	-	20
	Native Assistants	-	19
	Communicants	-	382
American Board of Missions...	Gaboon Mission.—Missionaries	-	4
	Female Teachers	-	4
	Native Teachers	-	3
	Members	-	45
Zulu Mission	Missionaries	-	14
	Female Teachers	-	13
	Members	-	229

The agency of missionary societies in promoting the welfare of West Africa may be summed up in the emphatic words of one whose thorough acquaintance with the results of missionary enterprise, and the men by whom the work is carried on, constitutes him the best authority on such a subject. He says, "The Church Missionary Society commenced its labours sixty years ago, and its annual expenditure on the coast amounts to between £13,000 and £14,000. The Wesleyan Missionary Society commenced its labours upon the coast some years later: its annual expenditure is about half that of the former society. Many other missionary societies have since directed their attention to the same field of labour. The statistics of these missions present the following results:—

The missionary societies are sixteen in number, comprising six in Great Britain, seven in America, two in Germany, and one in the West Indies. There are—

- 110 Principal Missionary Stations.
- 104 European or American Missionaries.
- 66 Ordained Native Ministers.
- 340 Native Catechists and Teachers.
- 236 Schools.
- 13,983 Scholars
- 19,639 Registered Adult Native Communicants, who must represent a Christian population of at least 60,000 or 70,000 souls.

Twenty-five of the dialects and languages of West Africa have been reduced to writing, and in these, portions of the Scriptures and other religious books have been translated and printed.*

We have been told of the difficulty, nay almost impossibility of translating the English versions of the Scriptures into the African dialects, and as an illustration the 37th verse of the 23rd chapter of St. Matthew is cited.† But the fact was overlooked that the supposed difficulty as to the words "prophet" and "Jerusalem" would apply equally to the teaching of the Koran, or the word "Mecca."

* West African Colonies, etc., by Henry Venn, B.D., ed. 1865, p. 38.

† Same also in 34th verse of 13th chapter of St. Luke.

The entire Scriptures, or portions, have been successfully rendered into the following African languages and dialects, and the books are readily obtainable at very moderate prices, even within the reach of those who can offer only their cowries in payment.

Versions.	Books printed.	Country where circulated.
Coptic (with the Arabic)	Psalms and Gospels	For the Copts of Egypt
Ethiopic (Ecclesiastical)	N. Testament & Psalms	For the Church in Abyssinia
Amharic (Vernacular)	The entire Bible	Abyssinia
Kmika (St. John, Romans, and Ephesians translated)	Gospel of St. Luke	Wanika tribes, East Africa
Kiswahili	St. Luke translated	Swahili tribe, East Africa
Berber (four Gospels and Genesis translated)	Part of St. Luke	The Oases of the African Deserts, from Mount Atlas to Egypt
Bullom (with English)	St. Matthew	About Sierra Leone, on W.C.
Mandinga (four Gospels translated)	Ditto	Mandingo Country, south of Gambia River
Accra, or Gã	Sixteen Books of O. Test. and the N. Test.	Gold Coast, Western Africa
Oji	Genesis and N. Test.	Ashantee Country
Yoruba	Genesis, Exodus, Daniel, and N. Test.	Yoruba tribe, W. Africa
Hausa	Genesis, Exodus, St. Matthew, St. John, and the Acts	Hausa tribes, and each side of the Rivers Niger and Tschadda
Ibo	St. Matthew, St. Mark, and St. Luke.*	For the Ibos on the Banks of the Niger, etc.
Grebo (by American Bible Society)	Genesis and St. Luke	For Grebos in Western Africa
Nupe	Part of St. Matthew	For the Nupe tribe, on the Kowara River
Namaqua (New Test. printing)	St. Luke, &c.	N. of Orange River, S. Africa
Sechuana	The entire Bible	Bechuana, east of Namaqua
Kafir	Ditto	Caffraria, E. coast of S. Africa
Sesuto (Pentateuch printing)	Psalms	} For the Basutos in S. Africa
Ditto	New Testament	

The great number of converts to Mohammedanism is not corroborated by official documents, for the Colonial Blue Book, issued in 1863, gives the returns from Sierra Leone under the census of 1860 as follows:—Total population, 41,624. Of these, were liberated Africans, 15,782; born within the colony, 22,593. Of the whole population only 3,357 remained pagans, 1,734 were Mohammedans, 15,180 were Methodists, etc.; and 12,954 Church people; 11,016 children were taught in the schools in the year. The trade of the colony is steadily growing; the population are rapidly learning the general customs of civilized society, and in many instances amassing wealth, enabling them to vie with European enterprize. Sierra Leone is thus proving not only a refuge for those who are rescued from

* An edition of the Gospels of St. Mark and St. Luke is now preparing for the press, under the superintendence of the Rev. J. F. Schön.

slavery, but a nucleus of civilization, and school of Christian teaching.*

The appeal to the pocket is often in religion, as in many other instances, a very good test of the sincerity of our feelings, and the earnestness of these converts can scarcely be questioned when we find, that in 1854, the Native Church undertook the whole pecuniary responsibility of their primary schools, at a saving to the Church Missionary Society of £800 per annum. In 1861 *the contributions amounted to above £10,000*; the following year the clergy were supported by local means, and rendered independent of the society at home.†

Bishop Bowen's remarks, in a charge to the Sierra Leone clergy, are so unmistakeable as to the results of missionary enterprise, that I cannot forbear to quote them. He says, "When we witness the crowded congregations in the mission churches; when we see the people kneeling universally in prayer; hear the almost too loud response from nearly every lip; and then the warmth and heartiness of the song of praise; and, again, meet so many, two-thirds—or sometimes three-fourths—of the adults crowding to the table of our Lord, many with the marks of former heathenism in their faces, what Christian, I ask, but would thank God for these things, and would see in these great results the value of missionary labours in general, and would acknowledge the unmistakeable mark of Divine approbation on the efforts and scriptural principles of that great society which has been such an honoured instrument in the hands of God for planting the Church of Christ on these shores?"

It would take far too long to quote all the independent testimony as to the successful work of the missionary. I would refer those interested in the subject to a work entitled *Residence at Sierra Leone*, by a Lady, and where we find in the description of the "patient, pious, and indefatigable missionary", a very different character to that picture of uncleanness, knavishness, and ignorance Mr. Reade has held up to our gaze. Might not Bishop Bowen's observation upon an Englishman abusing the negroes be here recalled to our recollection: "I did not wonder," said he, "much at his remark, *for I had overheard him swearing at a little boy in the boat.*" One passage from the work already referred to bears so closely upon the question we have been considering that I am induced to give it entire:

"Nothing can exceed the pains taken in teaching the people by the different missionaries, among whose ranks mortality is most awfully frequent; but yet their numbers are not adequate to ensure to the *whole* of the vast population here the benefits of instruction in the thorough manner in which it must be conveyed, ere we can look for its fruits in that improvement of mind, heart, and soul, which a right knowledge of our holy religion in all its truth, purity, simplicity, and beauty, is calculated to produce. Still, to a certain degree, they have seen their labours rewarded; and of their dense and orderly congregations it is to be hoped that the greater part are not merely

* African Missions, No. 1, p. 45.

† Ibid., pp. 33, 48.

Christians in outward profession, but to the utmost extent of their abilities. Yet many of the liberated Africans are savages in every sense of the word, whilst numerous others, who *were either never at school*, or else taken away *ere they had made the least progress*, and apprenticed out in early childhood to the rudest and most ignorant of the country people, although they have grown up conforming externally to a few of the most striking usages of civilised life, in every other respect are as barbarous as the lowest slave in their own country."

I had almost omitted to observe, that amongst other hindrances to African researches, are found severe attacks of ophthalmia, to this we must now, unfortunately, add a mental nyctalopia, which, unable to behold the brighter side of nature, warm with its virtues and ennobling aspirations, turns its gaze alone upon the darker picture shadowed with ignorances and vices—a mental and moral degeneracy. This disease would be bad enough if confined alone to the individual sufferer, but the mischief assumes a wider form when the erroneous impressions are given forth to the world, where, like cheap *cartes de visite*, they leave on the minds of others an impression not alone faint and imperfect, but the very reverse of the original.

Mr. Reade has alluded to the Puritans. This is neither the place nor occasion to enter upon a discussion of their opinions, which need no defence of mine; for however mistaken might have been their political views, yet they have left monuments of piety, and a literature ranking for originality of idea and vigour of intellect, conspicuous amongst England's noblest authors. Far better would it be for us, if, in this age of rash opinions and assertions without reason, we imitated the mature reflection and prayerful preparation evinced alike in the writings and the speeches of these Puritans.

After the opinions we have noticed as advanced by some of the African travellers, it is no wonder that we are advised by them to relinquish our efforts, and withdraw from what is to them an unfruitful field. They can, however, know little of the character of their countrymen, and still less of the Christian portion of it, who advise such a step as this. Retreat is the last word that occurs to the mind of an Englishman, and at no time would it be more inappropriate than the present, when we see the example set in a new expedition, whose best success can be but a trifle in comparison to the enterprize of the missionary. Where men and means are found ready in the face of repeated failure, privation, and loss of life, to construct a new expedition to solve the Arctic question, depend upon it there will be no lack of hands for Africa; and when I add, even at the risk of Mr. Reade's derision, that there are many, fanatics if you will, who believe that the day is not far distant when Africa's wilderness and solitary places shall be glad, when the now desert of ignorance and sin shall rejoice and blossom as the rose; it is not probable that the work will be abandoned, especially as we feel assured the gain has far repaid the outlay.

I wish that to some more able pen than mine had fallen the lot to defend alike the negro and the missionary, but as one of the three who, alone in a crowded meeting, had raised their hands in protest of

Mr. Reade's paper, I felt it my duty to state such facts as I believed would correct the false impression likely to be made by that document, and I cannot close this feeble effort without recording my hearty thanks to Mr. M'Arthur and Mr. Reddie for their bold defence of those principles and labours to which the missionary's life is dedicated.

The PRESIDENT proposed that the thanks of the meeting be given to Mr. Owen, which was carried unanimously. He then said that Mr. Harris had contributed a paper on the same subject, but it would be irregular to read it as a distinct paper, therefore he called on that gentleman to read his remarks as a part of the discussion on the communication of Mr. Owen.

Mr. J. M. HARRIS (of Sherbro') then read the following observations:—The few remarks which I am about to make with reference to the subject under discussion will, I trust, be received in the spirit with which they are offered, that is, without any feeling of animosity to missionaries of any particular sect or nation, or of ill feeling to the negro. And I desire to add, that anything I may state will not be from hearsay, but from facts within my own personal observation, and which I can fully substantiate by adducing the names of the persons to whom I shall have occasion to refer. In the first place, I must say that my experience with regard to the effect of missionary efforts amongst the natives of the part of Africa with which I have been connected for more than ten years leads me to the conclusion that those efforts do not constitute a success; nor do they produce sufficient return for the very large amount of valuable lives and money expended; and my principal motive for giving you these facts is in the hope that others having a similarly personal acquaintance, and a like intimate knowledge of the character of the African, before and after his civilisation, may be encouraged to follow my example. I think the greater number of persons acquainted with Africa will agree with me that the system pursued by the missionaries is a wrong one. I believe it will be allowed that the negro is a very imitative being, and I think I can show you that if he but imitates his teacher, he will not prove a very beneficial member of the community to which he belongs. In the first place, the missionary considers it derogatory to his character and position to do any kind of labour, or to be seen without his white necktie and black coat. He always lives in a far superior manner to any person where he resides, excepting at government stations, and then it is always said, "If you want a good dinner you must go to the mission-house." I will remind you of a remark of a man who, I believe, had a world-wide reputation of being a thoroughly conscientious missionary. I refer to the late Bishop Bowen of Sierra Leone, who was unfortunately lost to us just when his good example was being felt and becoming influential. Bishop Bowen was returning from a visit to some part of his diocese on board one of the mail steamers, in which there were also some missionaries as passengers. As usual, they complained to the captain of the want of accommodation in the chief cabin, and

the quality of the food; he then remarked to them that he thought it would be more in character with their profession, before leaving England, if they had travelled in the second cabin, and saved the balance of the money to spend amongst their parishioners; that men who, when in England, were only mechanics, working at 25s. per week, when they came out as missionaries were not satisfied unless they lived in a style equal to that of an independent gentleman. At another time he said, it would be more to the credit of the missionaries if they lived amongst the poor people in the villages, than occupying the best houses in Freetown, and scarcely ever associating with the natives. Mr. Reade, Captain Burton, and Mr. Walker the other night gave us some facts which, to a stranger to the Coast of Africa, must, to say the least, have appeared very startling; and upon that occasion I said I could to a great extent corroborate their statements; but I consider it my duty as a man who has received a great amount of kindness and attention from Africans, and for many of whom I have a sincere respect, to protest against the sweeping denunciations then made, that every Christian negro is a thief, and every Christian negress a prostitute. I know negroes and negresses whose character absolves them from that condemnation, although I can confirm their remarks with reference to very many of that race. It is very rarely that you meet with a Creole of Sierra Leone who is not a thoroughly bad character, exceptions being few and far between. And the most respectable part of the population in that colony are those who have been captured in slave ships, and there liberated. I could give you the names of at least a dozen, who are rich men, and doing a large amount of business, and to many of whom, when I have complained of the character of the Creoles, have said to me, "Ah! Creoles are no good." In proof of what I say, look at the inmates of Sierra Leone gaol. I am certain you will find the greater portion have been born in Sierra Leone, and were therefore fair and favourable subjects for the process of civilisation, if they had been properly taken in hand by the missionaries when young, and made amenable to mental and moral cultivation and improvement. Many people talk of sending missions up the Niger and other of the rivers. I think it would be much more reasonable first to civilise those natives, whom we have in our own colonies, rather than perpetuate the uselessness of thousands of untutored natives within our reach in the colony of Sierra Leone. It will scarcely be credited, although absolutely true, that the Sierra Leone people do not produce food enough for one-tenth part of its inhabitants; and if the savage tribes around that colony were determined not to have any intercourse with Sierra Leone, nearly the whole of the population would be starved, or become dependent upon the imports from Europe, whilst the amount of articles produced for export would not suffice to purchase a shirt for each inhabitant of the colony. A few nights since the practice of polygamy was referred to by several gentlemen. I do not believe that custom can be abrogated in Africa. If you make the attempt you will drive them to greater deception. Even now marriage in Sierra Leone is very generally a farce. A woman

will live with a man till she has a child ; then, if they agree, they get married ; if not they part ; but of course this is not always the case ; in the upper classes they are more circumspect. Now for missionary examples as to polygamy. It is generally the case that a missionary loses two, three, or even four wives during his stay in Africa—the supply being kept up as I renew my supply of merchandise. He writes home to say his wife has died ; the committee at home sends him out half a dozen photographs from which to make a selection ; and the lady is shipped to him to his order, just in the same way as a bale of goods. A young lady, a fellow passenger of mine on board one of the mail steamers, was *en route* for Lagos, and for marriage to a missionary there. When, however, she arrived at Lagos, and saw her consignee, she was so disappointed at the change of his appearance that she declared she would not have him, and it took the united efforts of the missionary establishment to keep her to her bargain. When the natives see this sort of thing going on, you may be sure it does not give them a very exalted idea of holy matrimony. And if anything is said to them on the subject, they make answer, “Yes, it is all very well for you white men ; you have only to send home and you get another woman whenever you want one.” A speaker at our last meeting observed that he would take the evidence of the Governor-General of India in preference to that of the gentlemen who then addressed us. Now, I contend that no official can have so much knowledge of the character of a people as they who live amongst them, who are continually in personal contact with them in their daily avocations, and to whom, as I have often experienced, they are sure to apply for advice and assistance in their pleasures and in their troubles. Another thing that would give the visitor to Sierra Leone a very poor idea of the standard of its religious community is the disgusting conduct of professing converts in some of the chapels, where the native Christians, both women and men, throw themselves about, exposing and distorting their bodies, and yelling in a fearful manner. Indeed very many of the converts made by the religious societies in Sierra Leone are made in this way. The exhibitionists for the time being are declared to be seeking, that is to say, praying, for God to receive them into the arms of the Church. After a certain time they profess and proclaim in the chapel their religious experiences, working themselves up into a most excited state, making use of the most blasphemous language, and being then accompanied home by the congregation, singing hymns and lauding the Christian excellence of those idols of the hour thus made the enviable centre of attraction and admiration. By the converts I do not mean persons who up to the time in question were unbelievers, but those previously received into the Church, and who, having been subscribing members, had fallen from grace to nature, possibly by having had illegitimate children, or for theft, sins which are systematically purged by the payment of small sums by the sinners, and who are thereupon readmitted into the Church. Another circumstance will give the visitor to Sierra Leone a curious illustration of the religion of these Christianised natives—the fact that, when intoxicated or in any way elevated, their

hilarity or jollity is manifested by the singing of hymns, instead of songs, as in England, a most disgusting desecration of spiritual subjects. It will also be found that the negro after he is converted still retains to a great extent his superstitious ideas, and as a rule they have greater weight with him than the laws of Christianity. In many cases that have come to my knowledge, the boys who have been brought up in the mission-schools, when they return to their homes become the worst characters in the country. This is to be accounted for in this way: they lose faith in their greegrees and other native customs, but do not gain a sound knowledge of Christianity, for it to have any effect upon them; and you will always find that the boys return to the native custom of wearing greegrees, trying people for witchcraft by the sarcy-wood test, etc. I have had in my employ during my residence on the coast at least twenty natives as clerks; nearly the whole of them came from mission-schools direct, but I do not know of an instance in which these boys have not robbed me, and committed many other crimes in the country till they have had to leave the Sherbro altogether. In some cases they turn war-men to get slaves, then become slaves themselves. I remember one case where a young man was sent from Freetown to me with strong letters of recommendation from the Church Missionary Society, asking me to give him employment; "he did not drink, was regular in his attendance at church, a good scholar, an honest man," in fact, he was everything that was good. Well, I thought, I am all right now; what a capital thing that school is; I must give five guineas next year instead of one. I sent him up the river to a factory, with a Sierra Leone man, to see what he was made of. He had not been there a month when the chief of the town sent me word that my saint was drunk all day, and if I wanted to save my money I must go up there directly. In less than six months from my first employing this young man he became one of the greatest blackguards in the country. Another I had from the late Mr. Brooks, a member of the American mission, and a thorough good honest man, but much disliked by the generality of his associates because he was too plain spoken. This young man he raised from his childhood; his father is a chief, and had been educated at Sierra Leone. Mr. Brooks came to me one day, and said, "Now, Harris, I have a capital boy for you, will you have him; the society cannot afford to keep him any longer; he is a good honest boy, and you know the trouble I have taken with him." Of course, he was another saint. He had not been with me a month when one of my uncontaminated natives came to me and said, "Massa, daddy Charles da thief." "Nonsense, I don't believe it." The end of the palaver was, he took me to the back of one of the stores, and there hanging under the rafters was a four-pound parcel of beads and a dozen red caps, ready to be taken away. Charles bolted; got a Mr. Peters to employ him as a factor in the Gallinas. He made away with the money entrusted to his care; robbed Prince Mannah, and then ran away to Monrovia, where he remained. These, gentlemen, are only specimens. I have had from the Mendi mission three boys, cousins of this Charles, and all robbed me. One is now a slave; the

others are skulking about the country following war parties, in fact, turned perfect savages again; much worse than other boys of their own class who have not gone through the civilising process. Out of some dozens of boys brought up at the Mendi mission-school, I do not know of a single instance of their not turning out the greatest rascals in the country. I believe they have had two or three boys taught carpentering, who are now of some use when they can be made to work. I have two or three boys with me who are very good mechanics, and, as far as I can see, they are honest and steady; but they have not been brought up in a school. If they continue as they are now going on, I intend to bring them to England for a twelve-month, when they will be able to get as much book-learning as they require. The Mendi mission has been established from fifteen to twenty years, and the greater part of that time have been expending something like three thousand pounds a year, and have lost at least twenty to thirty lives, and this sacrifice has produced no beneficial results. One or two circumstances I remember to have taken place that do not reflect very highly on the qualifications of the persons sent out as missionaries. Some few years back there was an American coloured man who had been many years in the Gallinas and Sherbro countries, dying; a trader, a friend of mine, had the old man brought to his factory, and tried all the doctoring he knew, but found the old man getting worse. He went to the mission-house, and asked the head of the mission to come and see old Godfrey, as he had done all he could for his body, would he endeavour to do something for his soul. He made answer that "he had been going to the devil all his life, it was no use trying to save him now." There was one of the missionaries married a coloured woman. This so annoyed the white saints that he was compelled to leave and go to Monrovia; and this feeling with regard to black people is more or less shown amongst all missionaries. You never see them received into the house, and associate with as an equal one of the black pastors, although these men do the greater part of the work, and live in the villages amongst the people, where, of course, their black coat has to be found, and white necktie kept as well starched as their more fortunate brethren in Freetown. One very great cause of the want of success amongst the natives is the continual opposition of one denomination to the other; this causes the natives to argue with themselves in this manner: these white men say they all worship one God, and are all followers of one Saviour. How is it they are always quarrelling, and no two of them go the same road to heaven; which one is right? This creates so much doubt in the small mind of the savage, that it ends in his professing whichever pays best. A few months back the whole body of missionaries in Freetown combined to preach against the Roman Catholic mission just establishing in Freetown, and advertised sermons to be preached by the different ministers on the subject. This caused a great sensation, and was the best advertisement that the Roman Catholics could have had, and I have no doubt was the means of getting a great many converts to the Roman Catholic faith. A great deal has been said about the rapid strides

the Mohammedans are making in Africa. This is a very strange fact, but whether it is that the religion is suitable to the African in his present state, or that the proselytising is done by a people who lives with them, and whose ideas are almost of the same standard, it is a fact that amongst the aborigines of the Sherbro and Gallinas countries a large number of them profess more or less to be Mohammedans; and whenever you meet a boy who has been educated by a Mohammedan he rarely goes back to his old habits; and if he fails to keep up his religion, he endeavours to hide his backslidings as long as possible; not like the Christian convert, who never seems to value his new religion as soon as he gets free from his schoolmaster; and all this is done by the Mohammedans without one farthing cost; in fact, on the contrary, the natives will pay to be taught portions of the Koran and the religious ceremonies. I think one great cause for success is the simplicity of the religion. They do not attempt to deny any portion of the belief of any other sect; they believe that all religions are good and true, and that all the prophets were good men; they allow that Christ was a good man and a prophet; and that Mohammed was a prophet after Christ; this to the natives' mind is so much easier of belief than all the bickerings of the white man, and that this is the correct road because it is my road, etc. There can be no doubt that the system of instruction now pursued by the missionaries in Africa is not as beneficial as it might be, the children in the schools becoming thereby merely educated parrots. They read the Bibles and hymn-books fluently, but they cannot read any ordinary book placed in their hands. And instead of the boys and girls being brought up as useful members of the community, and taught to work at some serviceable trade, or in the cultivation of the soil, they learn nothing but reading and writing, and when they leave the school they have no means of gaining a livelihood, except as clerks, traders, or ministers. This, I think, is the chief cause of the number of young men in Sierra Leone who find their way into the Freetown gaol. In conclusion, I must say, that if the money expended at missionary stations were disbursed in the establishment of model farms, and in the employment as missionaries of men who are mechanics, or agriculturists, for the education of the natives in useful labour, I have no doubt that in a very short time such improved system would exhibit very valuable results.

Captain BURTON: Mr. Owen, I thank you. The paper last read is sufficient answer to those who charge our Society, as the many jealous of its great success are glad to do, with so-called "infidel" tendencies. You, gentlemen, have listened, and with the greatest patience, to Mr. Burnard Owen's paper on Missionary Successes; most ably has Mr. Owen stated the stereotyped view of this highly interesting subject. And here I will at once make the remark, that upon such a matter, the English public's eyes are completely hoodwinked, and despite our efforts, the Negro has not yet taken that place in Nature for which Nature intended him. I know not whether the author of that highly instructive and progressive paper—perhaps Mr. Owen would like it to be called an argument—

has been in Africa. Probably he has not; and his present experience of the African consists in having rubbed shoulders against a negro or two in the dismal rooms that look upon Salisbury Square. Now Mr. Reade, Mr. Walker, and Mr. Harris, of whose paper I must on the whole approve, have been in Africa. I agree with them that you seldom meet at Sierra Leone any but a thoroughly loose character. Mr. Owen has given you a very pretty picture. Mr. Harris has given you a photograph. Mr. President and Gentlemen, I am so sorry that you have heard the brutal truth. I also have been in Africa, and not only we, but all African travellers, if they dare to speak the truth, are of one opinion. Our opinion is that missionary efforts in Africa generally have been a complete failure. And from the past we venture to speak of the future. There is nothing to cheer us in the conversion of the negro, because when converted he becomes worse than before. The late Commander Fred. Forbes, R.N., author of *Dahomey and the Dahomans*, and a man of thoroughly respectable and average opinions, has long ago told you that.

Mr. Reade is now absent, and it is my pleasing duty to defend his position. He did not, I believe, intend any argument in the paper with which he favoured us: he proposed to offer his experience. True, the experience was limited to five months; but how many Englishmen there are in every audience who cannot boast of five minutes' personal acquaintance with Africa? Besides which, five months in some men equals five years in others. It is highly to Mr. Reade's credit that he comes forward so boldly to challenge Exeter Hall; and if in the heat of the moment he has expressed himself in strong terms, we will charitably ascribe them to the ardour of generous youth. I am ready to support Mr. Reade in his assertion that the Christian converts of Sierra Leone, male and female, are the most demoralised race that I know in Africa. A certain F.R.G.S., who not long ago wrote his *Wanderings in West Africa*, tells the public so openly. The hospitals are crowded with cases of gonorrhœa and syphilis; and as for robbery, it is hardly possible for a white man to keep property there. The unfeigned horror in which the other and non-Christian settlements hold the Sierra Leone people is the best proof of their evil name. Missions began there in 1816, and we have favourable official reports in 1819 and 1822; the present generation, therefore, has had a fair trial. It was the same at Abeokuta, but at a later date. Christianity is accepted with *furor* by the volatile negro, who plays with it for a year or so, finds it utterly unsuitable to him, and throws it away in a pet. The traders south of Fernando Po do not care to see even steam communication extended, because it would bring them Sierra Leone men. In my own jurisdiction, the Christian converts were of all by far the worst. One of them brought a charge of theft against a highly respectable missionary, the Rev. Mr. Anderson of the Old Calabar river. I found the charge wholly vexatious, and applied to the commander of one of H. M.'s cruisers to flog the man. But as he was a Christian and a Sierra Leone, he would have memorialised Salisbury Square. Mr. Owen would have written a paper about him, and a petition for him. So far he escaped;

yet, curious to say, the natives presently found him guilty of some offence, and he received an Egbo flogging which he will not easily forget. The fact is the pagans have their own ideas of honour and honesty, crude ideas, I own, yet better than nothing; they severely punish unchastity in women, robbery in men. But the Christian convert loses his own code without attaining ours; he becomes a bad negro, and a worse white. The less Mr. Owen says about trial by jury at Sierra Leone the better; it is the maximum of injustice, a disgrace to our nation. There are two great tribes of Ibo and Akur; no Ibo criminal is ever found guilty if the majority be Ibo men, and *vice versa*. But whatever the negroes be, a white man never escapes.

I shall not notice Mr. Reade's assertion that El Islam is a branch of Christianity, which Mr. Carter Blake denied. To be brief, El Islam is merely that Arianism which the Semitic mind has ever preferred to the Japhetic Athanasianism. The mission of the Apostle of Allah was to complete and restore Christianity to her original lustre; it may be called, in fact, the First Reformation.

Mr. Owen thinks it would be more candid in me to inform him of my stand-point. He wishes, in fact, to put me into the confessional. It is satisfactory to see a person of Mr. Owen's evangelical antecedents thus fraternising with the popular sentiment towards Rome. But personally I object to confessionals. My stand-point is, and I hope ever will be, the truth so far as it is in me. My religious opinions are of no importance to anyone but to myself; and I will *not* confess to Mr. Owen. Of my stand-point on the negro question, I will say something presently. When I have to look into Mr. Burnard Owen's graphic account of the "proud successes of missionaries in the battle with paganism," I am somewhat surprised to see the authorities which he quotes. Prichard was doubtless a good man in his own time, but he was born in the age of ignorance; he was, in fact, a præ-anthropologist. Mr. East quotes merely what he heard, without attempting to sift it; he is severe on Moslem grigris; had the Hebrews no phylacteries, or have Christians no scapulars, holy crosses, etc.? Equally one-sided is Mr. Beecham's *Ashantes and the Gold Coast*; I have read it, but African travellers rarely look at these missionary advertisements, which are mostly written in London *in majorem populi injuriam*. The students of Fox's Wesleyan Missions should be known as Foxe's *Martyrs*: I have rarely seen so much paper so thoroughly wasted. And yet he is brought in as an authority upon the Congo when we have such writers as Father Merolla! "Walker's Missions" and "African Missions" tell their own tale. The latter (p. 23, No. I) actually sets out with the venerable but obsolete blunder about the negro's belief in an evil spirit and his ministers—I should not have expected to hear this again. It indulges also in the favourite silly sentimentalism about "when the Bible was presented it was met by the trader's rum bottle." Why, gentlemen, I myself know a mission on the West African coast where rum and ammunition were sold. I will also assert that on the whole the trader is not more degraded than the white missionary, and is much less so than the black or the whitey-brown. And, I regret to say, I know many in England who attend

their chapels, and subscribe largely to missions, and yet who enrich themselves by the destruction of the negro by supplying him with arms and spirits. How they reconcile the abomination with their consciences I know not. Perhaps Mr. Burnard Owen can explain. At any rate, we have present an African merchant who can tell his own story. Bishop Bowen, of course, spoke well of his own cloth. Mrs. Melville, who wrote a pleasant volume, *Sierra Leone by a Lady*, spoke sentimentally of the missionary generally; in those days it was the fashion; but she did not like his handiwork. As for Mr. Vice-consul Duncan, no man had a greater contempt for the converted negro than he had; all praise of him is contrary to the spirit of his book, but he was not a rich man, he had his way to make, and consequently a little "soft sawder" was duly administered to the "British public." The eminent African traveller, Dr. Livingstone, was quoted to prove that the Sabbath is as strictly kept by the negro as in Scotland. I should say more, namely, that he is ready to keep three hundred and sixty-five Sabbaths per annum—to do nothing all the week, and to rest on Sunday. And after the terrible fates of the Oxford and Cambridge Missions, Dr. Livingstone's enthusiasm on the subject will probably be deemed greater than that of an ordinary man. I cannot judge my predecessor, Mr. Consul Hutchinson's book of "Impressions"; that gentleman is not called upon to express unpopular opinions, unless he likes. Bishop Crowther I know; he is, perhaps, the best African, or rather the only good one I have met on the West Coast, but I am unable to tell you whether he is a negroid or a negro. There were even at his birth Moslems in his native village, and there have been usually Haussa blood in their veins. Of the Rev. G. Nichol, I cannot say anything, except that if what we have heard is true, he must be a *rara avis*, and most dissimilar to "Niger" generally. African children, we all know, are quick, indeed too quick. Their quickness is indeed amazing, but it has no results. But about the age of puberty they come to a dead stop. Practically, we all have recognised this fact; but as the English youth does not come to a dead stop at the same age, the Englishman still hardly believes it. There are people, as our noble Chairman said on the last memorable night, who feel hurt by being told a new thing—it does not agree with them!

Mr. Owen informs us, quoting Mungo Park, that in Bondou the Imam (I wish he would not call it Iman, which means "faith") consults the king upon matters of religion. Possibly; there is the taint of negro blood. But El Islam does not *as a rule* consult kings or style them defenders of the faith. El Islam, like the religion of all the patriarchs, maintains slavery, which is the first step of progress in uncivilised lands; but her slaves are in a high social position, and far happier than your servants. It remained to Christian societies, it is the proud prerogative of civilisation, to render slavery infamous and horrible. On the West Coast of Africa I have heard Christian as well as Moslem teachers described as "agents of perpetual mischief." Mr. Macbriar is to me no authority. Mr. Missionary Baker shows a touching ignorance of West Africa when he asserts that Islam "has

made the Gambia people the worst of men—utterly debased in their morals." He had certainly not seen Sierra Leone. And observe: I do not assert that the Moslemised negro becomes a good Moslem; I mean only to state that the Christianised negro becomes a very bad Christian.

Mr. Reade, *versus* M. Schön, is not solitary in holding that the African is benefited by polygamy, which I admire to see characterised by Mr. Owen as an "unnatural institution." One would think he is speaking of the peculiarities which the Christian Greeks taught the heathen Turks. Polygamy, the practice of Abraham, Isaac, and Jacob, the ancestors of the Founder of Christianity, who came from a peculiarly polygamic family—polygamy unnatural! The force of prejudice and pharisaism can hardly go further than this.

Of course, in polygamy, few men have more than one wife. But why repeat the trite old trash of strong-brained and hard-headed Paley about the superior prolificacy of monogamy? I am weary of recounting the rule, and thought that my *City of the Saints* had to a certain extent established it. But I must do it again for the benefit of Mr. Owen. In monogamy, ours for instance, there is a slight preponderance of male births; in polygamy female births become greatly in excess; in polyandry male births are enormously numerous, as many, for instance, as 400 boys to 120 girls.* We sometimes read that polygamic lands are thinly populated: true, but it is their population which causes polygamy, not *vice versa*. Moreover the two most populous empires in the world, China and Japan, are eminently polygamic. Mr. Reade is perfectly right in stating that in Africa wives are furious at the abolition of polygamy. The Church of England missionaries at Abeokuta actually unmarried many converts' wives and remarried them to others. This is a power to bind and to loose with a witness. Anything more degrading to the woman I cannot imagine. Mormon girls often refuse to "nigger it with a one-wife man," and perhaps they are not wrong. In polygamic countries of course there are many scandalous tales about polygamy, so there are in monogamic England about the mother-in-law. But it remains for the monogamist on the West Coast of Africa to poison a sister-in-law by way of concealing his and her shame, and to be removed from his mission without other penalty for the slight offence. Eunuchs are rare in Africa, and belong only to the negroid races or those in their vicinity. It is an Asiatic invention, and the *castrati*—they were to be met with even in St. Peter's—became a European institution, now happily abolished.

El Islam, we are told, does not progress at Sierra Leone, and figures are given. But they prove nothing; the large floating population of Mandenga is not included. Sierra Leone alone is talked of. But Sierra Leone is not Africa. The governor of Lagos will tell a dif-

* See "Hunting in the Himalayas", by R. H. W. Dunlop, C.B., B.C.S., F.R.G.S. London: Richard Bentley, 1860. That well known and experienced English official has published the results of personal observation; and he wisely remarks that he "gives more weight to nature's adaptability to national habit, than to the possibility of infanticide."

ferent tale. And before quitting this part of the subject I must once more join issue with Mr. Owen upon the subject of Sierra Leone. He assigns to it the *epithetum ornans* of "nucleus of civilisation and school of Christian teaching." I declare it to be the curse of West Africa. Let him now go there and see for himself. His mental nyctalopia, his hallucinations of negro worship, will vanish before the first month is over. The worst of these philanthropists is, that they become so cruel to the late gods of their idolatry.

Mr. Owen is pleased to say hard things touching the present age of rash opinions. Now, hard things have as justly been said of any present age. For my part, I am not so desponding, nor do I look back with the least satisfaction upon the moody and superstitious days of "prayerful" Puritanism. To Catholic gentlemen here present I commend Mr. Owen's liberal and enlightened opinions touching the action of the Roman Church upon its votaries, making it a mere machine requiring only body to be in its ranks. As for the preparations for Protestant membership required from African converts, I know pretty well what that is; I have also learned to fathom the value of an African "call." True, the Catholic faith has vanished from the banks of the Zaire; but take away your missions and slave squadron, and what would become of Protestantism in our West African "pesthouses?" For my part, I cannot but confess that I should feel curiously disposed towards Christianity if I were a negro, for instance, an Abeokutan. I am placed in a little crowd of Roman Catholics, Anglo-Catholics, Kirk of Scotlanders, Wesleyan Methodists, Northern Baptists (who abhor slavery), and Southern or hardshell Baptists (who uphold it as a godly institution); and each one of these learned and reverend gentlemen tells me that he is right, and all the others are wrong; some a little wrong, others "damnable wrong".

But then, Mr. President and Gentlemen, had I been a negro, my superior docility, gentleness, and intelligence would certainly have solved the mystery. I very much respect Mr. Venn, B.D., but I do not respect his lists and figures; there is no exacter error than the statistic. Protestant missions have, it is true, had translations of their Holy Writ, but what an ignoble literature it is! Let the reader, as a specimen, read the Niger English Testament, a scandal published by M'Dowall, London, 1829. I would rather accept the popular version of the Glasgow Bible.

To conclude: of course I do not expect to prevent the public subscribing to missions; I might as well expect to keep out the tide with a pitchfork. Also, my motto is "live and let live." But I have travelled in our English "black country", and I have seen Blarney Lane in Galway town. These, to quote no others, are places which make me blush for the honour of our nation. I deeply regret every shilling sent away from our own people to be wasted upon the hopeless barbarous blacks of West Africa. I lament to see nearly a million per annum lavished upon an anti-slavery squadron when, with that sum, we might settle our emigrants in the south temperate zone, and supply our auriferous colonies with hands who are now allowed to drift over to the States. This, Mr. Owen, is my stand-point. I con-

sider it my duty to express my opinions upon the subject; and whether they prevail or not, whether you like them or not, I shall ever take a pride in advocating them.

Mr. McARTHUR, in rising to support the views of Mr. Owen, said he should first notice the paper of Mr. Harris. That gentleman's paper was entitled to consideration and respect, because he put forward his views in a manner not calculated to insult their feelings, as a former paper had done. It was objected by Mr. Harris that a sufficient return had not been received for missionary efforts. That objection raised the question, what is a sufficient return? There were people in the world who believed that the salvation of a single soul was an object of greater value than all the wealth of the world; and if they took that view of the question, there had been a sufficient return. There could be no doubt that, not only one, but many souls had been saved by missionary efforts. A large amount of education had been diffused among savage people. Numbers of schools had been established in Western Africa, the Bible had been translated into the language of the people, and diffused among them; so that, if nothing else had been done, in those two respects valuable returns had been received for the money expended. But taking a larger view of the subject of missionary efforts, it would be found that, in connection with education alone, hundreds of thousands of once savage children had received education. They had been taught to read and write and cipher, and had been rendered capable of discharging many duties that they would otherwise have been totally unfitted for. The efforts of the missionaries had also been of great advantage in aiding the abolition of slavery. They had been told by Captain Burton that slaves are happier than servants are in this country. He was prepared to admit that in the slave States of America the slaves are as well off as the greater part of the labouring population in Ireland, and even in some parts of England. But would it be said that a man who could be bartered by one master to another without his consent, was better than a servant? The slaves could not be taught to read; their masters might separate them from their families, and send them to different parts of the country, regarding them merely as chattels; a white man might murder any slave with impunity provided no other white man was present to give evidence. The condition of servants in this country could not be compared to such a state as that; and he regarded slavery as the greatest abomination under heaven. It had been objected to the missionaries that they were idle, and did no kind of manual labour; but it should be borne in mind that white men could not work on the western coast of Africa. From his own experience he could affirm, that among many of the converted Christian negroes, there existed deep feeling and genuine piety. In Washington he had heard a black man preach an admirable sermon. On another occasion, he was present at a meeting at which a black man presided, who conducted the proceedings with as much propriety as any white man could have done. He also heard a black man address a public meeting and make an admirable speech. He adduced these as instances

of negro civilisation and Christianity. Another case he mentioned was that of a negro, whom he had once heard speak very effectively at a public meeting in this country. He told how he recollected having been sold to a slave dealer, and put on board a slaver which was afterwards captured by a British man-of-war; how he was taken to Sierra Leone, where he was taken by the hand by the missionaries, who educated him and put him to business; how he embraced Christianity, commenced business for himself, and got on until he became a successful merchant in Free Town; and he (Mr. McArthur) believed he was an honest Christian man. It had been adduced as a reproach to the converted negroes, that they had been heard singing hymns when intoxicated; but the same reproach might apply to some Englishmen, for he knew of one who appeared to be very religious when he was tipsy, but was far from being so at other times. With regard to the alleged fitness of Mohammedanism to the negro on account of its simplicity, it was, indeed, simple enough, for it seemed to consist in saying that "Allah is God and Mohammed is his prophet." It had been said that many of the negroes who had been educated in the schools could read no other book but the Bible. That assertion was very extraordinary, for he conceived that a child who was able to read the Bible would have little difficulty in reading any other book in the same language. He contended that Christian missions, independently of their direct object, had done a great deal for the extension of geographical knowledge, and if they had done no other service they had effected much good in that respect. They had also been of great service to the literature of this country. The statistics of missions shewed that nearly three hundred volumes had been written by missionaries, or upon the subject of missions, and that they contained a large amount of valuable information. With respect to the alleged prevalence of gonorrhœa and syphilis at Sierra Leone, he could understand how that could be the case, from what had occurred at the Sandwich Islands from intercourse with the traders. It could not be attributed to the Christian missionaries; but it had been caused by the heathen Christians, who introduced the vices of civilisation among the natives. Lord Stanley had said, on the occasion of the dinner to Captain Burton, that some persons appeared to be disgusted with a new idea and could not receive it; he (Mr. McArthur) thought the value of an idea did not depend so much upon its being new, as upon whether it was good or bad; if it were bad they had better be without it, but if good, then they should gladly receive and endeavour to act upon it. It had been said that one cause of the non-success of Christian missions was the difference of opinion on religious matters among the missionaries, and there could be no doubt that that was a great hindrance to the efforts of Christian missions. Captain Burton said he blushed for the honour of our nation; but he (Mr. McArthur) blushed for the honour of Christianity to find any one stand up for Mohammedanism in opposition to the Christian faith. Captain BURTON, interrupting Mr. McArthur said, "This is personal."

The PRESIDENT observed that it was competent for any person in

the meetings of that society to advocate any religious opinion he thought proper without being personally attacked.

Mr. McARTHUR, in continuation, said he made the remark because Captain Burton avowed himself as the defender of the opinions expressed in Mr. Reade's paper. He should be sorry to use abusive language, but when a gentleman chooses to use such weapons against others he should not object if the same weapons were employed against himself. It had been said that the reports of the missionaries could only be attributed either to ignorance or to attempts to deceive, and that the missionary societies were supported by a few thousand ignorant people in this country. Now the fact is, that these societies are supported, not by a few thousands only, but by millions, of the wealthy and of the poor, who give their money liberally in support of those objects. As to the charge of ignorance, many among them were of the highest rank, and held high positions, politically, commercially, and socially, in the literary world, and as men of science. Enthusiasm he did not consider a term of reproach. When enthusiasm in the pursuit of other objects was praised and admired, why should it be called a crime when applied to the diffusion of Christianity by missionary efforts? The broad question was, what had been the effect of missions throughout the world and the spread of Christianity? and in answer to that question let them compare what Christianity has done for this country, and what Mohammedanism has done for those countries in which it is believed. What Christianity has done for this country it might do for the world at large, and though as a matter of credibility of evidence he was bound to respect the statements that had been made in that meeting, he was also bound to respect the evidence of the many others who state exactly the opposite, and who represented missionary efforts to have been very successful in obtaining genuine converts to Christianity in all parts of the world.

Mr. R. B. N. WALKER observed that the preceding speaker had referred to the returns that had been received from the large expenditure of life and money on the west coast of Africa; but the experience of twenty-three years residence at Gaboon enabled him to say, that during the whole of that period there had not been the salvation of a single soul by missionary efforts. The missionaries themselves admitted the same. As to the abolition of polygamy and slavery in West Africa, he knew that there was a missionary organ published at Abeokuta, in which both polygamy and slavery were advocated. With respect to the alleged demoralisation of the negroes, caused by traders, to a certain extent that was true; but though the Africans were very quick in acquiring the vices of civilisation, they were very slow in acquiring its virtues. The less that was said about the observance of the sabbath by the so-called converted negroes the better. It might, indeed, be said that if the sabbath was as well observed in Africa as it is in Glasgow, the blacks were in a very poor way, for Sunday afternoon in that town is given up to drunkenness. He considered that the practice of polygamy in Africa was conducive to chastity, and that it should not be abolished. The practice was advocated by

the women, and in the Gaboon country the number of males unmarried did not predominate over the females. From his knowledge of that country he could say that Christianity had retrograded. A few years ago there were several converts, and one place was called Jesus Christ Town, but every one had gone back to paganism and became pagans, thieves, prostitutes, and worse.

Mr. D. W. NASH said, that in considering this question they should take a general view of the effects of missionary efforts and endeavour to ascertain whether, as had been asserted by Mr. Reade, the negroes were morally and intellectually worse than they would have been if there had been no Christian missions in Africa. He did not think it necessary to have been in Africa to offer an opinion on that question, notwithstanding Captain Burton and other speakers had attached importance to it, and regarded it as an objection to Mr. Owen's paper that he had not been in the country. If, for instance, the question of the demoralisation of a large portion of the population of London were discussed, would it be necessary to have been into all the worst parts of London before giving an opinion, for the judgment might be determined by the facts obtained from others. He (Mr. Nash) had not been in West Africa, but he did not therefore consider himself unable to give an opinion where so wide a question as the advantages or disadvantages of missionary efforts was brought forward. What had been the conduct of the native Africans after those efforts had been made? Many persons were employed to convert them, and to give an account of what had been the result. Many societies of the kind had been formed in every Christian country in the world, who had sent missionaries among all savage nations. There were many individuals who devoted themselves and their money to carry out the view that it is desirable to plant Christianity in savage lands, and who believe that it has produced great advantages. Now, who were the men that had acted in that manner? They were some of the best, the wisest, and the most intelligent of all Christian men. In the lists of subscribers to those institutions were to be found that class of men who were earnest and honest in prosecuting their object. That being so, what a gigantic imposture must the reports of such societies be, if what Captain Burton, Mr. Reade, and Mr. Harris had said be true; and it could only be supposed that those gentlemen had come in contact with false examples of negro converts. Was it to be believed that all those societies which had been going on for so long a time, and which had cost so much money, were altogether impostures? In West Africa, for instance, about which no mistake could be made, for the circumstances were well known to thousands of persons in this country. Those persons were perfectly well acquainted with what had been done, and yet it was to be supposed that they subscribed their money freely to carry out a system of fraud and imposture with which they must be acquainted! After all, it did not appear that there were many examples of backsliders who were worse than they were before, and those examples were obtained by traders, who were likely to come among the worst specimens. As to the capacity of negroes, and the allegation

that the growth of their intellect is stopped after a certain age, that was not the question they had then to consider. If history taught by example, it showed that Christianity has supplanted heathenism over a large portion of the globe; that it has bettered the condition of man, and placed him in a position fitting to his superiority over every other creature in animated nature. That had been the effect of Christianity as opposed to paganism among many savage nations, and why should it not apply to Africa and the negro? He thought there was abundant evidence that the negro has been bettered by missionary efforts, morally, intellectually, and religiously. He hoped the society would pause before it decried the correctness of the valuable evidence which missionary societies had collected of the improvement of savage nations by their efforts, and before they decided a question of such great importance, not only to anthropological science, but to the social condition of man.

The PRESIDENT said it would be impossible to finish the discussion that evening, but before the meeting adjourned he would call on Mr. Carter Blake to read a letter which had been received from Mr. Winwood Reade, who was unable to attend.

The following letter was then read:—

Southampton, March 18, 1863.

MY DEAR SIR,—Before leaving England, I write to express to you the regret which I feel in being unable to attend the reading of Dr. Colenso's paper on Missionary Efforts among Savages. Not only am I interested in the question; I admire the man. The Bishop of Natal is the forerunner of a race of churchmen whom we who are young may hope to see plentiful among us: he is the apostle of free and honest thought; he is striving to liberate the clergy from those chains which shackled even laymen but a short time ago; he is the Martin Luther of a new reformation; if sometimes mistaken, he is always conscientious; and he has stood up bravely against the religious ruffianism of the day, and endured that species of martyrdom which the age still tolerates, but which it will soon forbid. I mean malevolent abuse, and attempted robbery of his see.

I think, sir, that you do well to allow such questions as that of missions among savages to be discussed before the Anthropological Society; such discussions elicit indirectly most important facts relating to the minds and manners of savage nations; and they also directly afford us information upon a most interesting question in the science of ethnology, viz., the influence of civilised races upon those which are uncivilised.

The efforts of missionaries among savages afford materials for science. There can be no doubt of that. It is for this reason that we consent to examine them. But I maintain that as efforts of philanthropy they are quite useless; and indeed that they are injurious, because they rob our own wretched paupers of that sympathy and of that money which justly belong to them.

However, as missions will certainly be continued for many years, it is the duty of the traveller to point out their most flagrant errors. A mere handful of men will never be able to christianise a continent,

unless the religion which they impart is of such a character that the natives can proselytise among themselves. This is not the case with Christianity. However, these men may to a certain extent improve those natives with whom they mingle, if they be, in the first place, men of high moral character; and, in the second place, if they possess sufficient wisdom and knowledge of human nature to go to work in the right way.

But, unhappily, missionaries are frequently bad, and almost always foolish men. I should suggest, in the first place, to those who send them out, that they should display a little more care in selecting persons for this office. Let them study the system which is pursued in the Presbyterian missions in America; and, perhaps, they may succeed in sending out such men as Mr. Walker of Gaboon, and Mr. Mackay of Corisco. They should also advise their missionaries to attach more importance to deeds than to words. Savages are generally refined hypocrites. When it suits their own purposes, they can ape holiness, and quote scripture with all the skill of a Tartuffe. The missionaries should discourage their pseudo-converts from expressing pious sentiments, unless after close examination their practical lives be found to be equally unimpeachable. They should recollect that there is a denunciation in the New Testament against hypocrites, and should quote it now and then.

Also, they should not weaken their influence by making rabid war against certain customs which are called *fetish*, which the natives are loth to part with, and which are innocent in themselves. A clergyman in England would be laughed at if he preached a sermon against the custom of hanging mistletoe in houses at Christmas; yet that custom is quite as heathenish as those which horrify missionaries abroad. They should also avoid all controversial points; they should conceal from the savage the degrading fact that in times past Christians burnt each other by way of settling different readings of a text; and that in the present day the same hatred burns, though the fires have gone out.

Finally, they should not attempt to interfere with the "customs of the country," and only endeavour to check those abuses which may arise from them. Polygamy and domestic slavery should be countenanced. It is idle to combat with them. But it might be permitted to the missionary to limit the number of wives as Mohammed did, and like Mohammed to enjoin that the slaves be treated kindly.

By pursuing such a line of conduct, the missionary might then gain real influence in the village where he happens to dwell. He might then be able to check vice and crime; to make his parishioners more honest, more sober, and more truthful than they would otherwise be; and he would, at least, earn the admiration of his fellow-countrymen instead of their contempt.

Yours obediently,

W. WINWOOD READE.

James Hunt, Esq., *President of the Anthropological Society of London.*

The adjournment of the discussion was here moved by Mr. G. DIBLEY, seconded by Dr. CHARNOCK, and carried unanimously.

The PRESIDENT announced that the Bishop of Natal would read

his promised paper on missionary work in Africa on the 16th of May, and they should then be in a position to deal more completely with the subject under discussion. Numerous applications had been sent for admission to the meeting on that occasion, and negotiations had consequently been entered into for the purpose of obtaining a larger room for that evening.

The meeting then adjourned.

MAY 2ND, 1865.

THE PRESIDENT, DR. JAMES HUNT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The following Fellows were announced to have been elected:—George Hill, Esq.; Samuel Higgs, Esq., F.G.S., Secretary to the Royal Geological Society of Cornwall, Penzance; G. W. Smith, Esq.; Dr. Hyacinthe Rónay, Membre de l'Académie Royale de Pesth; Rev. W. Arthur, M.R.A.S., F.E.S., Glendun, East Acton; George C. Joad, Esq., Patching, Arundel; Captain W. D. Carey, R.A., Shoburness; D. G. F. Macdonald, Esq., C.E., F.R.S.L., F.R.G.S.; James Wilson, Esq., 23, Ryder Street, W.; Rev. W. B. Boyce, 3, Angel Terrace, Brixton; H. R. Twyford, late Captain 36th Regiment, Junior United Service Club, London; H. Duckworth, Esq., F.R.G.S., 5, Cook Street, Liverpool; W. M. Ord, Esq., Brixton Hill.

The following Honorary Fellows have been elected:—Prof. Max Müller, Oxford; Prof. Nilsson, Stockholm; Prof. Gonzales Velasco, Madrid; E. G. Squier, Esq., New York.

Local Secretary abroad:—E. H. Harbour, Esq., B.A., local Secretary for Amoy, China.

The PRESIDENT stated that information had been received with much pleasure by the Council, announcing the formation of an Anthropological Society at New York. The Council had determined to send them all the publications of the London society. He congratulated the meeting on the evidence which this new society afforded of the extension of anthropological science throughout the world. The President then called on Mr. Dibley, who had moved the adjournment of the discussion on the previous meeting, to resume it. He expressed a hope that gentlemen would be brief.

MR. MEYER HARRIS said he wished to call attention to the manner in which his remarks had been misrepresented by the press, and was proceeding to make some comments, when

The PRESIDENT interrupted him, and said that he must seek redress elsewhere, as the Society took no cognisance of any remarks made by the press.

MR. DIBLEY* said: The subject under consideration requires calm and unprejudiced examination, so that evidence may be elicited which shall either tend to a complete reformation of the system introduced

* Printed in a condensed form from Mr. Dibley's MS.—ED. J. A. S. L.

by missionaries for the civilisation of savage races, or justify the continuation of the present method of missionary operations. As anthropologists, I presume we must not look for the mere nominal acceptance of dogmatical creeds, which, unhappily, is but too often the mere caricature of religion, but for those good results which are to be observed in a gradual growth of a superior condition of things, through the assimilation of new ideas that have been enforced among the people. We have the statement of Mr. Winwood Reade respecting the results of missionary operations among the Africans; which statement, we all know, is most unfavourable. Certainly, the experience of this gentleman is rather limited, being only of five months duration; but this opinion was endorsed, with but slight qualification, by Captain Burton, Mr. Harris, and Mr. Walker, all of whom had a more lengthened experience in Africa; and the same opinion seemed to prevail with many other Fellows of this Society. The opinion of these gentlemen is, that about £21,000, annually expended in missionary operations on the western coast of Africa, is completely thrown away. Also, that there are sacrificed the lives of a number of Europeans, whose exertions might find more fitting channels among our poor unfortunate heathen population at home. Dr. Seemann has also given us his experience in the Viti islands, which is very unfavourable; the best missionaries even deploring the barrenness of their exertions. Dr. Yvan, physician to the French scientific mission sent to China and Malacca, in the work relating his travels, touches upon the influence of missions, particularly in Malacca. He says, "It is easy to see at a glance that the influence of European civilisation is nearly extinct here. The Portuguese, Dutch, and English have from time to time ruled these people, but the aboriginal manners and opinions predominate at the root. It appears that the savage everywhere is very willing to accept any creed that will give him an advantage or make him prominent." Dr. Yvan relates that, while walking out with a Catholic missionary, they met a native of Dutch origin, who had two sons and a daughter. The missionary soon began questioning the man as to the faith of his family. The man replied that he, his wife, and son Vincent, were Catholics, but his other son and daughter were not. The missionary soon became interested as to the reasons why they were not. The man replied, "You see, father, there are reasons for everything; Vincent, the eldest of our children, is a Catholic, as it is of course necessary that the eldest son should be of our religion. My second son, John, is a Protestant, as I thought that on account of his embracing that faith, some of the English ministers here, who are very powerful, might probably be of use to him. As to my daughter, I was in some doubt as to her religion; but one day, as I was walking with a Mohammedan friend, he told me that his religion was decidedly the proper one for a woman, and she has therefore embraced it." The doctor, with the same missionary, visited a tribe in the vicinity of Malacca, in the direction of Mount Ophir. The people are described as being in the most abject state of dirt and laziness. The missionary, after conversing with them, promised another visit. The doctor asked him, "What good can you

do by another visit? all your efforts in their behalf must be as ineffectual as the administering of medicines to a corpse." Instances are given of the cunning natives continually imposing upon the missionaries; and altogether the facts, as related, seem clearly to indicate that missionary enterprises among savages should either undergo great modification, or be discontinued. I quote the work of Dr. Yvan more particularly, as his statements have not the least reference to the subject which we have under discussion, and may therefore be considered quite impartial. I was rather surprised at the statement of Mr. Harris, that boys who had not been to the mission house or school, are better and more honest than those who have been there. Of course, Mr. Harris does not mean by this that education is not a good thing. Perhaps his experience was unfortunately bad. And it should be taken into consideration that, unless the education that is given becomes incorporated with the deeper faculties of the mind, and thus thoughtfully impresses it, the end desired cannot be produced, but, on the contrary, will make the subject more artful and cunning. This effect may perhaps attend nearly all attempts to educate the savage. We may see similar results among great numbers of our own countrymen. I think there is not a little weight in the suggestion that missionaries should be mechanics, and teach the natives how to make houses, furniture, clothes, boats, and things generally of this description. Would not such a course tend to promote the rudiments of civilisation among them far better than the discordant jargon of creeds opposed to each other? Mr. Burnard Owen, in his paper upon "Missionary Successes and Negro Converts", states that the results have been most satisfactory, and that both the Church of England and Baptist missions had achieved gratifying success, notwithstanding the missionary was met in his evangelising process by the infidel European trader, who opposed the rum-bottle to the Bible. There can be no doubt but that spirituous liquor is a cause of much evil, and must be a powerful opponent of moral principles. But Captain Burton states that many persons who occupy positions in Christian churches, and are considered devout, supply the natives with rum and ammunition—I presume, get their livelihood and accumulate fortunes by such means. Certainly, there appears to me an entire absence of consistency in such conduct. Yet, such inconsistency is not peculiar to Africa. Have we not in our midst numbers of persons who are accumulating fortunes through the ignorance, drunkenness, and degradation of their fellow-creatures, and, unfortunately, are considered Christians? In this respect Islamism, perhaps, has the advantage; and the great superiority in the conduct of its converts over the so-called Christians, may be attributed to the enforcement of habits of abstinence. Missionaries are, perhaps unconsciously, given to write down everything that does not accord with their particular formula; they can see nothing but evil in everything else. But I think there are degrees of good as well as of bad, and that there may be, to the people moulded under the influence of Mohammedanism, some good in it that is suitable to their capacity. Nearly all travellers but missionaries acknowledge this. Would it not be better to

connect ourselves with the little good that may be seen in savages, and endeavour to increase it, rather than waste valuable effort in the endeavour to effect a sudden transition of manners and customs, which are totally at variance with nearly every habit of the people? Mr. Owen gave statistics concerning Sierra Leone. He said, out of the total population of 41,624, only 3,357 remained pagans; 1,734 were Mohammedans, 15,780 were Methodist Christians, and 12,982 were Christians of the Church of England; and that the civilised and moral condition of these people was very different from that represented by Mr. Reade. I ask the missionaries, where is the virtue of their work, if it does not impart to the people a greater capacity for resisting corrupting influences? Mr. Owen referred to the negroes of South Carolina as being much superior, in consequence of religious teaching. If I mistake not, this is rather beside the question; as the condition of the African and South Carolinian negro is very different. I fervently wish that the picture drawn as to the superior condition of savage races through missionary operations was true; but there are cogent reasons for thinking the reverse. The statements and results of missions ought to be subjected to the infallible test of experience, when, probably, it would be found that the results have been vastly exaggerated, and that the whole matter should undergo entire reconstruction. Mr. M'Arthur, in contending for the good results of missionary efforts, said that they had extended our geographical knowledge, and increased our literature. I presume it is scarcely necessary to say that missions have not been established for these purposes. Mr. M'Arthur also stated that many persons believed that one soul was worth more than the whole world. This was said in reply to the objection founded upon the loss of wealth and life. I ask that gentleman, if it would not be more becoming to reasonable beings to convert the souls that are close at hand first; they naturally have stronger claims upon us than savages in far distant countries, under unfavourable conditions. I hope that our friends the missionaries will not produce to us figures and statements of their own compiling, but point to the manifest improvement that has arisen among savages through their teaching. There appeared to me to be some force in the remarks of Mr. Nash, that perhaps the gentlemen may be mistaken who have visited Africa, and formed opinions so very unfavourable to missionary operations. It is well known that good is not to be seen on the surface, while evil and licentiousness boldly come to the top. I think, with Mr. Nash, that surely some good is done, but it appears (considering the amount of means employed) very trifling; and this good may result more through intercourse than the teaching of religious creeds. The best discipline for a savage, is to make him work, so that he may become accustomed to industrious habits. At the same time, he should be led by healthy and manly example; but this, I fear, is seldom to be found among missionaries. Though the expression of these sentiments may not be favourably entertained by some gentlemen, yet I beg of them to reconsider the subject of missions among savages, and see if they have not been supporting a system that can be proved to be incapable of accomplishing the wished-for result. If

so, the missionary method of procedure should undergo an entire reconstruction.

Dr. CHARNOCK* said: I am inclined to think that the missionary societies have been much abused, and that their efforts are entitled to our sympathy; for we cannot suppose that they would devote so much time and spend such large sums of money annually without any *bond fide* object. In Africa, however, Christian missions have made but little progress, and wherever Mohammedans have settled in that part of the world, Christianity has gradually decayed or disappeared. In relation to African missions, we might say, in the words of a writer on a kindred subject:—"In such an atmosphere the rod of the priest can bring forth no buds, the rose of Sharon withers on its stem and the vine can yield no tender grapes." There are several reasons against the success of Christian missions in Africa:—1st. Christians are not yet agreed amongst themselves as to what is the proper form of Christianity, and if they are not, how can they expect the natives of Africa to be wiser than themselves. 2nd. Christian missionaries do not, like those of El Islam, practise what they preach. 3rd. The climate of a great part of Africa is unfavourable to missionary enterprise. 4th. The Mohammedan form of worship is more in accordance with the tastes and habits of the people. It is doubtful, indeed, whether any African conversions have been effected without the aid of ardent spirits. The supply withdrawn, the Negro returns to the religion of his forefathers. And now, let us hope, that having seen the error of their ways, the missionary societies, especially those of Great Britain, especially those who protest against the established church, and spend their time in disputing about trifles, will not waste any more money in an attempt to Christianise the African race. If, in this commercial age, Christianity is *possible*, there are thousands to be Christianised at home; and thousands more who might be saved from starvation with the money fruitlessly sent to Africa. A writer in the *Saturday Review*, says of missionary enterprise in China:—"Certain shrewd Scotchmen have wisely recognised the importance of the help of the medical profession in advancing missionary enterprise, and have done much service by the establishment of a Medical Missionary Society. The Chinese did not see any particular advantage to be gained by changing their joss, but fully appreciated the skill of Dr. Colledge in relieving their physical blindness. It is a coming back to the first lesson of the ancient faiths, when men were taught that the great Sun-God was also the giver of that knowledge which saved them from death, and helped them from pain to ease." This might be useful in the case of Africa. On the last occasion, if I remember rightly, it was alleged that the ancient Britons were first civilised by foreign missionaries. I take it that the early Britons were quite as much indebted for their civilisation to the Romans. Rapin, the historian (who was not without his authorities), after telling us that Agricola gave the finishing blow to the liberty of Britain, says:—"Though the loss of their liberty seemed to be an irreparable damage to the Britons, it was in some measure repaired by the real alteration for

* Printed from Dr. Charnock's manuscript.—ED. J. A. S. L.

the better in their customs and manners, after their being subject to the empire. In a short time they were seen to lay aside their rude and savage ways and assume the politeness of the conquerors. Arts and sciences, little regarded by the Britons before this revolution, flourished among them as much as in any other part of the Roman dominions. In a word, from mere savages, the Britons were become polite and civilised, an advantage the most northern parts of the island have not yet (1732) attained." Even prior to their conversion to Christianity the Britons had some religious notions. Upon the authority of a Burgundian (no doubt one of those sent over by the Emperor Probus), Rapin, among other Druidical maxims, gives the following:—1. Everything derives its origin from Heaven. 2. Great care is to be taken of the education of children. 3. Souls are immortal. 4. If the world is destroyed, it will be by fire or water. 5. Money lent in this world will be repaid in the next. 6. There is another world, and they who kill themselves to accompany their friends thither, will live with them there. 7. Let the disobedient be excommunicated; let him be deprived of the benefit of the law; let him be avoided by all, and rendered incapable of any employ. The Britons are said to have been first converted to Christianity by Joseph of Arimathea, who preached to them A.D. 61, but the charters and MS. relating to the subject have been considered by the best authorities to bear marks of forgery. At all events, Christian missions had made little progress towards the end of the second century; for we find Lucius (*Llew Mawr*), a British king, dispatching ambassadors to Pope Eleutherius, to request him to send some missionaries to instruct him in the Christian religion. It is not probable that Christianity had much success in Great Britain before the arrival of Augustine, who, with his companions, landed in the Isle of Thanet A.D. 597. It is a mistake to suppose that the only code of morality is to be found in Christianity; other religions, especially that of Mohammed, contain a great deal of sound morality. Again, there are the sacred books of Confucius, upon which are based laws, political and moral, still recognised by Chinese and other peoples who, taken collectively, are estimated at upwards of 400,000. Look at some of the morals of this great philosopher:—"Do to another what you would he should do unto you, and do not unto another what you would not should be done unto you. Thou only needest this law alone, it is the foundation and principle of all the rest." "A magistrate ought to honour his father and mother; he ought never to falter in this just duty; his example ought to instruct the people. He ought not to condemn old persons nor persons of merit; the people may imitate him." "Eschew vanity and pride. Although thou hadst all the prudence and ability of the ancients, if thou hast not humility, thou hast nothing. Thou art even the man of the world that deserves to be condemned." "Desire not the death of thine enemy. Thou wouldst desire it in vain; his life is in the hands of heaven." "Acknowledge thy benefits by the return of other benefits, but never revenge injuries." "Contest night and day against thy vices, and if by thy care and vigilance thou gaineest the victory over thyself, courageously attack the vices of others, but attack them not before this be done; there is nothing more ridiculous than to com-

plain of others defects when we have the very same." "We may have an aversion for an enemy without desiring revenge. The emotions of nature are not always criminal." "There are three things that a wise man ought to reverence, the laws of honour, great men, and the words of good men." "Wouldst thou learn to die well? learn first to live well." These precepts have been compared with parts of Christianity, and some have gone so far as to suggest that the latter may have been borrowed from the former. It matters little whether Christianity was borrowed from Confucius or the reverse; it exists, or rather I should say, it *did* exist; for, in later times, the religion of Christ has been superseded by the worship of mammon, cant, and hypocrisy.

Mr. REDDIE read the following speech* :—Mr. President,—I was somewhat disappointed at not being able to speak at our last meeting, my desire being to bring back this discussion to its proper anthropological bearings. But, sir, anxious as I am to do this now, I find it impossible to attempt it, without making some prefatory remarks, not only with reference to the observations of previous speakers, but also with especial reference to the letter from Mr. W. Reade, the reading of which concluded our last evening's proceedings. Sir, I am always glad, when possible, to find points of agreement with those whose opinions, as a whole, I am obliged to controvert and oppose. It affords me satisfaction, therefore, to say that I agree with Mr. Reade that you did right—or perhaps I ought to say that the Council of this Society did right—in permitting the subject of "Christian Missions among Savages" to be discussed here. As a member of the Council of this Society, who was present when Mr. Reade volunteered his paper, and who assented to the discussion of the subject, I am indeed, like you, responsible so far; and I have no wish to shrink from that responsibility, much as I differ from Mr. W. Reade's views, and disapprove of the manner in which he introduced the subject. But, in saying this, I perhaps at same time may be allowed to observe—and, indeed, in justice to you, sir, to the Council generally, and even to myself, I feel bound to observe—1. That Mr. Reade's paper was allowed to be read exceptionally, in special circumstances—he being about to start for Italy—without its being previously submitted for consideration by the Council, and reported on as to its fitness for being read; and 2. That, in no case, whether a paper is so allowed to be read exceptionally, upon the general credit of the author, or whether it be read after previous examination, which is the usual course,—in neither case ought the Society itself to be regarded as in the least degree responsible for the character of any such paper, nor considered as identified with the individual opinions expressed in any paper whatsoever which may be allowed to be read,—and, as we all know is the case, freely criticised,—at our ordinary meetings. I will go further, sir, and say, that in this instance I myself, individually, am extremely glad that Mr. Reade's paper happened to come before us in this exceptional manner, entirely on his own responsibility as to its contents, without any pruning, or correction, or suggested modification by the Council. I am not advo-

* Printed at length from Mr. Reddie's manuscript, and by his express desire, contrary to the advice of the Publication Committee.—ED. J. A. S. L.

eating, of course, any abrogation of our usually wholesome regulations on this subject; though you are aware, sir, that I am one who actually proposed a rule, which has been adopted, the object of which is to prevent the undue rejection of papers. For, indeed, I never would knowingly be party to the rejection of any paper because individually I did not like its facts or arguments. I would far rather err on the side of allowing papers to be read, which may be destined to be refuted and torn to tatters upon discussion, than suppress the views of any Fellow of this Society, or, indeed, of any other man. Any one admitted to our meetings is at liberty to stand up and express his opinions when we are discussing a subject; and we do, what few if any scientific societies as yet can boast of doing—we print the arguments used upon such occasions; and, in fact, though but a young society, we have already earned for ourselves a character for fearlessness and fair play in such matters, which, sir, I feel bound in justice to say is in a great measure due to your own fairness and fearlessness, in the perfectly impartial manner in which you have presided over our deliberations. That it may be thus sometimes right to allow equal freedom also in papers laid before us, will perhaps be best proved by a practical illustration. When Mr. Reade's paper was read, a distinguished prelate was present—Dr. Colenso. Anything he might have been pleased to say upon that occasion, in support of or against that paper, would have been listened to by us with interest, and printed in our Journal. But, sir, Dr. Colenso preferred to deliberate further upon the matter, and promised to read before us a paper on a future occasion, now fixed for the 16th inst.; and I put it to you, sir, and to this meeting (though I know it is almost superfluous to do so), whether it would not be simply absurd, if the Council were to hesitate to accept and welcome a paper, on such a subject, from such a man of mark, himself a missionary bishop, without ever thinking—nay, I will say, presuming to think—of the necessity of its being previously submitted for consideration by the Council, as is ordinarily the case. I am sure, sir, the universal feeling of this Society will be—setting apart all our individual differences—that this is a fair case for an exception to our ordinary rule; and that we shall all be prepared to hear whatever Dr. Colenso may be pleased to say,—claiming at the same time for ourselves (as doubtless he expects) the liberty to consider independently and to criticise most freely all that he may advance. I need scarcely say, sir, why I have deemed it necessary to make these observations. I trust they will be sufficient to prevent a recurrence of misapprehensions as to the position and objects of this Society, such as have unfortunately been entertained and put forth by some writers in the public press during the last few weeks. To them we might fairly say, “Strike, but hear us”; *i.e.* *Hear us out*. And now I beg leave to address myself to the subject under discussion.—In my opinion, sir, the temperate paper read by Mr. Burnard Owen, was somewhat more than an answer to the assertions and gross accusations of Mr. Winwood Reade. Instead, however, of any attempt being made to controvert Mr. Owen's facts or arguments, Mr. Harris, as an African trader, read to us another paper, in the main repeating Mr. Reade's accusations. That paper Capt. Burton

described as being a photograph, pledging his own personal experience to vouch for the accuracy of Mr. Reade's and Mr. Harris's statements; and Mr. Robt. Bruce Napoleon Walker followed upon the same side. Unfortunately, that gentleman is not here this evening; and I regret Mr. Reade's absence. We are, as it were, in this position:—Mr. W. Reade, after chalking up "No Christianity for Negroes" on our notice-board, runs away to Italy;—why not to Utah, rather, where he would find what *he* might call a "reformed Christianity", and where polygamy is the right thing, I do not know;—and Mr. Napoleon Walker is off to the Gaboon, after letting off among us his anti-Christian-missionary, though somewhat weak, discharge. Fortunately, Captain Burton remains in London, and I expected him here this evening, to receive the adversary's fire. Mr. Harris is also here, and present; and, although I had imagined that we had sufficiently disposed of Mr. Reade on the evening he read his paper, he has provoked a second castigation by addressing, through you, a lecture to all professing Christians upon their Christian obligations, couched in language such as we usually find only in documents called "Encyclical," that date from Rome, and which differ so far from Mr. Reade's, that they are addressed to those who respect the absolute authority whence they emanate! So far as I know, Captain Burton is the only one who will pay equal respect to Mr. Reade's admonitions. But I fancy that even he, considering the great horror he has expressed of "prayerful puritanism", must have been surprised at Mr. Reade's gushing prophecy of the advent of a new Protestant "reformation, of which Bishop Colenso is to be the Martin Luther"; instead of being treated to some dogma of El Islam, laid down with all the authority which might become a real Marabout, or Mr. W. Reade, on the eve of a new pilgrimage. In passing, I may say that Captain Burton's anti-puritanical feeling seems somewhat inconsistent with his constant admiration of El Islam; the leading characteristic of which he has described to us elsewhere, as being a "peculiar gloom". (*Anthropological Review*, ii, p. 250.) Sir, Mr. W. Reade writes so wildly in his enthusiasm against what he calls "religious ruffianism", as if it meant that it was those "incompetent missionaries—the Wesleyans of the Gaboon"—who had been attempting "to rob Bishop Colenso of his see"; forgetting that although it has indeed been declared, on the highest legal authority in this country, that that see is now little else than a "bubble", yet this has not been done—so far as men can yet discover—in the interest of any "little Bethels" there may be in Africa!—I do not, sir, anticipate that, when Bishop Colenso reads his paper on "Missions", he will either agree with Mr. Reade's views, or arrive at his conclusions; and I do anticipate that we shall have the subject brought before us by Dr. Colenso in such a becoming manner, that Mr. Reade must then, if not before, bethink him of the flagrant improprieties in his own manner of dealing with it. Perhaps it will enable him to realise the fact, that he has laid himself fairly open to censure for what his opponents may consider something very much akin to "*irreligious* ruffianism," even involving, though not so fairly, the character

of this Society. The great fact—and perhaps, indeed, almost the only fact—relied on by Mr. W. Reade, is one to the truth of which Captain Burton has frequently borne witness: namely, the marked progress of Mohammedism in Western Africa. The fact is not new, as I have already said: we have discussed it more than once before in this Society,—not long ago in the presence of the late Governor Freeman of Lagos, whose recent premature decease at Tunis, I am sure we must all lament. I find the fact of Mohammedan progress confirmed by what I may call the most recent authority on this subject: namely, in the official Report of Colonel Ord, “Commissioner appointed to inquire into the condition of the British Settlements on the Coast of Africa,” presented to the House of Commons only last month (Parliamentary Paper, No. 170 of 1865). In it the following passage occurs: “Gambia—There is no doubt but that Mohammedism is slowly but steadily making its way south, and that it will probably eventually exercise its sway over the whole countries in which we have established ourselves.” This advancement of Mohammedism on the one hand, and the alleged failure of Christian missions, characterised as “wretched bubbles”, on the other, are what Mr. Reade and Captain Burton mainly rely upon as facts that support their conclusions. Well, sir, I am prepared to admit as fully proved that Mohammedism is making way among the Negroes; and for the sake of discussion I will also admit, if not that all Christian missions are such “wretched bubbles” as Mr. Reade declares, yet at least that the Christian missionaries have not succeeded everywhere in making converts so well as the Marabouts, or, even let me grant, in so greatly improving the morals of the Negroes. At the same time, it must be remembered that even Mr. Harris, a long resident trader in West Africa, has felt bound to protest that, according to his experience, Mr. Reade’s most sweeping accusations are not true; for Mr. Harris has *not* found “that every Christian negress was a prostitute, and every Christian negro was a thief.” Mr. Reade appears to have been unfortunate in falling into the very worst company in Africa. So much for his five months’ experience—a somewhat dangerous probation for an impressionable young man! But Captain Burton has been no less unfortunate. “After three years’ service on the Western Coast,” he tells us, “he has only met two negroes to whose oaths he would attach the slightest importance.” (*Anthropological Review*, ii, 240.) And if perjury is also to be regarded as a fruit of Christianity, this testifies at any rate to the wide-spread influence of Christianity in West Africa. Only two negroes (Captain Burton tells us) have escaped it! How he never happened to meet, in all this time, any of Mr. Reade’s “honest and truthful” Moslems, he does not say! And, as such statements are so manifestly exaggerated and conflicting, I do not care to ask. Captain Burton has told us that his experience leads him to receive many African travellers’ tales only *cum grano salis*. I follow so prudent an example. But then, sir, after making these concessions, What follows? When I last spoke upon this subject, in Mr. Reade’s presence, I urged that the real practical issue arising out of these premises—for professing Christians at least—was to try and find out, if the Christian missionaries might not learn

something from the Mohammedans of the secret of their success. And, sir, it was therefore a pertinent question raised by Mr. Owen, when he asked Captain Burton to tell us frankly from what standpoint he viewed the subject. But since Captain Burton declined to answer, or, as he called it, refused "to be put into the confessional", I will only now observe that there seems to be an obvious absurdity in those who do not profess to be Christians discussing the merits of Christian missions, whether among savages or elsewhere. For, sir, if men do not believe Christianity to be true, they cannot reasonably be expected to be so impartial as to approve of Christian missions, whether they be successes or "wretched bubbles"; whereas, those who accept Christianity as truth—as Mr. Owen very well said—are not likely to relax their efforts on account of temporary failure; while "retreat" is certainly the very last word that will be pronounced by British Christians so long as they can hope to succeed. This, however, I admit, has not been the issue discussed by those whose arguments I am about to answer; and I pass from it altogether at present, knowing that on a future occasion that issue must be raised, when a professedly Christian missionary bishop will bring this subject again before us. Besides, sir, I maintain that not even an attempt has been made to answer Mr. Owen. Those who have spoken or written on the other side do not appear to have studied the working of Christian missions. They give their own outside experiences merely; and I therefore limit myself to answering what they have placed on record. In doing so I have departed from my hitherto invariable habit, by putting my arguments on paper. I have done so, because the tenour and tone of this whole discussion has been so unusual. In this Society heretofore, I have generally spoken briefly; I think always with the calmness becoming our usual discussions; and I believe without ever giving offence to any with whom I may have differed in opinion; without obtruding Christian doctrines, or quoting texts of Scripture, like Mr. Reade. To-night I am obliged to be more severe—in reply to what I may truly call a "savage" style of argument—and, if I am obliged to use the caustic freely and to cut unflinchingly, I am anxious to show, by writing what I say, that I do not speak thus in the mere heat of debate. Besides two papers by Mr. Reade, two by Captain Burton, and one by Mr. Harris, have been read, also two this evening, with only one by Mr. Owen in reply, and I am anxious that this disproportion should be compensated on our side. I may, however, remark incidentally, before I begin my criticism, that as not even Mr. Winwood Reade—with all the ignorance he went out of his way to display as to Christian doctrine—dare allege that Christianity either inculcates unchastity or theft, but, as he very well knows, condemns them both as sins; his main thesis, that Christian missionary teaching has converted the negroes and negresses into thieves and prostitutes, is a strange one to be publicly broached before a scientific society in a Christian country. His position is not that there are thieves and prostitutes in Africa, as, unfortunately, there are in England, in spite of Christianity; but actually in consequence of it. His whole argument at best is a puzzle-headed confusion of the *ante hoc*, *post hoc*, and

propter hoc. "What is the use," he exclaims, "of a Christian mission, if a man goes to church in the morning and burns a witch alive in the afternoon?" Really, sir, it is not only Christianity which Mr. Reade has neglected to learn something about, either before or "since he was sixteen," but he has even neglected to study English history. The great and good Sir Matthew Hale, exactly two hundred years ago (in 1664), as a judge in this country, condemned two persons to death for witchcraft; and yet he was a very good Christian; and he was also—as we learn from Mr. Bendyshe's valuable "History of Anthropology" in our *Memoirs*—a far advanced anthropologist even in that early age. But though Mr. W. Reade seems pusillanimously to argue, "Shut up the churches in Africa and let the burning of witches go on,"—we, sir, who profess to be Christians, say "No—rather go on in Africa as in England, till, by means of the Christian teaching in the churches, the burning of witches and witchcraft are extirpated." Sir, as Mr. McArthur and Mr. Nash both pertinently argued, Christianity as a religion destined for being taught among all nations and peoples, savage and civilised—has, wherever it goes, to struggle, and it has successfully struggled, with the superstitions and prejudices it has everywhere encountered. It is itself often temporarily damaged in its character through such adverse and evil influences; and besides any consequent corruptions which may have sometimes infected Christianity, it is also a very old story that both Christianity and its professors have been falsely and maliciously traduced. In a very early age of the Christian era, the despised Christians were represented as worshipping an ass's head and sacrificing and feasting upon infants. Such were the charges of ignorance and impudence against primitive Christianity. But if we consider that these slanders were invented when Christianity was little known in the world, and when there was no wide-spread circulation of the Christian Scriptures, such slander may be regarded as in fact less scandalous and as more excusable than the fresh accusations coarsely made by Mr. W. Reade. But, sir, if we may not have Captain Burton in the confessional, I claim to put him into the witness-box, and that for the express purpose of disproving the assertions or arguments of Mr. Reade, for which he has made himself jointly responsible. The proverbial "appeal from Philip drunk to Philip sober," we all have heard of; and I, sir, shall mainly appeal from the papers I have heard Captain Burton read after dinner at our evening meetings, to what I have read of his, in print, in quieter moments, written in the *Anthropological Review*. Nor can he fairly complain of this as "personal"; for who else would he believe, were I to cite the missionaries or other witnesses,—excepting always, of course, Mr. Winwood Reade? And, though "metal upon metal", as brass upon brass, "is bad heraldry", I shall for the same reason be obliged to appeal from the paper and epistle Mr. Reade has boldly put before us, while setting out upon fresh travels—I believe this time in search of the romantic—to what he had previously stated before us, with pretty nearly equal assurance, soon after his return from searching for bubbles and female ideas in Africa. These two gentlemen, then, have told us of the success of Mohammedism; but they have also

been rash enough to tell us "the reason why"; and that reason is, in a word, "polygamy"! "The forbidding of polygamy," said Mr. Reade, "alone will prevent Africa from becoming nominally Christian." Now, sir, I am not going to say all I might against polygamy this evening. I wish my present arguments to be appreciable even by the admirers of El Islam. And for their sakes I will even acknowledge there are worse religions than Mohammedism, and worse things, morally, than polygamy. The merely amateur Moslems, who are only theoretical polygamists after all, cannot quite speak of that institution from "personal experience." They may know something practically of polygamy or polygenation, including what has well been characterised as "the filthy theory" of miscegenation; and this polygamy I may be allowed perhaps to define, as a kind of bastard polygamy, which some men practise, but, unlike the real polygamist, without troubling themselves either with the responsibilities or the duties of husbands or of fathers. But then, sir, I must also admit that, though without experience as actual polygamists themselves, they may have had extensive converse and intimacy with the wives of polygamists; and, at least, we have their own word for it, that they know the negresses are furious for polygamy! That Mr. W. Reade should come and tell us this, did not surprise me, after hearing what he said before; but that that distinguished traveller and anthropologist, Captain Richard Burton, V.P.A.S.L.—a society which (with great good taste) does not admit females to its meetings—that he should come here also to tell us this, I confess, does indeed astound me! It is, in my opinion, to fetch either social science or anthropological science, to say nothing of religion, from a very strange quarter indeed; and, sir, I shall be generous towards our gallant—and, I fear, in this only too gallant—Vice-President, by making him a present of the argument, together with its dark and frail authority. In truth, I know not what to make of this sombre anthropology in petticoats—scanty as their dimensions may be. When we go to the vote before some Social Science Congress on this grand question of polygamy, I shall expect to see the poor degraded "sandwich men" walking up and down placarded, not with "Bumble for Beadle", as in a parochial election, nor—as was not many years ago the case in our streets—with "Read the Parthenon, a journal of Scientific Advancement, edited by C. W. Goodwin", etc.; but with "Go and hear Mr. Winwood Reade at the Polygraphic Hall. The negresses and Reade for polygamy"! But, sir, to be somewhat more grave, I wish to ask how polygamy can possibly be the main cause of the success and popularity of Mohammedism in Africa, when we know, as Captain Burton has himself assured us, that "Polygamy is nowhere prevalent among the mass of the population, being necessarily limited to the comparatively wealthy"? (*Anthropological Review*, ii, 240.) That Mr. Reade should think so, or say so, is not surprising; for you remember, he sneeringly told us also just before, that "Women are always the pillars of the church", as the result of his Christian experience in England; and if he learnt so little here to any purpose, we cannot expect him to have learnt very much in Africa. So he added that, "When the negroes were required by their Christian

teachers to give up their wives upon being baptised, they were indignant,—as well they might be," says Mr. Reade, "at the impertinence of these foreigners in making such a request"; while "the wives especially were furious". In the same paper, this confident but inconsiderate anthropologist tells us how differently the negro accepts Mohammed's wiser law on this subject:—"He," says Mr. Reade, "did not attempt to oust polygamy—he limited the number of wives to four." And here is Mr. Reade's argument:—The Marabout goes to King Sambo, and says, "How many wives have you Sambo?" Sambo answers, "One hundred and twenty." "Then," says the Marabout, "you must put away a hundred and sixteen of them;" and Sambo at once submits—perhaps he even joins Mr. W. Reade in admiration of the wisdom of El Islam,—or, what Mr. Reade assures us, is "Oriental Christianity." Even the wives—the hundred and sixteen wives—we are led to believe, are, in such a case, *not* furious. The real Christian teacher then comes upon the scene; and he requires Sambo, or "some other nigger," to put away only three wives, or it might be only one or two, and to be content, like most niggers, with one; when, all of a sudden, Mr. Reade takes up his parable against the Christian missionary, and bawls frantically, "What impertinence!" Sir, I do not think it necessary to say where the impertinence really lies. There certainly seems to be some influence in Africa that affects both morals and manners deleteriously—nay, that weakens the very intellect. For, as to polygamy being requisite in order to keep up the population (another argument we have heard), I consider that to be so totally at variance with all our statistical knowledge, that I pass on to the more important point—the morality of polygamy among savages. Quoting Professor Waitz, in allusion to the common assertion that, where polygamy exists, conjugal fidelity is very lax, Captain Burton says, "the author might have stated that the very reverse may be predicated with an equal amount of truth." (*Anth. Rev.*, ii, p. 240.) But this is obscurely oracular; and I am sorry to be obliged to say, that I think Captain Burton is over-reticent as to his actual experience in this matter. We are still destitute of the truth he might tell us about it. Neither Mr. Reade nor Capt. Burton has condescended to mention what are the reasons—although they doubtless know very well—*why* the negroes like polygamy. I shall not, therefore, go into these reasons; but I am prepared to do so whenever the advocates of polygamy among savages venture to put them forward in discussion. (See Waitz, i, p. 299.) Perhaps Capt. Burton will decline to say more than he has done; and we must be content to wait till he does favour the world with his confessions. They will no doubt be curious. I must now, therefore, cite another authority, one who has lived "where polygamy exists." I cite from our own *Memoirs* (vol. i, p. 323)—the author Mr. W. T. Pritchard, F.A.S.L., etc. Speaking of the Samoans, Mr. Pritchard says: "By the strict native customs, every village or town provides a *fale-tele*, or free hotel, where all travellers are received and fed gratuitously. . . . Attached to all these *fale-tele* are certain women, etc. . . . They are generally the cast-off wives of young chiefs, who by the rites (*sic*) of

polygamy may have as many wives at a time as they please, and may change them by putting away and taking others. . . . But once the wife of a chief—however lowly, however high her birth—inexorable customs forbids her becoming the wife of another man; a girl is always his, though the chief may have cast her off for years. Her only resource is to attach herself to the *fale-tele*, where she may become the *convenience* of travellers", etc. This, sir, in a country "where polygamy exists"; and one in which, also, Mr. Pritchard informs us, "the chastity of the daughters of the chief is the pride and boast of their tribes." What then, I ask, must be the moral effects of polygamy, in a country in which you, sir, have informed us—quoting M. Pruner-Bey—"the negro cares little for the chastity of his daughter, and prostitutes his slaves" (*Negro's Place in Nature*, p. 39); where "the husband or father is quite careless." (*Ib.*, p. 49.) Nay, sir, where, quoting even Mr. Winwood Reade, you tell us, "The typical negroes dwell in petty tribes, where all are equal except the women, who are slaves. . . . The typical negro, unrestrained by moral laws, spends his days in sloth, and his nights in debauchery. He smokes haschisch till he stupefies his senses, or falls into convulsions; he drinks palm-wine till he brings on a loathsome disease; he abuses children, and stabs the poor brute of a woman whose hands keep him from starvation, and he makes a trade of his own offspring." (*Ib.*, p. 47.) You quote the same authority also, sir, to tell us that, "putting all exceptions aside, the women of Africa are very inferior beings." (*Ib.*, p. 46.) And on this point I agree with Captain Burton, when he says that Mr. Reade may speak from personal knowledge; for "besides the days he spent under the roof of two American missionaries", and "the days which he spent in actual travelling", he has told us in his very candid *Savage Africa*, that he did spend some days—or at least some nights—under other roofs; and he gives us some account of how he then occupied himself: to wit, in actually beslobbering the oily faces (to say no more) of those swarthy, high-smelling "brutes" and very "inferior beings"—those "not nice animals"—the negresses; who, he now tells us, with the pride of superior knowledge, are all for polygamy! What! sir, is the *vox populi, vox Dei*, now to resolve itself into this—the voice of furious negresses, re-echoed unblushingly in England by Mr. Winwood Reade and Capt. Burton? Or is this a symptom that the advanced opinion so lately propounded to Westminster by Mr. John Stuart Mill, in favour of female suffrages, has penetrated even to the Conservative Club, which Mr. Reade sometimes patronises, although, if not in politics, at least in religion, he is an uncompromising radical "reformer"—that is, after the fashion of Mohammed? But, sir, since I have referred to your memoir on *The Negro's Place in Nature*, I must quote on; for you have certainly much to unlearn and to unsay about the negro character, if Mr. Winwood Reade's present statements are to stand good. "'Show me a black man, and I will show you a thief,' say the traders" (p. 59); that is, provided the black man be a Christian, must now be added, according to Mr. Reade. Quoting the author of *Wanderings in West Africa*, you tell

us that "In Sierra Leone the Christian tenderness of the *British Government* has tended to demoralise the natives. . . . The women have become as vicious as those of Egypt, the worst of kingdoms—worse than the men, bad as they are" (p. 57). But now, sir, to this you must add, upon the experience of Mr. Reade's five months' trip, that it is not the too tender laws of the government, but the teaching and example of the Christian missionaries, that have produced this lamentable state of things. You must elevate the original negro and ngress to a higher place in nature, and tell us that all the evidence you aduced of their physical, and especially of their mental and moral (p. 4) differences and inferiority, compared with us, applies only to the Christians among them! You say, sir (p. 27), that "the assertion that the negro only requires an opportunity for becoming civilised, is disproved by history." And you add, "not only has the negro race never civilised itself, but it has never accepted any other civilisation." But, it would appear, you were grossly ignorant of the present "great reformation" going on, and of how Mohammedism is civilising the negro! It is very true, sir, that in your memoir you also quoted some rather old authors; as, for instance, from Mr. W. Bosman in 1705, when I fear few Christian, and at least no Protestant or puritan missionaries had as yet found their way to Africa, to corrupt its pristine innocence. "Bosman writes, 'the negroes are all, without exception, crafty, villanous, and fraudulent.'" (p. 41.) But, sir, as the London Missionary Society did not hold its first meeting till 1794, nearly one hundred years later, all that Bosman says, and you too credulously believed, must be, of course, a mistake. Or perhaps Mr. Reade will attribute this universal negro demoralisation entirely to the influence of the Portuguese conversion of Congo in the fifteenth century, even although "Wesleyan missionaries" did not exist at that time! But, sir, you also quote Col. Hamilton Smith as saying, that "*even* Christianity of more than three centuries' duration in Congo has scarcely excited a progressive civilisation" (p. 44); and that, I believe, sir, was Christianity *without* "Protestant divisions". But how ignorant Col. Smith and you must be, according to Mr. Reade, to suppose that Christianity could do aught but *uncivilise*! But I must take leave of your exploded evidences as to the inherent character of the negroes generally, curious to learn how far you are now prepared to correct them on the assurance of Mr. W. Reade. For myself, I cannot accept his authority as worth much; for this simple reason (besides others I have already given), because I cannot understand contradictions; and I am now about to show that Mr. Reade not only contradicts other people, but contradicts himself. For instance, in his recent paper, he described the Wesleyan missionaries of the Gambia as "incompetent men, and so also, with rare exceptions, those of the Church of England." He also alleged that some of the vessels, selected (as he called it) to bottle up religious oxygen, "are not of the most cleanly character"; and that "many missionaries are so ignorant or knavish, that no work of this kind could prosper at their hands." In his pseudo-Christian epistle, read by you the other evening, as a kind of valedictory sermon, he used, I

think, even stronger language against these devoted Wesleyans. But, when we discussed your *Memoir*, in Nov. and Dec. 1863 (*Journal*, ii, p. xli), Mr. Reade, then fresh from Africa, expressly declared, "*I have nothing to say against the Wesleyan missionaries in Sierra Leone; they are a very good kind of men*"; nay, he then contradicted in anticipation, also, what he as well as Mr. Harris has since alleged against them as to their bad character and idleness; for he then said, "*I believe them to be a pious, hard-working people*." On that occasion, also, Mr. Reade gave us a different and more sober explanation of the probable cause of the success of El Islam. He never once then said that this was due to polygamy, but to temperance and education. His words were then (p. xix), "The Mohammedans at present are civilising a great part of Africa, by converting the inhabitants to their own religion, and by teaching them Arabic (for wherever the Mohammedans go the Koran goes with them), and by elevating their character in every possible way. For example, they forbid drunkenness, which is the great vice of the negro, but which the laws of the Mohammedan religion forbid." Well, sir, I think this is very sensible, though it characteristically ignores the fact that Christianity also forbids drunkenness. It sounds something like the voice of "Philip sober", notwithstanding Captain Burton's reiteration the other evening of Mr. Reade's grand argument—the negresses' views of polygamy! Nay, sir, in his book on *Savage Africa*, Mr. Reade has written other sensible things about the negro. Talking of imitating the "noble savage—the child of nature"—as some have advised, he indignantly asks, "Must we instruct our children in vice at the tenderest possible age, and sell them in marriage as soon as they arrive at puberty? Must we make our wives mothers when they are scarcely girls; treat them as slaves when they are women, and kill them when they are old?" (quoted in *Anth. Review*, vol. ii, p. 125) and so on; and he does not then charge that lamentable state of things upon missionaries or Christianity, nor think it would be much of an argument to tell either Englishmen or Christians, even if they happen to be Fellows of the Anthropological Society, that the negresses are quite content with this state of utter degradation!—But, sir, I have yet another witness to cross-examine on the same side—Capt. Burton himself. In November 1864, the great success of Mohammedism was not due to polygamy, in Captain Burton's opinion, nor was the demoralisation of the negroes due to the bad example or the teaching of Christian missionaries. Here was, then, our Vice-President's sober judgment. Quoting Professor Waitz, he says, "Too much attention cannot be given to this assertion: 'THE INTERCOURSE OF A FOREIGN COUNTRY MAY BECOME A CURSE, IF THE NATIVES ARE PROVIDED WITH BRANDY, FIRE-ARMS, AND SIMILAR ARTICLES WHICH LEAD TO THEIR DESTRUCTION.'" These words Captain Burton had printed all in capitals in the *Anthropological Review* (ii, p. 247); and he adds from himself, "The English trade with the oil rivers of the Biafran Bight, to mention no other places, is I believe a greater curse to the country, a more effectually demoralising agent, and a greater disgrace to a civilised people, than any evil that ever prevailed amongst the aborigines. The Christian *merchants*"

[not *missionaries*, be it observed] "of Zanzibar have inflicted the same miseries upon the East African coast." Sir, I think this testimony goes to substantiate Mr. Burnard Owen's thesis, and refutes all Mr. Winwood Reade's most scandalous accusations. But there is nothing in it very new, though I am glad to cite Captain Burton as a recent witness. Did time allow, I could adduce the same proofs, and even more important facts, from a host of witnesses who were examined before a Parliamentary Committee in 1837; but I refrain. I am anxious to prove almost everything by citations from our own anthropological publications, for the very credit of the Society. One brief sentence, however, I shall quote from that committee's report, as bearing intimately upon the whole issues of these discussions. The committee came to this conclusion, after taking much evidence—and one of that committee was the present eminent, clear-headed, Chancellor of the Exchequer, Mr. Gladstone—"It is not too much to say, that the intercourse of Europeans in general, without any exception in favour of the subjects of Great Britain, has been, *unless when attended by missionary exertions*, a source of many calamities to uncivilised nations." May I go on, and quote another six lines? "Too often their territory has been usurped; their property seized; their numbers diminished; their character debased; the spread of civilisation impeded. European vices and diseases have been introduced among them, and they have been familiarised with the use of the most potent instruments, for the subtle or the violent destruction of human life, namely, brandy and gunpowder." (*Blue Book*, p. 5.) But, sir, while we may read a great deal like this about traders, as well as other travelling Europeans, not very new, and though we have been told much about Christian missionaries, which, if new, is not very true, we have not been told as much about El Islam as we might have expected to hear from our outspoken travellers, who are so well informed in their own opinion. One cause of the failure of Christian missions, Mr. Harris attributes to their divisions into sects, which may be true to a certain extent; and we have tacitly been led to suppose there are no divisions in the perfect system of El Islam. But in Col. Ord's Report, from which I have already quoted, I find he says that "between these two classes [he is speaking of two classes of Moslems in the Gambia] there is an unfortunate animosity, which is constantly bringing them into collision. . . . For two years past a fanatic of the name of Maba has been preaching a crusade against the unbelievers of his race, and after desolating a large tract of country on the right of the river, burning the towns, and carrying into captivity the inhabitants, he was finally checked by the influence of the governor," etc. (p. 8). This seems worse than any effects of "Christian divisions" on record! The Moslems, it would appear, are not yet quite in a paradisiacal state, even in West Africa! Their Utopian condition exists, like other Utopias, only in the imagination of their far-off, and, perhaps therefore, more enthusiastic admirers. Even the history of Savage Africa, it seems, must be "dashed with a little poetry"—and that even by our experienced travellers, as well as by the literary lounge! Captain Burton incidentally declared "trial by jury in Africa to be a farce"; and I was not surprised to

hear this, considering what we know of its working occasionally nearer home. But yet, I find appended to Col. Ord's Report a petition from nine traders at Lagos, in which they complain, "We are refused to be tried by juries!"—I think, sir, it was Mr. Walker who adduced, as an argument against perpetuating Christian missions in Africa, the case of a poor negro who sang hymns when he was drunk! And the same gentleman managed also to lug into this discussion the naughty conduct of his own associates in Glasgow, who drink too much whisky-toddy on the Sunday evenings! Perhaps, sir, following Mr. Reade, he thinks that *therefore* Christianity had better cease to be taught in Glasgow! More logical moralists—to say nothing of anthropologists—might, on the contrary, think that Mr. Walker's friends want rather to be taught to add to their faith—if they profess the Christian faith—some sterner virtue, and a better knowledge of Christian morals, especially temperance. As regards the poor negro and his hymn,—this, too, is a very old story. In this room (Royal Society of Literature), Mr. Walker might have remembered the piety of Michael Cassio in his cups! I have heard, too, of one authentic case, in which a gentleman acquired a lasting distaste for Christianity itself, from being blamed (bysome meddlesome females) for too lustily singing hymns, in his days of youth and innocence, I believe when perfectly sober;—of others (like the Moor's lieutenant) who go fairly down on their knees when not in that condition;—not in Africa, but here in England!—And, sir, having given some attention to psychology—as a proper branch of anthropology—and remembering the well-worn adage, *in vino veritas*, I have always set down these indications, of what was beneath the surface, rather to the credit of those who exhibited them. It might be well, indeed, for many civilised Europeans, passing outwardly for Christians, if never worse things than hymns or prayers escaped their lips, when "overtaken" (as we call it) "with wine"! But, to conclude. It was very well put in one of the newspapers, when commenting upon our last meeting, that the issue of this discussion had come to be simply a question of Traders *versus* Missionaries—that is, Which of these classes are the real demoralisers of the negroes? I think I have produced some important evidence bearing upon that issue—which, I beg to say, is none of my raising. I shall add one other brief testimony, by a distinguished African traveller. He says: "The Christian traders"—that is, traders who are so-called Christians, because they are white or come from England; but not, at any rate, the Christian missionaries—No—my present witness says—"the *Christian traders on the West African coast have made the traffic* [in ardent spirits] *a curse far heavier than the slave export.*" I quote from the *Anthropological Review*, vol. ii, p. 240. These are the words of Capt. Richard Burton; and they ought, in my opinion, to be now printed in *Italics*, for the edification of Mr. Winwood Reade.

The Rev. Mr. SCHRENK, who said he was a missionary from the Gold Coast (of the Bâle mission), thought several mistakes had been made in the course of the discussion. They had been told that a sum of £21,000 had been spent for missions on the west coast of Africa; but the fact was, there had been a larger sum expended. They had

been told by Dr. Charnock that some of the most beautiful of Christian precepts had been borrowed from Confucius. With regard to polygamy, which was allowed by Mohammed, it could not be said to be in accordance with the precept of doing unto others what you would that they should do unto you; for every man likes to have his own wife or wives: he does not allow another man to share with him. If that be the case, he should allow the same privilege to his wife, *i. e.*, she should have the right to have a husband without other women sharing with her. They had heard it said that the missionaries should not only preach, but should teach the people how to work. For his own part he placed much confidence in words. The spoken and written word is a power in the world. At that meeting, for instance, they heard lecturers address them, and they could not but feel that the words they heard had influence on their minds. If a reasonable missionary spoke with full confidence in the words he uttered, the same confidence would be imparted to those who heard him, and they might feel justified in trusting to his preaching. But it was not true that the missionaries neglected to teach the negroes how to work. He worked with his own hands, and, after working at manual labour during the day, he worked with his pen at night. He and others worked in their shops with the negroes in teaching them various mechanical arts. There were many negroes at his station who could make locks; there were carpenters and joiners; and there was one man who had made all the furniture in his own house, which he had fitted out in a superior manner. Under the influence of the missionaries, the negroes had begun to make roads; thirty-five miles of road into the interior of the country had already been constructed. The converted negroes had also plantations of coffee and cotton. There were some black missionaries on the west coast of Africa who were so far reclaimed from their original state as to have become sober, honest, industrious, and men of character. If a man has lived in the black country for years, he would be convinced of the benefits derived from missionary efforts. Could it be supposed that societies consisting of men of science and intelligence would go on for thirty years, and longer, sacrificing health and money, if they could point to no satisfactory results from their missions? And if negroes had become worse by their efforts than they were before, we would appeal to their reason and their understanding if it were likely for a reasonable missionary to continue his residence in such an unhealthy climate. At Sierra Leone, he could state from his own experience that there were 170 boys in the school there, a number of whom go to industrial shops and learn trades. At Sierra Leone, indeed, nine missionary congregations were self-supporting, the negroes paying their missionaries and teachers. No better instance could be afforded of the success of their efforts than that. In opposition to these facts they had only the statements of traders and hearsay evidence. Then he would mention the name of Mr. Hoffmann (American missionary in Cape Palmas), a man of a high moral character. He had stayed at Cape Palmas many years, and could point satisfactorily to the successful results of his labours. He (Mr. Schrenk) visited Mr. Hoffmann in company of Captain Burton, and Captain Burton himself thinks very

highly about Mr. Hoffmann. The American missionaries had erected a hospital there for British and other sailors; and Englishmen ought to acknowledge thankfully the benefits which even British sailors derive from that hospital. At Cape Coast Castle and along that coast they would find hundreds of people who had passed through the Wesleyan schools, and could read, write, and cipher very creditably. A number of native merchants trading with England would not be found there were there no Wesleyan schools. In the church missionary schools at Abeokuta he could point to the Rev. Mr. Hinderer, who has been living there for many years, without European comforts, in prosecuting the work of teaching and converting the natives; and was it likely he would continue to do that if there were no results? The missionaries he could confidently say had done great things in western Africa, and the British public had no reason to complain in the regard to money spent for those missions.

The PRESIDENT said the speeches had been so long, that he must limit the remainder to ten minutes each.

The Rev. J. MARTIN, a missionary from the Gold Coast, resented the attacks on the missionaries that had been made by Captain Burton, Mr. Reade, and Mr. Harris. Reflections had been made on the missionaries on the alleged grounds that they went about wearing black coats and stiff neckties, and keeping themselves aloof from the people. Now the fact was, that a black coat would not be endurable in that climate, and it was his practice to wear a short light jacket. It has been alleged against them, also, that they lived luxurious lives. Now the truth was, that the missionaries, when visited by European friends, brought out their best to entertain them; and Mr. Harris was not the only one who had partaken of their hospitality and afterwards abused them for it. In considering the question—what is the success of missionary labours, they should bear in mind what they have a right to expect. Christianity had not been established in this country till after long repeated efforts; and if our own countrymen had been so long in taking hold of the truths of the Gospel, why should it be made a matter of complaint that it had not made greater progress in Africa? It had been said by Mr. Reade that all the converted negroes were thieves; but for his own part he could aver that he had never lost a penny by them. Against the principles and practice of the missionaries, the whole extent of Mr. Harris's charges against them was that there had been ten failures, and from those he inferred that the failures had been universal. He could adduce numerous instances in which the men had maintained their honesty, and the women their chastity for many years. One testimony, at least, which would be admitted to be unbiassed, as to the value of missionary exertions, was to be found in a letter from Dahome, addressed to the Wesleyan Missionary Society.

The PRESIDENT requested the speaker to mention the name of his authority, as it was customary in that Society to have the signature to any letter read before the letter itself.

The Rev. J. MARTIN said the letter was written by Richard F. Burton, and was dated June 13th, 1863. The following is the letter alluded to:

"To the Members of the Wesleyan Committee :— " Whydah, June 13th, 1868,

"GENTLEMEN,—I cannot terminate my journey to Dahomey without expressing my gratitude to your missionary at Whydah, the Rev. Mr. Bernasko. That gentleman not only made my visit pleasant by his kindness and civility, but also enabled me, by his influence with the king, to contribute my hints in the cause of humanity and civilisation. Having heard that you entertain an idea of removing the Wesleyan missionary from Whydah, I would respectfully suggest to you the advisability of adopting a wholly different course—of strengthening rather than abolishing it; and wholly unsolicited I have ventured to address to you these few lines. I am, gentlemen, yours, etc., "RICHARD F. BURTON."

Captain FISHBOURNE said that he had had much experience on the west coast of Africa, but that experience was not such as to bear out the assertions of Mr. Reade. In considering the question of the results of missionary efforts they should bear in mind the materials with which the missionaries have to deal. He had been employed for some time off the coast of Sierra Leone in suppressing the slave trade. The negroes when taken out of the slave ships were in such a state of prostration that they required to be nursed for three months. He had seen 2,500 lying about the slave-yards in the most grotesque attitudes, something resembling paper-jointed men. He knew that at least 10,000 slaves within a very short period had been liberated at Sierra Leone. He could speak as to the condition of the schools of the missionaries, as he had given much attention to the subject, and he did not think that any one would abuse the Christian missionaries there if they knew what Christianity was. The children in the missionary schools might put to the blush the Christian schools of this country. In Sierra Leone the greater part of the population have been slaves, and he has known many who have been converted to Christianity who act as missionaries, and it was remarkable to observe the striking contrast between them and unconverted negroes. Among the number he might mention Samuel Crowther. He was eighteen months in the ship with Capt. F., and was made the seamen's schoolmaster. He was then about twenty-five years of age, and notwithstanding the prejudices of the sailors to the black man, they submitted willingly to be taught by him, and treated him with great respect. He has now been made a bishop in connexion with the Church of England. The condition of Liberia fully justified what had been said of it by the missionaries, and their influence was extending widely. At Zanzibar the influence exercised by the traders on the negroes was exceedingly injurious. Their statements might be true, but it should be borne in mind that there are two classes of negroes in Africa, as there are different classes in this country, and the bad might be exceptional and the good the rule. In this as in other matters they should look on both sides of the shield.

Mr. A. A. FRASER, who said he had spent much time in the Pacific, especially at the Friendly Islands, was about to state what the missionaries had done there, when

The PRESIDENT said the discussion for that evening must be confined to the subject treated of in Mr. Owen's paper.

Mr. C. CARTER BLAKE said :* I feel some diffidence in addressing you on this subject, as the two opposing lines of argument which most of my predecessors have adopted render the *tertium quid* which I would be inclined to advocate probably unacceptable to a vast

* Printed from Mr. Carter Blake's manuscript.—ED. J. A. S. L.

majority of you. A Fellow of the Anthropological Society of London has, however, a perfect right to say what he chooses, and I trust that my remarks will be no exception to the general rule. Whether I view this question by the light which may have been thrown on it by Mr. Burnard Owen, or by that of Mr. Winwood Reade, in both cases I am struck with the mutual desire to bring forward as few facts as possible in behalf of the illustrated doctrine, and the inclination to throw the burden of interpreting an unintelligible statement upon the adversary. To take Mr. Winwood Reade's argument, even supposing that the inefficacy of Protestant missions had been triumphantly demonstrated by Mr. Winwood Reade, this would be no argument that negro civilisation and negro conversion were impossible. That immoralities may be demonstrated amongst the missionaries must be admitted; the fact is too patent to admit either apology or justification. But even on the theory that in every deep there is a lower deep still, still this argument is about on a par with that adduced by Mr. Burnard Owen, that it is the trader whose sale of rum interferes with the promulgation of the "Gospel." Considering that some Protestant missionaries who are permitted to trade, sell spirits and ammunition to the negroes, it is much to be desired that the exceedingly weak argument of depreciating the moral character of one's antagonist should be discarded on both sides. It is, however, not in the slightest degree necessary for any one to identify himself with the opinions which Mr. Reade advocates, whilst condemning those which Mr. Burnard Owen has endeavoured to prove. I dissent most strongly from nearly everything which Mr. Reade has said; nay, I regret that he has adopted a tone of language both in his original paper and in the letter which was read on his behalf at the last meeting, which has necessitated the use of expressions equally derogatory to the rules of scientific discussion on the other side of the argument. The probable truth of the question seems to be neither on the side of Mr. Reade, nor on that of his more temperate and less experienced antagonists. That some missionaries may be immoral or foolish is a fact, which although true, leads to no other practical result than to demonstrate the truism that in every part of the world where men are placed, who may have the misfortune to be unable to resist the temptations to crime which climate and society afford, vice is the necessary result. This is a fact which is anthropologically as true of missionaries as of any other men; and while we must admit that missionaries are no exception to the rule, we should recollect that, *ceteris paribus*, it has not been proved that there are a greater proportion of evil men amongst missionaries than amongst soldiers, traders, or even travellers. Many missionaries, even on the showing of Mr. Reade, are holy and devout men, who are actuated with no desire of self-aggrandisement, no incentive to the perpetration of licentious or of avaricious crime. This fact is universally admitted, and it no doubt has its due weight with the dispassionate observer. On the other hand, when Mr. McArthur cites instances of the wondrous moral aptitude displayed by some of his hypothetical negroes, a great amount of incredulity is excited in the breast of the anthropologist. When he tells us of the moral virtues which some of his instances of negro

Christianity display, we would desire to be furnished with the names, dates, and localities of these extraordinary mental phenomena. One of his instances may be alluded to. "Bishop" Crowther is frequently cited as an example of the civilised negro, improved by the missionaries out of the hold of the slaver. Now, unless Mr. McArthur has had some positive physical evidence of "Bishop" Crowther's truly negro parentage (I mean such physiological evidence as would satisfy a jury in the Divorce Court), I must throw all the weight of proving his improbable thesis on himself. The predominance of Haoussa blood in the neighbourhood where "Bishop" Crowther states that he was born is significantly omitted from the discussion, and those who have ever seen this highly educated African will, while admitting the darkness of his complexion and the woolliness of his hair, prefer, as in many other cases where the parentage of the negro is discussed, to avoid this delicate question. The story which is cited by Mr. Burnard Owen of the negro student who begged for copies of Alford's *Greek Testament*, Maunder's *Treasury of Universal Knowledge*, Spurgeon's *Sermons*, and other depositories of critical, elementary, or superfluous information, he must pardon me for saying that I take "*cum libro salis*". If any of our West African travellers will tell us what the negroes do with these books, even supposing them to be ever sent, I am sure that anthropologists would be highly gratified. Indeed, the feeling of relief which our controversialists would undergo by relegating to the negro the interpretation of a few disputed points, induces me to press this question. Probably Mr. Burnard Owen thinks that the time may come when the Gaboon or the Bonny River may be the court of appeal to which all disputed points may be referred; that the words—*Gabona locuta est; causa finita est*—may be used by some future postulant for religious advice from the lips of erudite and whitey-brown Africans on the Equatorial Coast. Another source of doubt is that, in nearly every case, Mr. Owen has cited the facts which missionaries have stated in their own behalf, not those which dispassionate observers have described respecting them. The argument in favour of this procedure is one which I shall endeavour to dispose of. It is alleged that the testimony of the missionaries is as good as that of the traders. Now, whilst of course admitting that the testimony of an upright missionary may be more reliable than that of a dishonest trader in individual cases, still we must remember that in the case of the missionary there exist temptations to exaggeration to which the trader is not subject. The missionary has his annual report to make; the populace at home are ready to receive with avidity any statement of the success of his labours; and the Society who employs him are willing to afford him favourable support should he paint matters *couleur de rose* or to withdraw their assistance should the narratives of his labours be discouraging. The audience whom he has to satisfy, or to amuse, are seldom composed of persons famous for their geographical or anthropological knowledge; they rarely perform the thankless task of examining the missionary's course on the map; and few are in a position to criticise the statements, which in an amended form, his employers may lay before English society. The trader has no such inducements. He has his cargo to sell at the best price he

can, and the necessities which sale produces bring him into more contact with the natives than he who has merely to preach to them once a week. His employers at home desire from him no flaming accounts of the moral or mental degradation or of the improvement of the negroes, and he is left at leisure to observe what he pleases, and if he cares, to publish it when or how he likes. I have not thought it worth while in these remarks to notice the attacks which the inferior section of the press have made upon our Society. But I trust that none of our Fellows will care so little for the true advancement of the science of anthropology as to be deterred by these attacks from expressing their opinions. The task before us is to arrive at the truth, heedless of the consequences which its diffusion may produce on the prejudices of any one, and regardless of the diatribes of those who may feel the bitter disappointment of discovering that they have devoted their lives to the advancement of an unhappy delusion.

Mr. J. GOULD AVERY remarked that, at the opening of the discussion it might have been supposed that the missionary efforts had not been attended with any success. The subsequent speakers had brought forward evidence to prove that they had effected a great deal of good. He regretted that the Society should have placed itself in antagonism to the Christian religion.

The PRESIDENT explained that the Society had done nothing of the kind, and that the Council had only permitted the discussion of the subject with a view to elucidate the truth.

Mr. AVERY in continuation said, that they had at all events given rise to much of the *odium theologicum*. It had been said by Mr. Reade of a black missionary preacher at Sierra Leone, that he had attempted to explain how the negro became a white man. Now that story appeared upwards of thirty years ago, and was to be found in Joe Miller. Something had been said of the success of missionary efforts in South Africa. He had a friend who laboured there for several years and, he reported that his success was most decided. It had been said that the missionaries were bad witnesses as to the success of their own efforts; but the fact that they were risking their lives in the cause was the best proof they could give that they were sincere. As to the assertion of the bad condition of the negroes at Sierra Leone, he must say that the negroes there were of a very low class—the lowest in all Africa; and yet they had heard that among them great success had been realised. The missionaries converted the negroes, but they taught them at the same time useful industry. He concluded by observing that he was exceedingly sorry that anything should have been said in that room that might be construed to be antagonistic to Christianity.

Mr. BENDYSHE said the object of that Society was to be “all things to all men” and to obtain truth from whatever quarter it presented itself. If the missionaries spoke truth they were the best friends of the Society. He thought himself that “*amicus Christus, magis amica veritas.*”

The Rev. DUNBAR HEATH said he rose to calm a slight degree of asperity which had arisen during the discussion. He hoped they were all truly unprejudiced witnesses. The resident merchants on the

west coast of Africa did not complain of the missionaries because they attempted to introduce Christianity; but what they said was, that they had not introduced enough of Christianity. That at least was the feeling in his mind on listening to the evidence of the facts brought before them. As to the complaint of the three methods by which it had been attempted to introduce Christianity among the negroes, that was a question which had best be reserved for the future, and not be entered upon on that occasion. He hoped that there was no opposition in that Society to the opinion of the great practical good done by Christianity. Those who had objected to the efforts of the missionaries had not said that Christianity had done any harm.

The Rev. WM. ARTHUR said that he belonged to that untruthful class of missionaries. He should be sorry to think that commerce and Christianity were antagonistic. True, some traders opposed missions, but the majority did not; and missionaries did not deprecate a scrutiny of the respective characters of their opponents and supporters. Much had been said about the money spent. If this Society had any disposition to examine the question in a scientific spirit (and with profound submission to the Chair, he would ask what scientific fact had that night been attested, what scientific conclusions drawn?), if they were disposed to inquire into facts capable of positive test and proof, he would submit this question, Whether the ultimate economic effect of moneys spent on missions was not to open new markets for England? What was the point in doubt as to the negro? Was it whether his intellect was capable of accepting the doctrines of Christianity? That has passed out of the province of guesses, or individual testimony, into that of demonstrated fact. It is as much matter of historical evidence that the negro intellect can accept Christianity, as that the Anglo-Saxon can. Gentlemen say no; but I challenge them to name a form of Christianity, Roman Catholic or Protestant, even down to minute shades and varieties, of which we shall not produce a negro disciple. I have seen negro Christians of different tribes, seen them live, seen them die; lived in the same house with them, seen them study, seen them tempted, heard them preach, and marked their whole career. There was my friend Joseph Wright, a negro whose parentage no physiologist could challenge; having witnessed his thirst for knowledge, his progress, his labours, his conduct to his mother, his letters to his children, I should set him in presence of any gentleman who called the negro an "unpleasant animal", and say, "He is as much a man as you are". A gentleman has said, it does not matter whether Confucius borrowed from Christianity, or Christianity from Confucius. To a philosopher it would matter much. Quoting from Confucius some precepts resembling those of the Gospel, he reminded us that he lived five hundred years before Christ. But how long did Moses live before Confucius? Those precepts, wonderful in Confucius, were the A B C of Old Testament morals; and the most elevated and comprehensive expression of all was not of Confucius or Christ, but of Moses, "Thou shalt love thy neighbour as thyself". That gentleman declared there was much good moral teaching in the Koran. Of course there is. It borrows wholesale from both

Old Testament and New, but often deteriorates what it transplants. Much has been said of the success of Mohammedan missions in Africa. On whom do they gain? on Christians? No; but on pagans. Mohammedanism has so much of the Bible in it that it is stronger than paganism. But look at it where it touches upon Christianity. On the East it retires before Protestant England; on the North, before Greek Russia; on the West, before Roman France. *La Turquie périclisse faute de Turques*. Wherever it touches on the boundaries of Christianity its frontiers fall in.

Dr. UNDERHILL (Secretary to the Baptist Missionary Society), said he hoped to have heard a scientific discussion of the question, but he had been disappointed. With regard to the assertions that had been made that Islamism was better adapted to the improvement of the negroes, that it had made much greater progress than Christianity, and that the dogmas of Christianity ought not to be taught to savage races, he must confess that the gentlemen who made those assertions seemed to him to exhibit as strong a bias *against* Christianity, as missionaries were said to show in favour of the views they hold. It had been shown in that meeting that the testimony of Capt. Burton was of little value, as he had several times contradicted himself. With regard to the opinion that the money expended on missions had better be spent on the destitute population of our own country, he referred to the labours of a Christian community of the neighbouring district of St. Giles, which, while giving some £500 a year to foreign missions, expended more than £100 a year to raise and benefit the degraded inhabitants of that noted locality. It would be well for the censors of missionaries to follow that example.

The PRESIDENT said he had listened for two nights to the various speakers without saying a word. He had felt annoyed at the irregular and unscientific form which the discussion had taken. As to the accusation that the Society seemed to be prejudiced in the matter, he could only say that his wish was merely to know the truth. He was prepared to listen to both sides; and during that evening the speakers in favour of the missionaries had been more numerous than those against them. He regretted that the discussion had not been more philosophic. It should certainly have been more specific, and taken into consideration in connection with the different races of man. The President expressed his regret at the accusations and recriminations that had taken place during the discussion: he was sorry to hear Mr. Owen speak of Mr. Reade and Captain Burton in his paper as men who only believed in themselves. Such remarks ought not to have been uttered. As to the condition of the natives of Sierra Leone, he believed that the creoles there were the worst savages in Africa. The question was, were the missionaries to blame for not having improved them? From all that had been said in the course of the discussion he must admit he could not form an opinion on the subject. The only positive evidence they had was that relating to Gaboon; and they had it from the authority of a missionary himself that during twenty-three years of unceasing labour he had not made

a single genuine convert. That testimony came from the Rev. W. Walker, an American missionary. It had been said that this subject ought only to be discussed by professed Christians, but he contended that the subject could only be properly discussed by men of science, who were bound to look on all creeds in the same manner, and it was from a scientific point of view alone it could be considered in that Society. With regard to Captain Burton's letter which had been quoted, he thought that not much weight should be attached to it, as it was merely a complimentary letter, for which they had to thank the good-nature of Captain Burton. He very much regretted that matters had been introduced into the discussion which were not at all relevant. Whether, for instance, the precepts of Christianity had been borrowed from Confucius, or whether Christianity is likely to become extinct in this country, were questions with which that Society had nothing whatever to do.

Mr. J. M. HARRIS made the following reply: * With reference to the remarks made by Mr. M'Arthur, all I can say is, if the friends and supporters of missionary societies are satisfied, and consider the doubtful saving of one negro soul an adequate return for the sacrifice of hundreds of valuable European lives, and the expenditure of millions of money, I can only pity the white man, and must regret that the white man is reckoned of so little value as compared with the negro. Upon these terms I cannot attempt to argue with this gentleman; and I must leave it for some more able person to carry on an argument where one side starts with so low a value of human beings of his own class. I really think we should start fair, and value white and negro at least the same. I regret exceedingly that the opinions and facts stated by Mr. Reade, Captain Burton, Mr. Walker, myself, and other gentlemen of the same opinions on this subject, should give offence, and call forth such very strong remarks; but I am aware it is an unthankful office to prove to any person that his cherished theories are wrong; and it is also dangerous to interfere in any way with vested rights. Now, gentlemen, I suppose the staunchest supporters of missions, and the most ardent advocates for missionary efforts, will allow it is for the benefit of the negro that missionaries are sent to Africa, and not to create employment for Europeans. I uphold, if they are true in this profession, and are not acting in support of a clique, that they would be anxious to hear fair and unbiased arguments on this subject, to enable them to make their efforts as beneficial as possible to the negro, and the expenditure of lives and money (if it is necessary to make it) should bring the largest possible amount of real benefit and improvement. We all know that a reformer attempting to reduce the salaries or privileges of any branch of the public service, will meet with strong opposition from those with whose interests he is interfering. I may be answered by this argument—that missionaries do not look for their reward here, but hereafter; but I cannot reconcile this profession, when I think of the following things. It is strange that when a missionary is fit for his work—that

* Printed from Mr. Harris's MS. ED. J. A. S. L.

is to say, acclimatised, accustomed to the natives, and just becoming what men of other professions would call efficient—he leaves the coast and gets some comfortable living at home, as secretary to the society, or something of that description, and leaves the mission station to some younger man, who has to get over the acclimatising (and which will take him some time) before he can be of use. This looks to me very much like looking after a few of the good things here, as well as what they expect hereafter. And it is also very rarely the case that you see men giving up a good living at home to go out as a missionary, excepting occasionally to a bishopric. This surely cannot be for want of good men amongst the clergymen of England. It appears that the mission station is the stepping-stone, and much similar to the foreign stations of all branches of the public service; and the more dangerous the station, the more rapid the promotion. In reading the paper by our President, on *The Negro's Place in Nature*, I find he quotes from Dr. Clarke of Sierra Leone, and several other writers and travellers, the whole of whom give almost the same opinions as those given by myself and others of the tabooed classes of travellers and traders. Dr. Clarke resided many years in Sierra Leone, and his professional services as colonial surgeon would have given him every opportunity of becoming acquainted with the people as they are, and not as they are painted. Every person who knows Dr. Clarke, would say that he would be more likely to be biased in favour of the Sierra Leone men than otherwise; but read what he says about them, and I think you will find his description of their characters much worse than anything in my remarks. As to the remarks made by Mr. Owen, I am not allowed to reply to them. Mr. Nichol and his *Greek Testaments*, the paradise of Wilberforce and Regent; let any person who knew those places ten years since go there now, and say if he finds those places progressed or otherwise. In conclusion, all I can say is, if any one wishes to get a true statement of facts, let them send out an unbiased person to report for them. He must not go to Sierra Leone and take what he sees at the churches, chapels, and schools as a fair test, but go to any government officer, who can show him the real life of Sierra Leone, and not the superficial—and I am certain he will return with the same conviction as Colonel Orde, and all who go there, that the worst characters in Africa will be found amongst the Sierra Leone people; and, instead of their being an example to the natives on the other parts of the coast, they are always mistrusted and looked upon with suspicion wherever they go. I uphold, to correct this state of things it is necessary to change the system of education. The present system has had a long trial, and failed; then why not try reform, and look for some plan that will give better results?

Mr. BURNARD OWEN then said: * Mr. President and gentlemen,—The few points in the speeches of the opposition, which I had marked for reply, have been so ably and conclusively handled by my friend Mr. Reddie, that I find but little remains for me to say. Mr. Dibley, in quoting the extract I gave from the Colonial Blue Book (1863) of

* Printed from Mr. Burnard Owen's MS. Ed. J. A. S. L.

the Sierra Leone Census of 1860, appears to have slightly misunderstood the classification, which might have been more explicit. Where it says "15,180 were Methodists, etc., and 12,954 Church people", it would have been more correct to have added the other denominations, who form a large proportion of the Christian population under this head, conspicuous amongst whom we find the Baptists. I certainly did not intend it to be supposed that I limited Baptist and Wesleyan successes to South Carolina; for wherever they have laboured amongst the negroes, they have been eminently successful. We might be puzzled to trace the connection between missionary labours and the relations existing between debtor and creditor, but information, and even comfort, often comes from very unlikely sources; and certainly Dr. Charnock will raise the drooping spirits of many a despairing creditor, when he authoritatively assures us that "debts contracted in this world will be paid in the next". A consolation this will be to those who otherwise would see little or no chance of their claims being liquidated. We are told Mohammedan converts rarely revert to their old faith, but we were not informed whether their lapses were likely to be communicated to us; nor am I aware of any published statistics of the Mohammedan Missionary Society. Capt. Burton has declined for himself and friends what he calls the "confessional"; but at any rate we have a right to know the bias a creed, or the want of one, would naturally give to their views. Every man being said to have some religion, I suppose these gentlemen would not wish us to imagine they are different from their neighbours in this respect. Far be it from me to hold up to ridicule the too apparent infirmities of any man; but when Mr. Reade can so far forget himself as to apply the term "religious ruffianism" to those who prefer the Bible of their fathers to the crude insolence of juvenile infidelity, we cannot refrain from a passing smile at such assurance, though we are painfully struck with the mental obliquity which seeks to make a scientific society the medium for publishing opinions which charity alone can induce us to believe are attributable, as his friend Captain Burton apologetically expresses it, to the warmth of ingenuous youth. To state that every guinea sent to Africa is defrauding our own people in England, is, to say the least, evincing little acquaintance with facts; for, if we compare the list of subscribers to our missions, it will be found that those giving most liberally for foreign evangelization, equally support home efforts; whilst a comparison will show that the subscribers' names on the list are almost identical, and their charity as world-wide as the ignorance and idolatry they endeavour to remove. Civilization to the negro can only be effected by intimate association with the Anglo-Saxon race; and, when we are taunted with the small results, it should be remembered how few are the labourers, and how wide the field of heathenism in which they toil. It would be uncourteous not to notice the remarks of our versatile and voluminous friend Mr. Carter Blake, who starts with the assertion that "a Fellow of the Anthropological Society has a perfect right to say what he chooses." Evidently this has been acted upon before the permission now granted officially. Mr. Blake says that each side in the discussion has pre-

sented as few facts as possible, endeavouring to throw the onus on their opponents. Whether this be correct I leave others to judge; but I do not see that Mr. Blake has himself remedied the defect he points out. Nor must he forget that the strong testimony, drawn from entirely independent sources, which I have cited in answer to Mr. Reade, has been left unquestioned by that gentleman's supporters, who have studiously avoided a discussion on the facts or figures I advanced; thus by their tacit acquiescence acknowledging the indisputableness of my assertions. Knowing Mr. Blake as an indefatigable zoologist, in which science order and arrangement are vital essentials, I am surprised at the difficulty I find of deciding upon the bearing of his remarks to-night, which present to my mind a picture of that extraordinarily incongruous Australian animal which, it is said, after nearly breaking the heart of one naturalist in the vain endeavour to classify him, was in despair at last styled *Ornithorhynchus paradoxus*. Whilst regretting for the Society the present discussion, I cannot but rejoice at the results to the missionaries. I feel convinced it will be productive of good to them, and give increased energy to their supporters. It may also induce many, who have hitherto paid slight attention to the subject, to regard more closely the noble acts of that little army—those brave soldiers of the Cross, before whom the serried ranks of the Crescent shall be scattered. As I am not aware that any missionary is a member of this Society, I have taken the prominent part which more properly belonged to them, in repelling Mr. Reade's accusations. As it was no question of science which ushered in this discussion, so it is no question of sectarianism which prompts the course I have pursued. As Mr. Reade's paper, to my mind, bore but one construction, that of an open, unequivocal attack on Christianity, so I as a Churchman have endeavoured to meet it; and to my fellow-Christians—Presbyterians, Wesleyans, or Baptists—I can only express my regret that the task did not devolve upon a more able, if not a more willing, champion. Mr. President and gentlemen, you have now heard the accusation and the defence. You may sum up; but the verdict is not delivered here; it lies beyond this meeting; it lies beyond this Society; it lies in the hand of a public whose decision I can with confidence await. Οὐ γὰρ δυνάμεθα τι κατὰ τῆς ἀληθείας, ἀλλ' ὑπὲρ τῆς ἀληθείας.

The PRESIDENT announced that, at the next meeting, the Bishop of Natal would read the paper he had promised, on "Missionary Efforts in South Africa". After the paper there would be a discussion, and then the subject must close.

The meeting then adjourned.

MAY 16TH, 1865.

DR. JAMES HUNT, PRESIDENT, IN THE CHAIR.

THE minutes of the last meeting were read and confirmed.

The following names of gentlemen elected as Fellows, and of new Corresponding Members, were then read:—His Royal Highness the Comte de Paris, York House, Twickenham; J. C. Richardson, Esq., Glenragon, Swansea; B. Quaritch, Esq., 15, Piccadilly; F. E. Pearse, Esq., High Cross, Samford Peverell; John Murray, Esq., Wickham, Herts; T. Pritchard, Esq., Abington Abbey, Northampton; J. Bischoff, Esq., 10, St. Helen's Place, Bishopsgate Street; W. H. Spencer, Esq., Downing College, Cambridge; E. B. Tawney, Esq., F.G.S., Bridgend, Glamorganshire; J. H. Challis, Esq., 35, St. James's Place, S.W.; J. B. Baxter, Esq., Ironbridge Cottage, Buxton; R. M. Nunn, Esq., Grays, Essex; A. Aubert, Esq., Albion Road, Stoke Newington; T. H. Wood, Esq., Cluney House, Dunkeld; T. B. Sprague, Esq., 18, Lincoln's Inn Fields, W.C.; C. Simonides, Esq., Ph.D., 9, Great Percy Street, Islington; H. Barber, Esq., M.D., Ulverstone.

Corresponding Member.—M. Giraldès, Paris.

Local Secretaries.—M. Henri Vignard, Paris; Professor Filippo Manetta, Turin.

The following list of presents to the Society since the last meeting was read, and thanks were voted for the same:—Busts of Tasmanians (Admiral Bethune, with sanction of United Service Institution); Suess. über die Nachweisen zahlreicher Niederlassinger, etc. (the author); Revue Orientale et Américaine, 6 vols. (N. Trübner, Esq.); Λιθωφονημα, Stone Talk (Anonymous); Portrait of C. Forster (Dr. Seemann); Wit and Wisdom in West Africa, by Captain Burton (the author); On a Condylus Tertius in the Occipital Bone, Dr. Halbertsma (the author); On the Asymmetry of Javanese Skulls, ditto (ditto); On the Zoological Names of Characteristic Parts, Professor Owen (from the author); British Columbia and Vancouver's Island, D. G. F. Macdonald, Esq. (the author); Golovin, Natives of Russia and Turkey (N. Trübner, Esq.); A Memoir of the Gorilla (Professor Owen); Maps to illustrate Palliser's Expedition (W. A. Nunes, Esq.); Ozanam, Cours de Mathématique, 1697 (H. Burnard Owen, Esq.); Elements or Principles of Geometrie, 1684 (ditto); Anthropometamorphosis (J. Reddie, Esq.); Transactions of Ethnological Society, vol. iii, new series (the Society); T. Rask on the Patriarchs (K. R. H. Mackenzie, Esq.); Manetta, La Razzo Negro (Dr. Hunt); Various Tracts on Anthropology (Dr. Hunt); Letter to the Archbishop of Canterbury on Polygamy (the Rev. the Lord Bishop of Natal); Maassbestimmungen der Oberfläche des Grosseen Gehirns (Hermann Wagner).

The PRESIDENT then called upon the Lord Bishop of Natal to read the following paper:

On the Efforts of Missionaries among Savages. By the Right Rev.
J. W. COLENSO, D.D., Lord Bishop of Natal.

ON a former occasion, at the invitation of your secretary, I attended a meeting of this society, of which I have not the honour to be myself a member, for the purpose of hearing Mr. Reade's paper upon *The Efforts of Missionaries among Savages*. I need hardly say, that having had some personal connection myself with such "efforts," having laboured for some years in the endeavour to improve a heathen race, rude and savage as any of those to whom the paper in question was likely to refer, I felt a peculiar interest in the subject, and listened to the lecture with close attention. There were some statements in it from which I dissented, and some which I much regretted; yet I felt that it was good to have had the question raised—to have had the work of missions among savages inspected and discussed from a layman's point of view; and I was too well aware, from my own observation and experience, that some of Mr. Reade's strictures were far from being undeserved. Upon the whole, however, I thought it would be best, rather than express myself in a few hasty words, which would but imperfectly convey my views, and would be very liable to be misunderstood, to request permission to lay before you more deliberately my thoughts upon the subject, as I propose to do on the present occasion.

Mr. Reade's account of the corrupt habits of native converts—that "every Christian negress whom he met with was a prostitute, and every Christian negro a thief,"—to whatever extent it may have been justified by the facts which fell under his observation, must be supposed, of course, to apply especially to that part of Western Africa in which he has spent five months of his life. But, in so short a time, as your President observed, it would seem to be impossible for any one to form a fair and true estimate of the entire results of missionary labours among the natives of any district. And that missionary, I imagine, spoke only the simple and obvious truth who said to Mr. Reade, "You cannot measure the amount of moral influence which our teachings exercise." It would have been impossible to do so without more intimate knowledge of the native language, and closer acquaintance with the ways and doings of the people, than such a hasty visit could have permitted. I presume, however, that there were *some* outward signs on which Mr. Reade must have based his judgment, and that in certain cases which came more immediately under his eye there was great dishonesty among the men, and great immodesty among the women. But admitting this, it would be only fair to suppose that this state of things may possibly be exceptional upon a coast where the slave-trade, with all its abominations, has so long prevailed, and is still, notoriously, more or less extensively practised; where, consequently, whatever good instructions may have been given by the missionaries, or whatever good examples may have been set by the better class of white residents, laymen

as well as missionaries, must have been to a great extent neutralised by the vicious conduct of others. I conceive, therefore, that Mr. Reade may have been, perhaps, unfortunate in having had the immediate neighbourhood of the Slave Coast as the only locality in which he has had an opportunity of examining into the "Efforts of Missionaries among Savages." Having no personal acquaintance, however, with that coast, I shall confine my remarks chiefly to the savage tribes of South-Eastern Africa, among whom my own lot has been cast, and to the mission-work which is carried on among them.

Before I proceed, however, let me say that, of course, I shall not think it necessary to discuss any of Mr. Reade's expressions of religious opinion. It was distinctly stated on the former occasion that those present were in no respect committed to the approval of the views expressed in any paper, because they accorded their thanks to the lecturer for the pains he had taken in laying those views before them. In a body of scientific inquirers like this it is obvious that the expression of religious opinion must be free, provided only that it is kept within the bounds, which the charities of social life require each right-minded person to keep, when enunciating propositions which he is aware may be unacceptable, may be even offensive and painful, to some of those present. It must be left, I presume, to the chair to decide, if necessary, in any case where those limits have been transgressed.

I have no intention, therefore, to make any comments on the religious views of Mr. Reade, for the expression of which he alone must be responsible. And, in like manner, I claim to be held singly responsible for any which I myself may express on this occasion. As much as possible I wish to avoid treading on debateable religious ground. But it is not possible wholly to do so when treating of a subject like the present. And, indeed, as was well observed at the former meeting, while this is no place for discussing difficult points of dogmatic theology, yet man, being a "religious being," and religious questions having very much to do with his physical, moral, and mental development, they cannot be ignored in the proceedings of a society which professes to deal with all that concerns the nature of man.

You are aware that the district of Natal—*terra Natalis*, as it was called by the old Portuguese navigators, because discovered by them on Christmas Day,—is situated on the south-east coast of Africa, between the degrees of south latitude 29-30, and therefore almost within the tropics. In extent it may be reckoned as about one-third of England and Wales; and the population at this time may probably be fairly stated as consisting of about 15,000 Europeans, of whom two-thirds are English and the others chiefly Dutch and German, and 150,000 natives, who, though of many different tribes, are called by the common name of Zulus, from having been once collected under the rule of the late Zulu despot Chaka. The name *Kafir* is an Arabic word, meaning "unbeliever." As such, I believe, it is even now applied by the Mohammedans of India to the English

and other Europeans. And as such also it was probably applied by the Mohammedan Arabs, who have settled on the eastern coast of Africa, to the heathen savages with whom they came in contact on that continent. All the tribes of south-central, as well as south-eastern, Africa, are now reckoned collectively as Kafirs, since they speak only different dialects of the same common tongue. For though the languages spoken by different tribes are sometimes so different that even natives living within the small district of Natal can hardly understand each other, yet philologists have shown conclusively that these languages are all fundamentally the same,—nay, that there are strong affinities between those spoken by the tribes on the *eastern* and those on the *western* coast of Africa. The subject has not, indeed, been thoroughly worked out as yet. But I believe that the tendency of modern inquiries is towards the conclusion that the whole central part of Africa, from the north-west to the south-east, is inhabited by kindred tribes, speaking only different varieties of the same common tongue, though often, as I have said, so different that only scientific skill can trace the connection. Thus Mr. Reade's negroes of the Gaboon may be after all only distant connections of the Zulus or Zulu-Kafirs of Natal. The word "Zulu" means "heaven." But the people have been so called from a former chief of that name, and not with any notion that this particular tribe had any claim to be regarded as the "Celestials" of south-east Africa.

It appears to me that Mr. Reade's paper expresses, perhaps in rather strong and even exaggerated language, thoughts which, however, are present more or less distinctly in the minds of many laymen in connection with the subject of missions, as, for instance, that missionaries are really doing little or nothing for the improvement of savage races,—that their reports are either dishonest, and "cooked," as the phrase is, to meet the eyes of their paymasters in England, or else are tame chronicles of trivial circumstances, which are not worth communicating,—and that, in fact, large sums of money are thus wasted, which might be more profitably used, if spent upon works of charity nearer home. Now, I am one who do entirely believe, nay, I know, that in spite of many serious drawbacks, some inevitable, some capable of being remedied, the "Efforts of Missionaries among Savages" have been a great blessing to them. And because I believe and know this, I am not afraid or unwilling to look the truth in the face,—to have our work scrutinised and our defects pointed out, as I have said, from a layman's point of view,—where necessary, to confess our faults and shortcomings, and to consider how those faults may best be amended, that so the blessing may be greater, and the work be done yet more effectually.

I will begin with saying that I am not careful to make much defence for the expenditure of considerable sums of money upon missions. On the one hand I cannot indeed sympathise with those who argue that to save one human soul is a sufficient return for spending any amount of money, and sacrificing any number of lives. I say I cannot sympathise with this argument, because it assumes that the soul in question is in danger of being *lost*,—that is, as such persons

mean, lost for ever,—that the Father of spirits has left it to be decided by the caprice, or zeal, or the greater or less measure of selfishness of one or more of us poor mortals, whether our brother's soul shall be eternally saved or lost for ever. Now this I, for one, do not believe; nor indeed can those who use the argument really and truly believe this. If they did, would they ever spend a penny on themselves which they could possibly avoid spending? Would they ever buy a newspaper, eat butter with their bread, drink sugar with their tea, or sit down to enjoy one of the commonest daily blessings which their money has purchased, instead of hurrying to give all their gains and savings, and scrapings to swell the amount of the mission fund? No! whatever men may say, they practically show that they do not in their heart of hearts believe this; they do not believe that the heathen will pass away into the pit of endless woe, because no friendly hand has ever been held out to them,—because no messenger of God's Love has ever reached them,—because the Great Being who made them has left them unvisited, uncared for,—and their fellow-creatures have been too busy, too self-indulgent, or it may be too poor in means, however rich in love, to remedy this neglect of their Creator!!

Yet such a horrible doctrine as this has certainly been taught, and laid down as the very basis of Christian missions. Let me quote a few words from a prayer which has been printed within the last ten years for the use of a missionary institution (I am ashamed to say) of the Church of England. "O Eternal God, Creator of all things, *mercifully remember* that the souls of unbelievers are the work of Thy hands, and that they are created in Thy resemblance. Behold, O Lord, *how hell is filled with them*, to the dishonour of Thy Holy Name. *Vouchsafe to be propitiated by the prayers of Thy Church*, Thy most holy spouse, and *call to mind* Thine own compassion."

Nay, I copy from the *Record* of May 3 of this very year, the following words from the speech of an eminent divine of the English Church (Dr. M'Neile), delivered on behalf of the Church Missionary Society:—

"St. Paul does not appear to have had the slightest idea of any man being saved . . . except through the *knowledge* of Jesus Christ."

One remembers, it is true, that St. Paul somewhere speaks of God as the "Saviour of all men," though "specially of them that believe." But, that there may be no mistake as to the speaker's meaning, he explains it further as follows:—

"It is a gross misrepresentation to say that we charge the lost and ruined condition of the heathen upon their ignorance of the Gospel, which they have had no opportunity of hearing. No! it is upon their transgression of their own moral standard, their own conscience which every man bears within him, a measure of the law written in his heart. For I say again, he is a servant—not a stone, a stock, or a horse—but a servant, and did things worthy of stripes. But then he is beaten with few stripes. All is equitable. We may trust in God for that. It is more tolerable for the one servant than the other; and 'more tolerable' is the master's expression—'more tolerable'—for Tyre and Sidon than Chorazin and Bethsaida.

If 'more tolerable' be everlasting happiness, then all who have not been taught may be everlastingly happy. But if 'more tolerable' wear a different and much more painful aspect, we are compelled by our allegiance to authoritative revelation either to admit the awfully solemn truth, or to throw off that allegiance, and deny the volume which contains that statement."

Now this statement is the more significant, inasmuch as it was made not only by one of the most prominent supporters of the Church Missionary Society, in Exeter Hall, on the occasion of its anniversary, in this year of grace 1865, in the presence of the President of the Society and a great number of its friends, as well as in that of his Grace the Archbishop of Canterbury, and was allowed to pass unchallenged and uncorrected; but also because the speaker expressly insisted upon the dogma in question as the very watchword of that great Society—a Society which has been the instrument of conferring, as I believe, vast benefits upon the heathen world, notwithstanding—rather in spite of—its maintaining in theory, at all events, a principle like this, which, in my judgment, so far as it is actually maintained in fact and acted on by its missionaries, is utterly opposed to the teaching and practice of the great apostle of the Gentiles, St. Paul. I say that the Church Missionary Society is committed in theory to the maintenance of this principle, that "no man can be saved except through the *knowledge* of Jesus Christ,"—that, consequently, the heathen—every one of them, men, women, and children, who have never heard of Jesus Christ, and therefore cannot have "knowledge" of Him, must be damned irrevocably and eternally—must be consigned to the pit of endless woe, and doomed to suffer everlasting burnings, though somehow they will be "more tolerable" than the flames which will prey upon others,—yet still "*everlasting* burnings," never-ending, irremediable, and therefore infinite woe,—the Society, I say, is committed to this, because Dr. McNeile went on to say, *with the full concurrence of his hearers*, that the utterance of this dogma with "the most pointed distinctness" was indispensable for success in their labours. Listen to his words, as reported in the *Record*.

"Now it is of the utmost importance for the sake of our missionary cause that this question should be fairly tested and examined, and that *the alternative should be forced upon the public mind*; because I believe that *there is such a love of moderation in our English people*—that there is such a repugnance to extreme opinions and extreme measures,—that half-and-half statements are doing more injury than bold and direct scepticism itself. We have a school of compromisers more to be dreaded in the recesses of our missionary work than open sceptics. And why do I refer to these things, but because the most pointed distinctness in the initial sound is indispensable for power or plainness in the distant echo, and that, if we lose distinctness at home, we shall lose all power abroad. I say, then, that we have a school of compromisers who ought, I think, to be brought to the test, Do they believe the Bible or not?"

Now these words were accepted, it seems, by the meeting in question, as the true expression of the principles on which this great Society

seeks to evangelise the world. It was in vain that the Bishop of London had the courage to stand forward as a "moderate man," that he reminded the meeting of the apostle's lesson, "Let your moderation be known unto all men." No "cheers," at least according to the report of the *Record*, greeted these expressions of a calm and sober judgment; whereas the words of Dr. M'Neile, which I have just quoted, were received, we are told, with "loud applause," with "loud and continued applause." I must assume, therefore, incredible as it may seem, that the sentiments of Dr. M'Neile were really endorsed, as those of the Church Missionary Society itself, by this large and influential meeting, including, as I have said, his Grace the Primate of all England. Three years ago I was ridiculed by some of my critics for supposing that any great body of educated persons in England believed in these days in the literal accuracy, nay, the divine infallibility, of every historical or scientific statement of the Bible. You know how such ridicule has been answered by the astonishing fact, that 11,000 clergy of the Church of England have set their names to a declaration of their belief in that very doctrine, as well as in that of the endlessness of future torments, while the two archbishops have openly declared their adherence to those views. It seems now to be equally incredible that any great body of educated men should believe that for the success of missionary efforts "the most pointed distinctness is indispensable" in declaring that every heathen, who dies without "the knowledge of Jesus Christ," must be doomed to suffer endless torments,—should believe that this is, as Dr. M'Neile says, "a bold and faithful repetition of the glorious Gospel of the Grace of God." But here we have this very assertion made by a distinguished clergyman of the Church of England, in the presence of this great assembly, in the heart of the city of London, and in the middle of the nineteenth century, and the statement is received, like the others, with "loud applause"!

Out of the Church of England, however, I fear such views are equally, perhaps even still more, common. On my first visit to Natal an excellent American missionary, with whom I had spent the night, supplied me when I started in the morning with a paper of sandwiches to eat upon my way. At midday I sat down beside a stream to rest my horse and eat my luncheon; and, to while away the time, I skimmed the columns of the sheet of paper in which my food had been wrapped, and which turned out to be a *Missionary Intelligencer*. I copied from it two extracts, which I printed at the time in my book entitled *Ten Weeks in Natal*, and which will further illustrate very strikingly and painfully this part of the subject.

One passage was the report of a colporteur, who was describing to the society which employed him,—and which, therefore, since they printed his language, seem not to have objected to it—the manner in which he conducted his ministry, entering first one house and then another, and distributing according to the necessities of each. In one, for instance, he would find the people careless and negligent in divine things, and then he would talk to them about the *heathen*, and what would become of *them*, and ask what would become of them—

selves if they lived like heathen. "They would perish," he said, "*like those heathen* ; and their children, about whom they thought so much, would twine about them like creepers on a gnarled oak, and they would burn—burn—burn on for ever !"

But these were the words of a missionary speaking about heathens to Europeans. The following is taken from the correspondence of a missionary, and shows the sort of language which such a man would use—and which, I fear, many a missionary does use substantially, if not so plainly—in addressing the heathens themselves. "Every hour, yea, every moment, they are dying, most of them without any knowledge of the Saviour. On whom, now, rests the responsibility? If you fail to do all in your power to save them, will you stand at the judgment guiltless of their blood?" Said a heathen child, after having embraced the gospel, to the writer, "How long have they had the gospel in New England?" When told, she asked with great earnestness, "Why did they not come and tell us before?" And then added, "My mother died, and my father died, and my brother died, without the gospel." Here she was unable to repress her emotions. But at length, wiping away her tears, she asked, "Where do you think they have gone?" I, too, could not refrain from weeping, and turning to her I enquired, "Where do *you* think they have gone?" She hesitated a few moments, and then replied with much emotion, "I suppose they have gone down to the dark place—the dark place! Oh! why did they not tell us before?" It wrung my heart as she repeated the question, "Why did they not tell us before?"

Here we have, indeed, the "most pointed distinctness" in the utterance of this doctrine! We have all heard, I suppose, of the old Bulgarian chief, who, when told that his father and mother, and all the ancestors of his tribe, were burning in hell-fire, declared that he would rather go and burn with them, than live in such a gloomy heaven, with so inhuman and unjust a being as this God—a very Moloch—whom the missionary spoke of. I have heard substantially the same uttered from the mouth of a Zulu. And I do not hesitate to say that, on this particular point, the ideas of that Teuton and that Zulu were far more orthodox—or more truly Christian—than those of such a missionary, trained, though he may have been, in schools of Christian theology. It was Christian to feel there can be no happiness for me in heaven, if my friends and fellow men, for no fault of their own, are to be eternally shut out: it was Christian to think, "Better that we should all be consumed together, and the Great Spirit live alone in his glory, than believe such things of the good and blessed God, and ascribe to him such frightful partiality."

I repeat, the persons who maintain this doctrine cannot possibly believe in it, or they would be intensely wretched during every waking moment of their lives,—that is, if they were really full of tender human feeling and brotherly kindness. But the very use of such language appears to me to be an unconscious blasphemy against the name of the Most High,—of Him who is "loving unto every man" and whose "tender mercies are over all his works," who is styled in scripture the "Faithful Creator," of whom we read that His name is

Love. "He that planted the ear, shall He not hear? He that formed the eye, shall He not see?" He that has taught *us* to love—to love even the fallen and the outcast, or these poor ignorant degraded savages—shall *He* not love them, with a love that infinitely surpasses our own? I not only assert with the writer in *Essays and Reviews*, whom Dr. McNeile condemns, that, "if the sacred writers have really enunciated such a doctrine as that which we are speaking of, if they have said what is so utterly opposed to the moral sense that is in man, they cannot have been inspired by God in respect of such statements." But I assert also that they would contradict by such statements other statements in the Bible, the whole general tenor of the language of that Book, and the teaching of Christ himself and his Apostles; and this contradiction would suffice to show that, in respect of these matters, there is no such "authoritative revelation" in the Bible as Dr. McNeile supposes.

I reject, then, utterly the employment of *this* argument,—viz., that without our missions the heathen would be eternally lost,—as a reason for not taking any account of the weight of gold and silver which is thrown into the treasury of missions. But, on the other hand, it is not the outlay of a few thousands of guineas, or the expenditure of noble energies, or the sacrifice of noble lives, that is worthy of being made so much account of in this matter. There should, of course, be some proportion between the object aimed at and the means employed, as also between the amount of means expended in a given time and the results attained. But it must not be expected that in missionary work, any more than in political, naval, or military, no waste of means will be incurred,—that no pound will be spent unprofitably for want of experience, no money be lost by mismanagement, or be thrown away upon unsuccessful efforts or inefficient labourers. Allowances, in short, must be made, in this department of human labour as in any other, for errors, mistakes, infirmities, as well as for providential accidents. And then these losses must be compared with what are incurred in other great operations; for, on a different scale, the same principles apply to the one kind of expenditure as to the other. In the Crimean war, for instance, the loss of one single ship, which went down in the storm, involved a sacrifice of money, enough to have supported one hundred missionaries and their families for twenty-five years. And the sum spent in the last Kafir war was ten times as great, enough to have supported for the same period an army of ten thousand schoolmasters, so as to have changed, we might hope, the whole condition of those tribes, and prevented altogether the fears of such wars for the future.

But, it is said, *Ex nihilo nihil fit*. Multiply the work of one missionary as much as you please, and it will still amount to nothing or next to nothing. The results of missionary labour among savages are infinitesimally small; and an army of ten thousand teachers, though labouring for five-and-twenty years, would do little to raise a savage race from its barbarism. I do not, indeed, suppose that Mr. Read would adopt this sentiment as the deliberate expression of his own opinion, though his words amount to it. Nor is it my intention to

disprove such a statement by marshalling at length a series of facts, to show the beneficial results of missions. This has been done already, I believe, to some extent by others. I rather take for granted that we all know that, in spite of all their drawbacks and defects, the work of devoted men, such as many of our missionaries, if only as the heralds of civilisation, cannot but be a blessing to those among whom they toil,—as also that we all remember that we ourselves owe very much our present high state among the nations, in the first instance, to the labours of missionaries. Nay, a body of such teachers, inculcating among savages notions of the Supreme Being,—some true, and drawn from the pure living stream, which flowed in the teaching of the Great Regenerator of mankind,—some false, concocted in later ages, expressed in creeds and church-systems, by councils of fallible men or by schools of theology, notions often, like that of which we have just spoken, at war with the moral instincts of those whom they are teaching, not because those instincts are too low and debased, but rather because they are too elevated and pure, too simple and unsophisticated,—such a body of teachers could never be utterly useless, an utter failure, in their attack on the darkness of heathenism,—first, because of the portion of pure truth which is mixed up with their teachings,—secondly, because of their trust in Him, who is the Supreme Educator of us all. Faith and love are never lost. If no atom out of the material universe can ever be destroyed, surely these, more *real* and more precious things, can never utterly perish. Without these, indeed, man would be but the most cunning animal. But even war, we know, with all its horrors, has been a blessing to humanity on account of the field which it has opened for *faith* and *love*, for the heroism of duty, for the exercise of manly courage, patience, endurance, perseverance, for acts of self-sacrifice. And the mission-field, in spite of all the defects, moral and intellectual, of those who have laboured in it, has been another such field, and surely with far fewer and smaller drawbacks. My object, therefore in the present lecture will not be to take the opposite side of the argument to Mr. Reade, so as to prove that such efforts have been beneficial. Rather I shall assume, as I have said, that his remarks do but express a certain feeling of disappointment, which prevails in the minds of many good men, when they contemplate the defects of missions. And I shall endeavour to point out wherein those defects should not be regarded as affording just grounds for censure or dissatisfaction, and in what respects, as I think, there do exist real evils in much of our mission-work, which may and ought to be remedied.

There is, in point of fact, much unfairness often practised unintentionally in judging of the results of missionary labour, besides that of judging hastily, from imperfect knowledge or too limited observation. *Too much is often expected, and in too short a time, of the missionaries.* And this is frequently the case quite as much with their friends, with those who do sympathise with their work, as with those who do not. When excellent people in England, who contribute for the support of missions, are not content without receiving by each mail some touching account of interesting incidents, some fresh report of the increase of converts and communicants, and are

disappointed to find that no very marked progress is made from month to month or even from year to year—that the foundations are being slowly laid, underground, out of sight, upon which to build in future years, when they—the donors—will be laid, it may be, in the grave, a missionary can scarcely help reporting as important facts, (and, perhaps, indeed they are such to him,) what after all appear in print as very trifling and insignificant matters, and afford not unfrequently to shrewd lookers-on the occasion for a laugh, at the credulity of friends of missions, and the delusive nature of missionary reports.

Yet societies in England must be fed, and reports therefore must be sent; and accounts of little details, which nobody would think of chronicling, as incidents worthy of notice, in any parish in England, must be forwarded regularly by the missionary to his paymasters, as tokens of progress, or at least as tokens of his own activity. And such, perhaps, as I have said, they really are. And before a sweeping judgment is passed, either on such reports or on the “Efforts of Missionaries,” it may be well to consider more closely some of a missionary’s primary difficulties,—at least when entering upon a comparatively new field of labour, like that in Natal or Zululand.

1. In the first place, he has little to hope for from the older people, thoroughly imbued with the habits of heathenism, with their morals debased, and their mental powers weakened, by long indulgence in the gratification of sensual appetites, which must naturally form the main sources of enjoyment, where the higher pleasures of the heart and of the intellect are to a great extent unknown. No doubt there do occur cases of heathens more advanced in life, where Christian teaching of the simplest kind has produced a benign effect,—has helped to calm the passions, to raise the hopes, to expand the affections, to kindle a living interest in the progress of their children and the welfare of their kind. I have known such cases myself: but they cannot be numerous; and they will usually be found, I imagine, among the milder spirits of the tribe, who have little influence upon the mass of the community.

Our “efforts,” therefore, must be directed chiefly towards the *young*. Yet very great are our difficulties even here. For we have not to do with children removed altogether from the influence of their savage connexions,—from the idle, disorderly habits of the tribe,—from the impure practices of the native kraal. Still less have we to do with children whose training had begun at home at the mother’s knee, and who afterwards, as in England, may spend the day in the village school, and return at night to find, in many cases, a parent’s tender kindness and care, supplying the defects, at all events supporting the efforts, of the teacher. But here the whole work must be begun from the beginning, and must be done wholly by ourselves, and all *against the grain*; the children being brought to us at first with many tears and fears, and, when beginning to settle down under our care, disturbed continually by the visits of their people,—of mothers, sisters, brothers, friends,—who know nothing themselves of the meaning of education, of its end and object, of the benefits which the children are to gain by it,—who see only that it appears to consist in a wear-

some round of unintelligible school-performances, not unaccompanied with stripes and pains, and certainly not productive of any great present or prospective enjoyment, in the shape of eating, drinking, and other appreciable delights. It is obvious that such visits as these must greatly impede our labours. Yet this difficulty must be faced. We cannot refuse to allow of such intercourse, or the parents will consider that the children are treated like slaves, and will probably remove them altogether.

I remember how on one occasion a number of native boys were brought by their parents, and delivered up to me for instruction, with a promise that they should be left in our hands for the space of five years. It had been a very difficult work to persuade the parents to confide their children to us. However, at last, one chief of some importance, and many of his head men, consented to bring their boys for education; and the chief was to send me notice of the day on which we might expect them. Week after week, however, passed, month after month, and still no message came: and always to my inquiries the answer was returned, "The children are being collected." The real reason of this delay, as we afterwards found, was the fact that the proposition had excited alarm throughout the other native tribes. It was suspected that some subtle plan was being organised to get possession of their children, and send them across the sea as hostages for the good behaviour of their parents. The efforts of the friendly chief were counteracted by the hostility of others; the mothers, especially, were furious, and the chief was obliged to defer the carrying out of his purpose, until their passions were somewhat allayed. At last the day arrived—a day for me of great delight and hope, but for them (as it seemed) a day of doom and despair. As I rode up to the Mission House, to which the boys were to be brought, I could see the train of natives, marching as usual in single file, winding along upon the distant hill; fathers and mothers, brothers and sisters, the whole family connexions of the children appeared to be coming, escorting the miserable little wretches to school, with as much unwillingness almost as if they were going to take leave of them for ever. That night the fathers went to their kraals, leaving trustfully their boys in our hands. But the females would not leave us: the next day they still hung on: and I began to fear that we should never get rid of them, till at last the boys, finding things more pleasant than they expected, dismissed them of their own accord, and we were free to begin the work of education.

But what help could we have hoped to find, in case of any difficulty, by appealing, as in England we might have done, to the boy's feeling of regard for his parents or to the parents' own interference? I have known boys run away by twos or threes, or even ten or twelve together, and hide themselves in distant kraals, where they were gladly taken in by native friends, who did not favour the education-scheme, and where even their own friends could not find them, or at least pretended not to be able to find them.

II. But suppose that we have obtained our children, and quieted at last the apprehensions of their parents, and secured their confidence,

how now are we to teach them? It seems to be forgotten that we have no miraculous gift of tongues, and that those whom we are about to teach, in addition to the other faults, or, it may be, the vices of children, speak a totally different language from our own. Here then is another great element of difficulty, peculiar to the work of missionaries. We are liable, of course, to many drawbacks from the infirmities or the general inertness and inefficiency of teachers, just as much as managers of schools in England are, with this difference, that *we* cannot easily replace a defective teacher as school-managers in England may. Thus there are some who, with the best intentions, never can manage a set of boys, whom others will govern with a nod,—who never know how to be free and pleasant in the right time and way, or how to prevent a joke from degenerating into a liberty. I have known, for instance, a missionary, estimable in many respects, beseeching, and ultimately persuading, a little heathen boy to pick up his book, which the young rascal had thrown upon the floor.

Allowance, then, will have to be made for the ordinary infirmities of missionaries, for such failures as take place continually in the case of schools in England, though with much greater facilities for remedying the evil, and then we shall have to take account of this far greater difficulty, their want of acquaintance with the native tongue. "Teach them English," I have heard it said, "and then they will be most useful to the colonists, and derive more benefit themselves." Of course, they should be taught English; but you cannot "teach them English" in a day. In fact, you cannot teach them English thoroughly until their teacher has learnt thoroughly to speak in Zulu. You may teach them, of course, the use of English names for a pot or a kettle, very easily and readily. But such a knowledge of the English tongue as implies a power of expressing feelings and thought, a capacity for moral and religious culture—such a knowledge implies also on the part of their teacher a precedent knowledge of those forms of the Zulu tongue, idiomatic or otherwise, which correspond to these matters.

But what is the use of teaching them merely to *read* in English, when they do not understand a syllable of what they read? I do not say that it is impossible to do so; for I remember to have seen a school in Wales where the children were reading English very fairly, without in the least comprehending what they read. The absurdity of such a process is obvious; but then the Welsh children could also read Welsh, and knew what reading meant, and could amuse themselves and their parents by reading their Welsh books. To teach them to read English, even though they did not understand it, was not by any means so absurd as it would have been to teach our Zulu boys to read English before they either knew a word of the language, or had the least conception of what was the meaning of reading at all. We must begin, then, by teaching them to read in Zulu, thus leading them on by degrees to read in English. And then we are met by the difficulty that we have no books in Zulu—perhaps a primer, or an easy catechism, or a translation of some part of the Bible—but no books of instruction, such as every village-school in England possesses or may acquire from the nearest market town,—no graduated lessons,

story-books, geographies, histories, such as help to vary the monotonous routine of school-work. All these have to be prepared by the slow and painful labour of the missionaries themselves, and, when they have done their best to prepare them, will most probably be found ungrammatical and full of blunders. For how is the missionary to become all at once a perfect master of Zulu? While in England a superior teacher is able to bestow all his energies upon the school itself, upon its discipline and management, preparing special lessons for his older pupils, pouring into their ears from day to day fresh stores of knowledge suited to their age, mingled, as opportunity offers, with those words of truth by which the spirit even of a child is fed as by living bread, the missionary for many months,—and, if he be not gifted with linguistic faculties, even for years, if not for his whole life long,—will still be stammering out with painful effort, and a conscious sense of his weakness, feeble, broken, half-intelligible sentences. And need I say that the same weakness will necessarily affect his more public teaching, when he stands up to address an adult congregation?—that he will deal chiefly in commonplaces, reiterating the same insipid formulæ, distrusting his own powers of expression, fearing, as it were, to step out of his depth, and shunning, even if for no other reason, the discussion of questions in science, morals, and religion, such as often engage the native mind, as they do those of our own children,—with this difference, however, that the adult native, though simple as a child in some points, is yet able to think on others like a man, and cannot be set aside or quieted, as a child, perhaps, may be, with an evasive answer? How could such a teacher venture to discuss many of the questions which will inevitably be raised in a native congregation, if he allows them freedom of speech, and which, like the questions of a child, often go to the very root of the matter, as, for instance, questions with respect to the historical truth of the Scripture accounts of the Creation, the Fall, or the Deluge, or such a query as that which a grey-haired Zulu once put to myself, “Who was the father of Satan?”

Nay, even at the very best, how hard must it be for a missionary, an English missionary more especially, who labours to express himself in a foreign tongue,—much more the tongue of a savage people, for which, it may be, grammar and dictionary do not exist at all, or exist only in a most imperfect form,—so thoroughly to master it, as to be able to convey correctly his own thought, if he has a thought, to the mind of a native! If an English parish sermon often flies over the heads of the admiring or, more frequently, slumbering rustics,—if many an English pastor, who may be excellent in many respects,—in private intercourse, at the board of guardians, in the management of his schools, or at the bedside of the sick and dying,—finds himself incapable of addressing his people *extempore* in a few simple words in public, which they shall hear and understand and lay to heart as spiritual food—how must this difficulty be increased with the missionary, who may neither have the gift of ready thought, nor that of clear expression even in English, and who must try to utter his ideas in a strange tongue! How impotent and confused must be, at the best,

his teaching ! What blunders must he frequently make, unknown to himself, in seeking to express his meaning to young and old ! How little can he know what the real effect of many of his words may be on those who listen to them—how they must often be to them incomprehensible, and not unfrequently grotesque and absurd, when he thinks that his discourse has been most plain and impressive !

Let me illustrate this by two examples out of my own experience, such as, I have no doubt, could be paralleled by almost any missionary.

It was very common for the missionaries of Natal to use for the word "gospel" in Zulu the expression *ivangeli*, formed, of course, in imitation of the Greek, or perhaps the Latin *evangelium*. I once asked a Christian native—in fact, my "Zulu philosopher," as he has been called—what he supposed the word to mean, and he replied at once, "a mixture or medley, from the word *vanga*, to mix ;" so that, instead of the beautiful description, "glad tidings," he understood by it only a kind of olla podrida of all sorts of stories heaped together.

A much more serious mistake is the following. There is a word, *ubomi*, which is used for "meat, rather high," in fact, in an incipient state of putrefaction, which is regarded by the wild Zulus as rather a dainty. Hence, to be "eating *ubomi*" has come to be used among them as an expression for a state of great enjoyment, of supreme felicity. The early missionaries, searching for a phrase to express the blessedness of heaven, lighted upon this, and used it habitually—"eating *ubomi*,"—without any startling impropriety, to denote enjoying life, eternal life. But you will easily conceive what nonsense was made for the native ear when *ubomi* itself was taken to mean "*life*," and so was employed in such a passage as "Strait is the gate and narrow is the way that leadeth unto—rotten meat !" Nay, what worse than nonsense was made when the same native word was used in that grand passage of St. John, "In Him was *Life*, and the *Life* was the Light of men !"

Of course, errors such as these must be made in all the early years of missions, and not only so, but in older missions also, in the teaching of younger missionaries. Many of them will be corrected by time and experience ; but our preachings and translations must long be very imperfect. It is only in a later age, and in another generation, when we have sons and grandsons of our earlier converts, trained to think deeply as earnest men upon the great truths which they have been taught, that we can hope to find *them* correcting our mistakes, and completing the work which we can only begin. But the "day of small things" is needed after all for this ; and our feeble "efforts" now may be attended, as we trust, with much more valuable results hereafter.

III. I pass on to point out another serious difficulty which we encounter in missionary labours. Let us suppose our boys, trained in our schools, to be now grown up to youths or young men. Here, too, it seems to be expected by many of the sanguine friends, and equally by the zealous opponents, of missions, that we are to find the ordinary rules of human experience reversed, and these young men settling down at once, each with a nice quiet wife, into exemplary

fathers of Christian families. Unfortunately for any such expectations, human nature is found to be much the same in Africa as in England; and we have to contend with the passions of youth there as elsewhere, but under far greater disadvantages. Here in England, at all events, the youth, on leaving school, is cheered by the kindly voices of home, and by the hope and prospect of honours and rewards, while he pursues his further career at the university, or in a lower rank of life, in some course of apprenticeship; and he finds in due time, it may be, a spirit congenial to his own, with whom to share the lot of married life. Our native youths leave school at a critical time, and return, as they will and must, to the native kraal. It would be folly to attempt to keep them at such an age: their passions, pent up, would only break out in some more gross and abnormal form. The parents will expect them to return: the boys will reckon upon it as their right, and will probably, if refused, take the law into their own hands, and enforce their claim by running away. Nor can we dispense with or ignore the natural affection between parents and children, if we wish to elevate, to educate, the latter in a truly human manner. If we *could* eradicate it—which, indeed, some missionaries seem almost to wish they could—we could not get on without it. No new ties to their teachers can or ought to take the place of their love to fathers and mothers, sisters and brothers. How can they learn the Christian faith—trust in, and obedience to, a Heavenly Father—if they have begun by learning to despise their earthly parents? I once had a boy brought to me by a teacher—a hopeful youth, steady at his work as a hired farm-labourer, but anxious to learn to read and write, and coming regularly to the evening-school at the end of his daily labours. But his father, a heathen savage, disapproved of it, and forbade the boy attending. I summoned his father, and had a long talk with him, saying all I could to persuade him to consent to his son's desire. But I found him unmoveable. If I had believed that the boy's soul was in danger of being lost eternally for want of that "knowledge" of which he was thus deprived, I should, perhaps, have taught him to disobey his father, and begin his course of Christian instruction by renouncing his family ties. Having no such fears, however, I could only advise the boy to obey his father, and to give up for the present the cherished wish of his heart, and trust to God's overruling providence, that some time or other, in some way or other, his dutiful act would not lose its reward. Happily, the sense of filial duty, expanded into deference to the chief, as the father of the tribe, is strong in the Zulu breast, and ought to be respected by those who come with the object of raising him in the scale of humanity.

We must, therefore, face this difficulty also, of our educated youths returning home from school, as one of the primary inevitable drawbacks upon our missionary efforts. For I need not say that, returning thus to their kraals, removed from the influence of their teachers, and coming again under that of their native friends, they are very likely to return also—for a time, at all events—to the native mode of life, to lay aside their books, to forget their lessons, to throw off their clothing, and fall back into the idle habits and the vicious practices of heathenism.

And, if they marry, whom will they marry? Not educated native girls, for probably not one such is within their reach. The parents are most unwilling to give up their girls into our hands for teaching. A few stray girls may by some accident be brought to us—the children, it may be, of paupers or refugees. But none of the better class—the true children of the tribe—have up to the present time been confided to us, or, I believe, to any of the missionaries in Natal. It will take another generation, probably, before we can hope to persuade them to this; when they see that their sons cannot be properly mated, or when those sons desire that their own children shall not suffer from the evil from which they themselves have suffered. For the present, great allowance ought to be made for this difficulty, in judging of the results of the “Efforts of Missionaries”. A hopeful young man, if he has escaped, or, more probably, desires to abandon at last, the pollutions of the kraal, and to settle down as a married man, can only in most cases be coupled with a heathen woman, unclothed, untrained, uncivilised, who will certainly to some extent drag down her husband to her own lower level.

Nor will this matter, I imagine, be mended much, as some seem to expect, by removing the children from any possibility of contact with their native friends and training them in a distant sphere, or even, it may be, in England. It sounds at first very plausible. “We will take them away altogether from their homes, and their debasing vices and superstitions; we will carry them across the sea, and show them new sights, new lands, new faces. We shall not be able to speak to them, it is true, in their own tongue. But we shall have other children to mix with them, who speak the same or a kindred language; and we shall teach them English—perhaps send them on to England to complete their training, and then send them back as missionaries to their brethren.”

For my own part, however, I very much doubt whether any great permanent results can be reasonably expected from such an experiment. It seems to me very much like rearing a hot-house plant, and then expecting it to live, when planted out and exposed to the cold and storms of winter. Much good might certainly result from the establishment of a central college, planted in the midst of a native population, in the very sight of the natives themselves, and with free access, at stated times and under proper regulations, to the friends of the pupils; more especially if such an institution were founded by the State itself, in the name of the Queen—I mean, of course, in such a colony as Natal, where the “savage” tribes are under British rule—and carried on under Government control and inspection, with due rewards for merit and progress, and with a view to the general elevation of the whole people, irrespective of the special labours of missionaries. But I very much doubt the expediency of training a few youths, in entire isolation from the great body of their people, to a pitch of education far above the possibility of the reach of their fellows. The cases of Bishop Crowther, and of the Kafir clergyman at the Cape who has married a Scotch wife, are quite exceptional. As a general rule, it seems to me vain to expect that boys sent to

England for education, when they return to their native land, will be found of equal use, in advancing the welfare of their people, with others who have been trained, at far less expense, in the midst of their brethren. The probability is, that at first they will find themselves painfully separated from those of their own kind; and at last, finding no wives fitted to share their higher fortunes with them—unable to associate freely with whites or with blacks—they will be only too likely to throw up their civilisation, unnaturally forced, and at best imperfectly developed, and sink down into idle and squalid heathens, as before.

It will be seen that I do not lay much stress upon rapid and great effects being produced by missionaries in their labours among savages. I should rather distrust such effects, as being unnatural, contrary to experience, and therefore most probably fallacious. What we should wish to see is, not a special forcing in a few particular instances, but a general improvement in the whole mass of a native community, by the increase of habits of industry among them, and a steady, though, it may be, slow and gradual process of intellectual, moral, and religious development.

iv. But I must yet mention one other very serious drawback on missionary labour, I mean the bad example of some of our own countrymen; though I need hardly dwell on this point, for it is one which notoriously interferes with all efforts for improvement in all countries. I need hardly say that in Natal we have many most estimable colonists, men equal in Christian worth and benevolence to any whom they have left behind in England. But in every community there must be others also of a different class; and their evil influence and corrupt example, when brought to bear on a race of savage heathens, must greatly impede the success of missionary labours among them. The chief, who brought to me his boys to be taught, once told me that he had been openly ridiculed by a whiteman in the streets of Maritzburg for so doing; and one of my native lads informed me that European workmen, employed about the station, had told him that the missionaries themselves did not believe a word of what they taught. We cannot prevent such statements reaching our converts' ears; they will hear them elsewhere, if they do not hear them on the station itself. And I need not say that I am very sensible, even painfully so, how much, in the eyes of many good men, I myself have added to this very source of difficulty, by the course which I have felt it to be my duty to take, in respect of certain long and deeply-cherished traditional views. The more reason that we should search thoroughly into the grounds of what we teach, and teach nothing but what we entirely believe to be true,—nothing that we fear or half-suspect will not bear a close inquiry,—nothing, at all events, that we *know*, or may know if we will, to be contrary to the plain results of Science. Then we must leave the rest with God, whose work after all is that which we are striving, each according to our light, to do. And sure we may be that honest, earnest, self-sacrificing effort, even should it take a mistaken direction, will never be wholly spent in vain.

It is not a little mortifying, however, when we have perhaps been speaking with a natural pride about our dear motherland, and fondly expatiating to a body of natives listening around upon the power and greatness of England, upon the love and zeal of English Christians, who have sent us out to minister the word of life to their brethren, to have some shrewd face turned up with the remark, that such a white-man had sold a wagon for £60 to a native chief, which turned out to be a rotten one, or that another had lied, and another been seen drunk; and to find the whole party, one after another, quoting their separate grievances, real or supposed, received at the hands of English Christians. Sometimes, of course, these complaints are greatly exaggerated; sometimes the natives are themselves to blame. But it would be very unfair in judging of the "Efforts of Missionaries among Savages" not to take account of this fact also, that the imperfections and faults, often the vices, of our own fellow-countrymen are very serious impediments to the success of mission work.

Nor is it just to ascribe to missionary teaching what after all is very commonly only, or chiefly, the consequence of coming into contact with civilisation. It is very common, for instance, to speak of "Mission Kafirs" as greatly inferior to the untutored savage. But who are these "Mission Kafirs?" Very frequently men whom the missionary himself would altogether disown as members of his true flock, mere hangers-on upon the mission-station, who have resorted to it for reasons of their own, for the sake of protection, convenience, or gain; and whom the missionary has not thought it necessary to expel, or whom, perhaps, he actually has expelled. With many, in fact, a black man in a coat and trousers passes at once for a "Missionary Kafir." Yet, of course, in a colony like ours, there are many natives quite unconnected with missions, who have long adopted to some extent a European costume, and indeed are required by law to do so whenever they enter one of the chief towns, *i.e.*, to wear some piece of clothing down to the knee,—an order with which a simple native from the kraal supposed that he had complied by appearing one day at our station, as I was informed, dressed in his native tails, surmounted by a crinoline, or what I believe ladies understand by the name of a skeleton-skirt. It was at any rate a cool and airy style of dress, and far more comfortable, no doubt, to the natives than a tight-fitting pair of trousers, and, it may be added, far more healthy. For we little consider, when we lay down peremptorily such laws of clothing, how seriously they must affect the health and shorten the lives of a savage community. We know how much they suffer from other baneful results of coming into contact with civilisation—what diseases they contract from dissolute whitemen—how they perish from being taught the use of strong drink. But perhaps we have less considered how the very clothing, with which we teach them to cover their nakedness, becomes too frequently not only the haunt of vermin, and the cause of skin-diseases, but the source of pulmonary disorders, sickness, and death; since the *one* pair of trousers or the single jersey is not only never washed, as it is never mended, but when damp with showers is obliged to be worn unchanged, and the wet garment is habitually dried

upon the person, instead of the naked limbs being dried by the hut fire. I have often thought that God has given to the savage his coloured skin as a clothing, which he had better not change too soon for European habiliments.

However, there are many who approximate in appearance to civilised men, and, having been formerly employed in service or by traders, have now settled near a mission station, and may be found attending school and chapel, but whom the missionary himself would point out as the black sheep of his flock, and for whose misconduct it would be as unfair to make his teaching responsible, as to charge the rector of an English parish with all the faults and vices of all his parishioners.

Let all these things be taken into account before you attempt to form a judgment as to the real results of the "Efforts of Missionaries among Savages." And then let it be remembered that it has taken centuries of civilising influences to bring us up in England to our present condition, and that condition itself, with all our enormous advantages from the experience of the past and the example of other civilised nations, being in some respects very disappointing and discouraging. "What is the use," says Mr. Reade, "of a Christian mission, if a man goes to church in the morning, and burns a witch alive in the afternoon?" But two centuries ago some of the best men in England did this, men eminent for learning and piety; and I am not quite sure that there are not some among us, who would even burn a heretic now if they could.

Nay, were a visitor from another planet to drop suddenly among us, and to take up his abode for a few months with one of the London clergy, and then put on paper his thoughts as to the effect of Christian teaching on a civilised community, from the outward evidences which met him as he walked by day or night in the innumerable lanes and alleys, where live the masses of this great community, he would probably find enough of drunkenness and prostitution—enough of all forms of vice and wretchedness—enough of selfish extravagance on the one hand, and of degraded ignorance and misery on the other,—to make it just as reasonable for him to express strong doubts as to the effect, not merely of the Christian ministry, but of all educational efforts, of all measures of social improvement, upon the inhabitants of this metropolis. And as to the country districts of England, we read as follows in the report on the Staffordshire Factories, which was quoted in a leader of the *Times* of April 24th.

"In most cases the modesty of female life gradually becomes a byword instead of a reality, and they sing unblushingly before all while at work the most disgusting songs [even as Zulu boys or girls may sing at their play]. Of the thousands which I have met with or known as working, I should say that one in every four, who had arrived at the age of twenty, had had an illegitimate child. Several have had three or four."

In short, as the *Times* justly observes:—

"The well springs of domestic virtue must be poisoned,—the labours of clergymen, schoolmasters, and scripture-readers are thwarted and defeated,—the power of benevolence and religion itself is neutralised,

—where decency is habitually outraged;”—[as it is in the overcrowded dwellings of England quite as much as in the Zulu hut].

Yet, with all these deficiencies, we none of us doubt that educational influences have done very much to improve the state of things in England, though falling far short, it may be, as yet of our desires. And in like manner there are abundant signs of the beneficial effect of missions upon savages, though I readily allow, and this brings me to the second portion of my address this evening, that, besides the unavoidable drawbacks to which I have been hitherto referring, there is great room for improvement in respect of our missionary labours.

Mr. Reade has spoken more than once of “idle, ignorant, knavish” missionaries. And, of course, such characters may and do exist in the wide extent of the mission field, as well as in other walks of life. An idle or dishonest missionary, however, is amenable to his ecclesiastical superior or to the society which employs him. And I need not dwell further on this particular point, which belongs rather to the former category of defects incidental to our work from the mere imperfection of the human agency employed in it, unless, indeed, it could be shown that missionaries are habitually “idle and knavish,” so that the fault belongs to the system—a charge which no candid person, I imagine, will think it right to make against them.

I. But on the subject of “ignorance,” I fear, and want of due fitness and preparation for the work, a great deal might be said. The work of a missionary, when regarded in a true light as that of endeavouring not to save a few individual souls from everlasting burnings, but to raise a whole race to the true dignity of man, as a child of God, a being endowed with intellectual, moral, and spiritual faculties, is one of the highest, most interesting, most ennobling, that can engage our powers. Yet this great work is left for the most part in the hands of men comparatively ignorant and illiterate, with narrow views and limited education,—earnest in spirit it may be, simple and pure in life, unwearied in industry,—yet greatly deficient in some of the primary qualities, which go to make up the true ideal of a missionary. Of course I am referring chiefly to Church of England missions, though Mr. Reade, I observe, speaks of the incompetence of “the Wesleyans of the Gambia,” as well as “with rare exceptions of the Church of England missionaries on the western coast of Africa.” And I do say that the Church of England, instead of sending her best men to this grand but difficult work, has been too commonly content to take her missionaries from a lower class of catechists, men who might have been usefully employed under clergy of higher mind and more liberal education, but who are quite unfit to be placed in sole charge of the responsible duties of a mission station. In the mission work among the natives of Natal I have had the aid of some able and excellent fellow-labourers, who, though not university men, have yet from various sources, (from professional or other training), derived the requisite amount of culture and mental discipline. Bishop Gray has complained that I have not multiplied the number of mission stations in Natal. Partly my want of means has prevented me from doing this, but principally my want of men, of men with large hearts, culti-

vated minds, and generous views, fit to be entrusted with such work. Of course, if the object aimed at is chiefly to multiply the professors of Church doctrine,—if men are wanted merely to cram the native mind with creeds and catechisms, and raise a number of human parrots, repeating dogmatic phrases and formularies,—it might not be so difficult to find suitable instruments; more especially as the income and position of a missionary are far superior to what such teachers would probably be likely ever to attain at home. At all events, it would not be difficult to find men willing to undertake such work in Natal, where the inducements are not balanced by an oppressive and sickly climate, or by extreme cold and severe privations, or by dangers to be apprehended from the savages themselves.

I need hardly say that for such inferior missionaries the work of mastering the native tongue, difficult as it is for all who have not peculiar natural gifts, is rendered still more difficult, when they have never learned another language than their own native English, and have not even learned that correctly, but are now set down, perhaps for the first time in their lives, to the study of grammar. Nor need I say how futile must be the expectation which some indulge, that missionaries generally shall be able to combine with efficient labours among the heathen the charge also of European congregations! The thing is simply impossible. The European congregations, of course, may be served; it may be right that they should be; that is quite another question; but then the native work must, in most cases, go to the wall. When the missionary has to gallop off to his English services on Sunday, leaving his native flock untended on the very day when they would naturally come most about him to talk with him, to question him, to listen to him, (as I have often known them do for hours together), it is obvious that even the work of an experienced teacher must greatly suffer from the interruption. But it is easy to conjecture what the result must be in the case of one, who has not yet acquired a ready command of the native tongue, when the excuse is thus given for neglecting those studies and that practice, in which the very strength of his labours consists.

II. Again, it is a great defect in our present system of missions, that the missionaries generally are not *practical* men; that they have no knowledge of any practical science, such as that of medicine, or of any mechanical art, or even of agriculture. They are mostly mere theologians, interpreters of Scripture, or teachers of catechisms or creeds. This is a very serious drawback upon such missions as ours, and is not easily remedied, because so few of the English clergy are practised in any of those arts and sciences, which, however desirable, are not absolutely needed for their ministry in England. Yet the advantage resulting from the possession by a missionary of medical science, or practical skill of any kind, is incalculable,—still more when the two are united in one person, as is strikingly the case in the instance of one of our missionaries (the Rev. Dr. Callaway), whose work has in consequence been eminently successful, and would by *itself* be a sufficient answer to any doubts that might be entertained as to the benefits arising, or likely to arise from the “Efforts of Missionaries

among Savages." It might be supposed that it is enough that some *subordinate* should have such qualifications, and the missionary merely superintend his work, and devote himself to the higher duties of his spiritual office. But this is a mistake. In such a case as that of the Zambesi mission, where the whole party was plunged into the centre of South Africa, far away from the bounds of civilisation—I say nothing as to the prudence of such a step—and therefore *must* hold together while life or health lasts, this arrangement might suffice. But in a colony like that of Natal, where skilled labour commands very high prices, and temptations of the strongest kind must be held out continually to any intelligent layman, who is not committed irrevocably to mission work, to employ his powers more profitably for himself and his family, than the moderate remuneration of the mission fund will allow, it is vain to hope to retain very long the services of a really efficient mechanic. If his zeal does not flag amidst the monotonous routine and the many discouragements of the mission work, yet it cannot be expected that he will continue to work on in a dependent position when he has opportunities on every side of doubling or trebling his income, of buying land for himself, building a house, and settling with his family in complete independence. I know this difficulty by painful experience; and I have learned by yet more painful and costly experience that inferior mechanical agents are worse than useless, and had better be dispensed with altogether.

Yet without industrial occupation for the natives of some kind or other, it is impossible that any mission station can be carried on to any good purpose. It remains, therefore, for the missionary to do the best he can with such knowledge or power as he may possess for practical work. And here again it is found that inferior men are far more likely to make difficulties, as to engaging themselves in manual work for the instruction of their native converts, than others of a higher class,—such, for instance, as the late noble Bishop Mackenzie and his fellow-labourers, who would have thought it no derogation to their position as gentlemen, or to their office as clergymen, to handle, if need be, the tailor's scissors, the shoemaker's last, the carpenter's square, the mason's trowel, the compositor's stick, or the farmer's plough. I see, for instance, that Bishop Gray, in his recently published journal of his *Visit to Natal*, has inserted in it the following passage, p. 8:—

"Walked up before breakfast to the camp, which is a kind of native suburb, where a coloured mission congregation is located. At present it is in the hands of the Dutch Church, who employ a German, formerly employed by Bishop Colenso at Ekukanyeni. All agree that this man is doing a good work amongst the natives. As I drew nigh to his mud cottage, he was summoning his first congregation to worship in his mud chapel, by some sacred music played upon a trumpet. Had some little talk with him. He told me that he had been upon the list of the S. P. G.; that the Bishop had promised to ordain him after six months' trial if he gave satisfaction; that on one occasion, when preaching on the subject of eternal punishment, the Bishop stopped him; that shortly afterwards he told him that apostles

had supported themselves while preaching, and asked him if he would make bricks; that he undertook to do this, but afterwards complained that he had no *spiritual work* given him to do; and he and the Bishop parted. I tell this story as he told it to me. *There may be two sides to it (!)* But it is only fair to this good man to say that all speak well of him and of his work."

Now, I certainly do not think it necessary to defend myself from all or any of the charges or insinuations, which Bishop Gray has thought it right to put in print against me upon mere hearsay,—after a "little talk," as he says, with one of the parties concerned,—if even this were the place or occasion for it. But, as he says, there "may be two sides" to the story; and as it illustrates the present subject, I will give some explanation of the case in question. This German had been originally a trumpeter, I believe, in the Prussian army, but had lately been employed by a missionary body of his own (the Lutheran) Church among the tribes of south-eastern Africa. He came to me saying that his own body had declined his further services, because of his holding what some would call "heretical," but what in England are usually called "evangelical," views on the subject of the sacraments,—a fact which Bishop Gray does not mention. As I found him to be a good, earnest man, with a fair knowledge of Zulu, I was glad to take him on trial for six months; and he no doubt would have been glad to secure the position and the income of an English clergyman. But I found him unsuited and incompetent for the work for which I wanted him. He could not manage a class of school-boys; for it was he who "besought" the little Zulu scamp to pick up his book. So I tried him with adults; and believing that he would be likely to do as much good by teaching them to work diligently on a week-day, as by preaching to them on the Sunday about Adam's sin and eternal perdition, I certainly did set before him the example of St. Paul, who wrought with his own hands as a tentmaker, as well as that of one of our missionaries, who had taught one of the native boys to print; and I thought that he might have been of use in superintending a set of natives, who were employed in making bricks for the erection of part of the mission premises. But he had no "spiritual work," it seems, given him to do!—as if his hours, spent from morning to night among such labourers, might not have been made abundantly conducive to "spiritual work;" as if many an opportunity would not have been given for ministering to them the word of life, "in season and out of season,"—for checking their evil passions, encouraging their industry, strengthening their better principles, and lifting up their thoughts from earth to heaven! "And so we parted!"

III. Bishop Gray, you will see, refers to my having once "stopped" this missionary when he was preaching on the subject of "eternal punishment." I remember well the occasion, when he startled and horrified my people—who certainly had never heard such a doctrine from me—by telling them that by reason of Adam's sin the whole race of man had incurred the doom of eternal perdition, and even the newborn babe deserved to be consigned to the everlasting burnings.

The people themselves immediately questioned the truth of this doctrine: and I, of course, told them that they were *not* to believe this. As we have seen, the inculcation of such doctrines is by no means confined to men of defective training and a limited education. But there is this difference, that, although many clergymen in England may profess to hold these views, and may from time to time make even a passing allusion to them in their sermons, yet they very seldom, indeed, express them in plain words, or dwell upon them, in all their details, in the ears of an educated congregation. Their hearers would in most cases be revolted by such teaching: nay, their own sense of equity would be revolted. And, accordingly, Dr. McNeile laments that "love of moderation in our English people,"—that "repugnance to extreme opinions and extreme measures,"—by which many even of the (so-called) evangelical clergy are led to make "compromises" on this question,—to avoid speaking with "the most pointed distinctness,"—to make only "half-and-half statements," which "are doing more injury than bold and direct scepticism itself." It is otherwise, however, on a mission station, where teachers of narrow views, as we have seen, may and do dilate, as they please, upon such points. It is a very painful fact that men should have gone out—in the name of our National Church, which (as we now know from the highest authority) does *not* maintain the doctrine of the endlessness of future torments—still less maintains Dr. McNeile's dogma of the endless punishment of all the heathen—to teach these things to the ignorant savages—that the attempt should still be made in this way to frighten them into believing, or retaining belief, in the creeds of Christendom, instead of seeking to draw them nearer—"to win," as the Bishop of London said, "by cords of love those who may be wandering away from the truth"—to the bosom of their Father and their God. There are not a few well-meaning missionaries, who will complain, no doubt, that my own publications on the Pentateuch have reached even the ears of their converts, and unsettled their minds, and made their work more difficult. I, on the other hand, complain that there are many, who with the best intentions have yet poisoned the native mind with their teachings of the kind just described—have made it difficult for the real "glad tidings," the message of their Father's Love, to reach them—have, in fact, unconsciously blasphemed (as I have said) the holy name of God, by these representations, so that the heathen can receive only a distorted view of His character, and are repelled from coming to the knowledge of the truth. Forgetting, or ignoring, or more frequently never having realised at all, the fact, that there is one Almighty Father of all mankind, who is the "Faithful Creator," the "Saviour of all men,"—who is present by His Spirit in the hearts of these Zulus as surely as He is present in our own,—from whom they have received that measure of light which they even now possess, and for which alone He holds them responsible,—Missionaries of narrow views seek not unfrequently to make that very light itself to be darkness, and try to teach their converts to renounce altogether the religious notions in which they have been reared, instead of meeting them, as it were, by the way, upon the common ground of our humanity, which a Divine

Life has quickened, and showing how far what they have hitherto believed is really true, how far in their ignorance they have mingled falsehood with truth. They come to them, in short, as if they were beings from another world, commissioned by Divine authority to override or overrule all their questionings, and doubts, and prejudices, as being utterly groundless and worthless; telling them that in their heathen state there is nothing good in them, that they are utterly fallen and corrupt, all their thoughts evil, and all their practices abomination in God's sight; instead of being ready, like St. Paul, to take for a text a heathen poet's noble utterance, "For we are Jove's offspring," or an altar raised to the unknown God as the ground of a Christian discourse, "Him, whom ye ignorantly worship, I declare unto you."

For among the Zulus, as among other nations, God has not left Himself without witness, in those thoughts which are stirred mysteriously within the depths of their inner being, as well as in the blessings poured upon them from without, "the rain from heaven and fruitful seasons, filling their hearts with food and gladness." I know that there are those who say that degraded tribes of human beings exist, which have no spark of religious life whatever. It may be so: I cannot contradict the assertions of those, who declare from their own personal knowledge that so it is—of missionaries or of travellers, who profess to have closely investigated the question, and who have expressed deliberately this conviction. If it be so, however, I should say that such tribes as these would scarcely deserve to be ranked with human beings. They could only be regarded as specimens of man as yet undeveloped; where the bodily organism of the human frame was imperfect, as it is with idiots, or was not yet advanced to that stage which allows of the exercise of the spirit's higher powers, as is the case, we may suppose, with infants, or, at least, with embryos. But I confess that I very much doubt the accuracy of the statement. I doubt if the travellers or the missionaries, who have made such assertions, have ever mastered so thoroughly the native tongue, or mixed so long and intimately with the native mind, as to be competent to pronounce such a judgment. I doubt if they have been able—or willing if able—to sit down, hour by hour, in closest friendly intercourse with natives of all classes, and in the spirit of earnest, patient, research, with a full command of the native language, have sought to enter, as it were, within the heart, and search for the secret characters of light, which may be written by God's own finger there.

Dr. Livingstone says of the natives of South Central Africa: "On questioning intelligent men among the Bakwena, as to their former knowledge of good and evil, of God, and the future state, they have scouted the idea of any of them ever having been without a tolerably clear conception on these subjects. Respecting their sense of right and wrong, they profess that nothing we indicate as sin ever appeared to them as otherwise, *except the statement that it was wrong to have more wives than one*; and they declare that they spoke in the same way as they do now of the direct influence exercised by God, in giving rain in answer to the prayers of the rain-makers, and in granting deliver-

ance in times of danger, before they ever heard of white-men. The want, however, of any form of public worship, or of idols, or of formal prayers or sacrifices, makes both Kafirs and Bechuanas appear as among the most godless races of mortals known anywhere."

So, too, among the Zulus, there is, first, a knowledge of a Creator, whom they call *Unkulunkulu*, "the Great-Great One". And I may mention, as a fact which has not yet, I believe, been made known to men of science, that all along the eastern coast of Africa, as my friend Dr. W. H. Bleek informs me, "This same word is used with the same meaning, though in abbreviated forms, *e. g.* *Mulungulu* in Inhambane, *Mlungu* in the Ki-kamba and Ki-nika languages, *Mlungu* at Cape Delgado, *Mulugo* or *Muluko* in the Makua language, *Murungu* at Sofala, *Murungo* or *Morungo* at Sena and Tette, *Mungu* in the Suaheli, and *Mungo* in the Pokomo. It would, of course, be a bold thing to identify this last form *Mungo* with the Zulu *Unkulunkulu*, if we could not follow up the gradual abbreviation through so many different stages. But, as it is, there is no doubt that from Natal to the borders of the Gallas country, this very same word has by the most different authorities (English, Portuguese, Germans, French, etc.) been noted as the nearest representative of our word "God." And even in Otyi-herero (spoken on the west coast, to the north of Great Namaqua land), a cognate word is used, viz., *Om-kuru*; and among the Timnehs of Sierra Leone (whose language has by the late Bishop Vidal been recognised as related to the Kafir) the name of God is *Kuruh*; though the identity of this last word with the South African names cannot yet be considered as an established fact."

Again, the Zulus distinctly recognise the existence of the double-heart, or, in the language of St. Paul, the constant strife of the flesh and spirit. They speak of the *ugovana*, which urges them to hate, kill, steal, commit adultery, and the *unembeza*, which bids them leave all this.

Further, they believe evidently in another life, since they make their prayers to their dead ancestors, the spirits of their tribe.

Thus we have seeds of religious truth, already planted by the Divine Hand in the minds of these natives; and our business is surely to cherish and prune the plants that have grown from those seeds,—if need be, to cut them down almost to the ground,—but not coarsely and violently to root them up altogether.

IV. Great evil, also, is caused, as I conceive, by those who insist, in their teaching of the heathen, upon the absolute infallibility of the Scriptures—a doctrine which happily is not held or taught by our National Church. Yet there are missionaries, and even missionary Bishops, who, while holding their offices by letters-patent from the Queen, as Bishops of the Church of England, will still violate their duty to the Church of which they are ministers, by misrepresenting her teaching on this point, and by laying down this doctrine to the ignorant heathen,—not as their own private view, which they were at liberty to do within the bounds of her communion, but—as the positive teaching of that Church itself, which, as we now know distinctly, it is not. I need not say that, with the daily increase of scientific know-

ledge among all classes, and with the facts that the first principles, at all events, of Geology and Astronomy, are taught in many of our schools, the maintenance of this dogma at home will soon become impossible for any persons of ordinary education. I have said in "many of our schools," because I suppose that no clergyman, who holds at present the traditionary view, will think it right to allow a school-teacher to discharge his duty faithfully, and explain the elementary truths of geological science to the children under his charge, when he knows that they will flatly contradict the accounts of the Creation and the Deluge, which he himself will read to them in church on Sunday, as the Word of God infallibly true. Are we, then, to perpetuate the same wrong in our schools set up among the heathen, the wrong I mean—rather the *sin*—of either deliberately keeping back from them such knowledge of His works as the Great God has already granted to *us*, that we may be stewards of His own good gifts for others, or else of distorting the plain results of Science, in order to prevent the discovery of their clashing with the statements of the Bible or the Prayer-Book? It would be a miserable, short-sighted, policy to do so; for the natives would soon learn from others what we did not choose to teach them ourselves. At all events, I have done my best to secure that the simple facts revealed by Modern Science,—some of which, as Dr. Temple has justly said on a recent occasion, are utterly irreconcilable with Scripture statements, if these are taken as announcing literal historical truth,—shall not be kept back from the heathen with whom my own lot has been cast in the district of Natal.

v. Once more, I believe that the course which the great body of missionaries have taken on the question of polygamy is a very serious impediment to the progress of our work. Here again, without any authority from the Church of which they are ministers, there are many of the missionary clergy, and even Bishops, of the Church of England, who have laid down the law, that every convert admitted into the Christian Church shall put away all his wives but one, if he had more than one, before baptism. It would be reasonable if they said, "You need not be baptised at all; you may be good men without being formally received into the Church, as there have been good men of old who were never baptised, and who had more wives than one, yet lived faithful lives. It is written in the Bible of the polygamist Abraham, from the mouth of Jehovah himself, "I know him that he will command his children and his household after him, and they shall keep the way of Jehovah to do justice and judgment;" and you, with your many wives, must try to do the same. As a Christian, you cannot take more; but you must not be false to those you have already taken, and to the obligations you have already contracted lawfully, according to your own native customs. You must not, in the selfish hope of saving your own soul, commit an act of wrong to any of your wives and children."

It would take me too long to discuss this question now. But I have expressed my views plainly and fully on the subject in a pamphlet, a copy of which I lay upon the table, and beg leave to present to the library of this society. I believe that the subject is one of very

grave importance, and that it has not yet received that degree of attention which it merits from English philanthropists and English Christians. I am convinced that the present practice, not indeed of all, but of almost all, missionaries, in dealing with the question of polygamy, as it exists already in converts from heathenism, is a most effectual barrier against the great body of a polygamist people, like that in Natal or Zululand, coming even within the reach of the teaching of the missionary.

I have now mentioned some of the principal defects, as they appear to me, which might and ought to be remedied in the missionary proceedings of the present day. Mr. Reade would probably admit, on consideration, that his censures were really valid chiefly in reference to such defects. But it may now be asked, If so much difficulty, necessary or accidental, attends the work of missions, why engage in it at all? I answer, that the mere difficulty of the work is no reason why, if it lies in the path of duty, we should not engage in it; rather, I should say, it is an Englishman's reason for entering at once upon it, and a Christian's reason for persevering in it, with the confident assurance that God's strength will, in His own good time and way, be made perfect in our weakness.

It will be plain, however, by this time that, when I speak of the work of missionaries among savages, I do not mean by it merely teaching them to read the Bible, or to use a liturgy, or to repeat a catechism or a creed. Happily, no one can attempt to translate the Athanasian creed into the simple Zulu tongue: we could find no words to express the nice refinements of the Latin original,—themselves most probably mere translations of Greek forms of expression,—which are but imperfectly represented even by the English equivalents. So it may be a century, at least, before it will be possible to raise that old war-song of the ancient Church in the ears of a Zulu congregation; and by that time, let us hope, it may no longer be the source of bitter strife, heart-burning, and separation, in England. By that time we may have learned to put our trust in God—the Living God—and in His power to maintain His own truth in the world, instead of in man's poor devices of church-censures and anathemas, inhibitions, suspensions, deprivations, excommunications. Nor is it possible to convey into the Zulu tongue the complex phrases of our Prayer Book, the result of ages of high civilisation, and expressed in a language which is itself enriched with the spoils of time. I have endeavoured to do my duty in this respect: I have translated a great part of the Church Prayer Book; and I know that, though I have rendered it on the whole correctly, it is simply in many parts unintelligible to the native—some long circumlocution labouring to express a single pregnant formula, and making utter nonsense, as it falls on his ear. But what mother in her senses would take her young child to her knee, and make it lisp its first words of prayer in a Church Collect? She might as well teach it to pray in an unknown tongue.

So, then, we must teach the Zulus to pray, but in such simple forms as a child might use. We must teach them Christian Faith and Prac-

tice; but, surely, it will suffice, at least for this generation, if we teach it, as it was taught by Christ Himself, in the Lord's Prayer and in the Sermon on the Mount, without perplexing them with the difficulties and discussions of dogmatic theology. Such teaching as this they receive with joyful readiness; they imbibe it as mother's milk. "Our Father which art in Heaven!" *There* is the answer to the thoughts, which have been stirring in their own hearts already—while they have been feeling in the darkness after Him, if haply they might find Him, who was not far from any one of them. We have no difficulty in teaching them to use these words, or to cherish the precious ideas of God's love, protecting care, and faithfulness, connected with them. It is only when we try to indoctrinate them with the mysteries of the creeds that our own difficulties, as well as theirs, begin—unless, indeed, we are prepared to silence at once their questionings as idle and profane, or to lay down to them, with some divines, the law—"What the Catholic Church, during the first thousand years of her history, declared to be, or received as, the true faith, that *is* the true faith, and that we receive as such."

And so, too, it is comparatively easy to teach them to read the Bible reverently and devoutly—not, indeed, all parts of it, for there are portions which, although he may profess to regard them as the infallible eternal Word of God, no clergyman ever thinks it necessary or expedient to read and explain to his flock,—but such parts as are suited to them, the devotional Psalms, the simpler prophetic passages, the more edifying portions of the Old Testament history, the account of the life and death of our Lord. If I am asked, "Do you not mean then to put the whole Bible in their hands?" I answer, "Yes—in good time—when we know how to translate it." And I may say that here also I *have* done my best to provide the natives of Natal with the means of mastering for themselves the contents of our sacred books, having been the first to translate and publish in their tongue the books of Genesis and Exodus, as well as the whole of the New Testament. But I certainly shall not give them the Bible without teaching them how to read it—with the understanding, as well as with the heart—so as to draw from it divine instruction, "the sincere milk of the Word, that they may grow thereby," without, therefore, feeling bound to believe, on pain of eternal perdition, that every statement which they find in it, merely because found in it, is the "Word of God, infallibly true." How can I do this in face of the facts, which we have been already considering, that the most elementary scientific knowledge which, as stewards of the manifold gifts of God, we *must* impart to them, will be directly at variance with the Scripture accounts of the Creation, the Fall, and the Deluge? Or how, when the very mission, on which I am sent, is to root out their heathen superstitions, among which one of the most dire is a firm belief in witchcraft and sorcery, can I go with the Bible in my hands, and bid them receive the stories of witchcraft and demonology, which they find recorded there—the Witch of Endor, Satan's appearing in the Courts of Heaven—as "God's own Word, infallibly true"? Most reasonably did a native council in New Zealand argue, as I saw it reported lately in the journals

that "witchcraft must be punished by stoning". "If God had commanded it, it must be right." "If it was right *then*, it could not be wrong *now*." And it is a very serious question, as it seems to me, for those ministers of our great National Church, who will still maintain, amidst the light of modern civilisation, the dogma of the Infallibility of Scripture, to consider how far upon their heads lies the responsibility of the murder committed, in our own native land, within the last three years, upon a wretched old man, who was done to death by an English mob as a wizard in Essex. Are we never to tell the people, whether Englishmen or Zulus, the plain honest truth? Mr. Lecky, in his noble work just published, *The Rise and Influence of Rationalism in Europe*, while defending the English clergy of former days from those charges of inhuman cruelty, which blackened the characters of others, has yet said, with that sincerity and faithfulness, by which his work is distinguished throughout, as well as by moderation and fairness, "It is indeed too true, that the Bishops of the Anglican Church contributed much to the enactment of the laws against witchcraft,—that the immense majority of the clergy firmly believed in the reality of this crime,—and that *they continued to assert and defend it, when the great bulk of educated laymen had abandoned it.*" (Chap. i, p. 135.) And he says, also, that "the scepticism on the subject of witches was commonly branded as a phase and manifestation of infidelity," (p. 136.) Yet we are now thoroughly ashamed of the part taken by so many of our forefathers—even good men and true, like Judge Hale—in maintaining this particular phase of traditionary belief; as, I doubt not, the next generation will be equally ashamed of the violence with which, in this age in which we live, some other traditionary views have been maintained, though standing in direct contradiction with the plain results of Modern Science.

For me, however, I feel it to be a matter of bounden duty, not a matter of choice, to communicate to our heathen converts those facts of Modern Science of which we ourselves are assured, so far as their simple minds are able to receive them; and this includes, I need hardly say, the geological conclusions as to the vast age of the world, the great antiquity of man, the impossibility of a universal deluge. The knowledge which I possess of these would make it sinful in me to teach any heathen brother to believe in the historical truths of the scriptural accounts of the Creation and the Flood,—as other scientific reasons make it equally impossible to teach them the scriptural story of the Fall, and other parts of the Bible narrative, as historical facts. For I hold myself, as a Christian missionary, to be, as I have said, "a steward of the manifold gifts of God" for these my brethren. I regard it as an essential part of Christianity to believe that "God is with us" still, as He was of old, and as He has been all along,—instructing and enlightening the hearts of His children, guiding and governing the ages as they go, and educating, in His own wise way, by wondrous influences from without and from within, the human race in the clearer knowledge of Himself. The true missionary goes, as the "heir of all the ages," to convey to his fellowman whatever blessings he himself possesses, as the good gifts of the Father of

all. And thus every white man, who teaches the natives industry and cleanliness, and the arts of civilised life, may be in fact, as many a white man is, a true minister of God's Love to his fellows.

A civilised government also, such as ours in Natal, might do much, by establishing a system of schools, under government control and inspection, in connexion with each of the principal tribes, to advance the welfare of the savage population. Our natives pay, and have paid for many years contentedly, a hut-tax of seven shillings per hut, which adds now to the revenue a sum of £20,000 a-year, of which £5000 has been expressly reserved by the Queen to be devoted to their improvement. I believe that this fact is unique in the history of the British Colonies. I should greatly rejoice to hear that this sum was devoted wholly to the establishment of state schools, irrespective of any religious body, in which the elements of an ordinary education may be given, to be carried on further, in the case of the sons of chief men or more promising lads, in a central institution, still under government control and direction. If a band of—I say not ten thousand, but even—one hundred intelligent laymen, with some knowledge of industrial arts, were scattered over the land in this way as schoolmasters, under the inspection of the magistrates, but not coming themselves with magisterial power to enforce the law and to punish crime, coming rather as friends and counsellors and comforters of the chief and his tribe, it is impossible to say what good might not result; not merely by the gradual elevation of the whole native community, but by the kindly intercourse which would thus take place between the natives themselves and their children, and these commissioned servants of the Queen. There would be no difficulty here in having the boys brought to school; probably, even the girls might be easily gained; for the Queen's word is the highest law with our natives, as with other savage tribes, and there is no fear of their not recognising implicitly the Royal Supremacy, in this as well as other matters. The chiefs would take an interest in seeing with their own eyes the progress of the work among their people, especially in seeing that their own boys were able to read to them their little books of science or history, and to write for them their secret thoughts and messages. Thus the business would be done systematically, instead of being left, as now, to accidental missionary efforts; it would be done thoroughly and effectually, instead of being hindered, as now, by sectarian strifes and jealousies. And are we not bound by every sense of duty, to do as much as this for them? Must we allow them to suffer all the evil consequences of contact with civilisation, while as a nation we hold the land in our hands and take the taxes of the people, without also, as a nation, seeking to impart to them that chief blessing of civilisation, the benefit of education? Or must we sit, as a nation, coldly by, and allow the religious sects to squabble on about their own peculiar differences, while the people are perishing still, as far as this life is concerned, in heathen ignorance, idleness, vice, and superstition?

Yet, after all, there would be room for the missionaries. Among these youths, so taught and trained, there would be some, we may

hope—nay, we are sure, from past experience in the whole history of man—whose hearts would be touched with the divine desire to be themselves the teachers and educators of their brethren, not only as regards the things of this life, but as regards the life to come. And the native community itself, thus raised from a lower level, would desire to hear the message of life from the lips of these teachers. Such a man is my Zulu catechist, who signs himself William Bishopo, not meaning to say that he is Bishop, but implying that he still clings to me, as a clansman in Scotland clings to his chief. I have printed some of his letters to me, since I came to England, in a pamphlet, *Remarks on the Bishop of Capetown's Proceedings*, a copy of which I lay upon the table for the library of this Society. But the last letter which I received from him, and which has not been printed, is as follows, and will show, I think, some proof of the beneficial result of "Missionary Efforts among Savages". I translate it literally from the Zulu.

"September month 29.

"SIR,—I thank you for your letter; it reached me; I heard it, all its story. But, sir, there is a thing which I was wishing to tell you clearly, to wit, that in fact as to the doing of the people, I don't wish to worry myself to no purpose, with the plentiful talk which comes from the people, white and black, of ours. 'Sobantu has gone astray; he is condemned; he has no truth.' About these matters, sir, they make my heart sink. I even left off to urge myself on about my work of teaching. I left it, beginning in May month 14 until to-day, September month 29. However, as to that unwillingness of mine my people trouble me much, saying I have forsaken them. But in all that I am looking for your return, because truly I put all my trust in all your teaching of me. It was that which gave me strength to know thoroughly our Father Unkulunkulu, who is over all. Sir, I supplicate blessing for you from our Father above; may He confirm you in that truth in which you confirm (others). And I too myself still hold fast that truth which I received from you, to wit, we are Unkulunkulu's,—He knows us. All that I received from you, that is what I stand by—I mean to know Him,—I mean to trust in Him,—every thing of that kind.

"I supplicate for you blessing entirely, saying, 'May He who is over all stand with you, deliver you, grant you (grace) in England, bring you to Natal!' for that truly is our glory, our wealth, that your return, Sir, Sobantu beloved. But, Sir, the thing which I don't understand is, your fighting with the white people, to wit, what are you fighting about? For, if it is that which I know of, *they* ought to believe, and leave you to return."

Bishop Gray says repeatedly in his Journal, "What shall we do with this poor fellow?" I am afraid there is no hope for him: he is incurably bitten with the simple love of the truth; and what is worse, there are others, to my certain knowledge, in the same predicament. And who knows on how many other hearts such words as the following may have a dangerous effect, which were spoken by William's brother Jonathan to a class of native converts, living under the shadow of my residence, who have been left for the last three years to instruct

each other, without the aid of an European missionary. They are reported to me by a friend, who very lately visited one Sunday the Station where I live :

"The Sunday before last, I went out and spent at Bishopstowe. There were not many more than twenty (natives) present (in the chapel). I could with difficulty repress my feelings, when I pictured to myself those I had seen there, and whom I hope to see there again. . . . Jonathan preached, and I thought his sermon very clever in some parts, and very interesting in others. I suppose it was your heretical teaching. He spoke of the innate consciousness which every one possesses of what is right and what wrong. He was particularly happy, I thought, in some of his remarks on this point. He said,— 'When a man has done a wrong thing in secret, his heart does not wait to find out if any one saw him do it, before pronouncing judgment upon it; but it instantly condemns him. So also, if he has done a meritorious thing in secret, his heart witnesses to the merit and right of it, although no other has seen it.' He said, 'In the nature of things it was so: it was so on earth, and it was so in heaven. Whatever *was* right, *was* right, and we all bore witness to it, although our learning was but small, or none at all; and the same with that which was wrong.' Then came his amusing—I should rather say interesting—application. I am afraid some would call it 'heretical'. 'And this,' said he, 'is the meaning of the passage, "Whatever ye shall bind on earth, shall be bound in heaven; and whatever ye shall loose, &c." It cannot be otherwise: right is right, and wrong is wrong, in heaven and upon earth; and so it always must be. It is as impossible for it to be otherwise, as it is that men should gather grapes of thorns, or figs of thistles.'"

I think that even Mr. Reade would allow that there is here also some evidence of the good result of "missionary efforts"; and, perhaps, he will think with me that no great harm would be likely to ensue, if what Bishop Gray dreads were really to take place, and a whole school of such teachers should be raised to infect the native mind generally with such teaching. But then the love of Christian men at home must send the first messengers of God's Living Word, to stir the hearts of such men,—to enlighten their understanding, to draw out their powers of thought, to clear their doubts, to answer their questionings.

Yes! those who have had their own hearts warmed with the knowledge of God's Love,—whose souls have realised the truth of their Creator's presence in the midst of His glorious universe,—whose spirits have been wakened to the consciousness of their high vocation, their mighty hope, their august parentage, as sons and daughters of the Lord Almighty,—who have known for themselves the blessedness of living, amidst all life's duties, trials, sorrows, in daily communion with God, the Father of spirits, the spring and source of all life, and truth, and love,—such as these cannot be content with having this blessing for themselves alone; they must help in some way to spread the knowledge of God's Love and Truth to others; their own joy would be utterly wanting in one of its chief ingredients, if they did not recog-

nise that the truths, which have refreshed and gladdened their own souls, are meant also for all mankind, and are only first granted to them, that they might each be, in his measure, the ministers of this great joy to others. We are all familiar with the words, "Go ye into all the world, and preach the Gospel to every creature." But, whatever criticism may do with the text which contains them, whatever outward sanction they may lose or still retain, they must continue always binding as the exposition of a clear human duty. The feelings of common brotherhood with which our God has gifted us, as real though faint reflections of that Great Love with which He embraces us all, would still urge many among us to go forth—personally, or by others sent in our name—to communicate to our brethren in heathen and savage lands those spiritual as well as temporal blessings in which we ourselves rejoice.

I cannot, therefore, allow that "whoever subscribes a guinea to a foreign mission is defrauding some starving Englishman of that guinea." I need not stop to say, what was truly observed on the former occasion, that among those who feel most deeply for the wants of the "starving Englishman", are very many, also, who are most earnest in the support of missionary work. But I do say that this feeling of love for our kind—this sense of the essential brotherhood of the great human family,—whether sprung from one first pair or more, whether developed from lower races or not,—which binds us all together as beings gifted with reason and conscience, and therefore capable of knowing, loving, and glorifying our Creator, and of loving and honouring each other, as reflecting the image of God,—this spirit, in short, which prompts the missionary to go, and the friends of missions at home to send him, while at the same time they are not found neglecting the calls which God makes upon them in His Providence nearer home at their very doors,—is quite as noble and generous as the spirit of scientific inquiry, which carries men into other fields of arduous and patient labour, and which has led, I believe, a recent traveller to risk the dangers of the West African coast in search of our (supposed) ancestral ape.

And as to the expenditure, let us suppose that each Englishman has confined his outlay on his own personal needs, and those of others dependent on him, to what is strictly necessary, and given every farthing of the remainder to help to raise the status of his fellow-countrymen at home of the degraded classes,—not, observe, by mere almsgiving, which is often absolutely pernicious, but by well-considered and well-organised schemes for their improvement. Then will it be time to grudge the few thousands of guineas, which go out of the purse of the old country to help her colonists, deprived as they are of those religious advantages which are here at home inherited from the munificence of former ages, that they may live truly human, divinely irradiated, lives, and to raise the multitudes, who hang on the outskirts of civilisation under our rule, to a like condition, instead of having recourse to the somewhat *expensive* process of keeping them down by the sword.

In short, whether this work of brotherly kindness is to be done at

home or abroad, it is not "the guinea" that will do it. It is not money—it is love, and faith, and the spirit of self-sacrifice, in obedience to a higher law of duty, which is, in fact, the very essence of Christianity itself,—which in some way or other we must exercise, if we are true sons of the Living God,—which in some way or other we must be taught to exercise, if we would live the life eternal,—and which the Christian learns from the example of his Lord, and, above all, at the foot of the Cross.

At the close of the paper, the PRESIDENT observed that the applause had been sufficiently loud and prolonged to indicate in the most striking manner the approval of the meeting, whose thanks he begged to convey in their name to Bishop Colenso for the very able paper he had laid before them. Before calling upon others to speak on the questions which had been raised, he wished to make a few remarks himself. Doubtless there were some present, who, on hearing the paper, would think that the Anthropological Society was a very extraordinary society indeed. There was much in the paper which had no direct bearing on the subject of anthropology. Theirs was a scientific society bound to no set formulæ or doctrines, seeking only the exposition of anthropological science. He must remind those gentlemen who might be desirous of speaking, that he could not allow any reference to be made to remarks that fell at the previous meeting. What they had to consider were the anthropological bearings of the subject. Religion, he believed, was a test of race. How far have we influenced savage races by our philosophical ideas? What was the effect of a contact between a superior and inferior race? And what part did the religion of a people take in their general condition? If religion consisted in faith, why did not the simple-minded African believe? This was a scientific question; likely to throw much light on the psychology of the primary races of man. To what extent could tribes be taught to comprehend Christianity? It was very desirable to understand their psychological condition, so that it might be known what they could be made to believe, and what could really be instilled into their minds. The amount of truth in particular religions could not be discussed; and it was even an assumption that religion did affect the physical and mental condition of man. If mobs at Exeter Hall did applaud missionary labours, or supposing 11,000 men had been making fools of themselves, he could not see how that affected the subject under discussion. He had heard there were many clergymen who would like to burn him, and many other members of the Anthropological Society, if they could. How, he would ask, could mere theologians, teachers of catechisms and creeds, do any good to any people whatever? It had been said that people not believing in any religion "scarcely deserved to be ranked as human beings." This was a new definition, and one quite novel to anthropologists. He would pass over the question as to the infallibility of the Scriptures as not bearing on the subject under discussion, but he would say that he was very glad to hear Bishop Colenso remark that he was deter-

mined to keep back no scientific facts from the natives. As to the impossibility of the Deluge, the Society recognised nothing as impossible which was not so mathematically. The Bishop of Natal has asked, "Were sectarian squabbles to be always allowed to hinder progress, and religious differences to be always engaging the attention of their respective advocates, while people, so far as this life was concerned, were left in heathen ignorance, idleness, vice, and superstition?" And this, too, when Mohammedanism was competing with Christianity. But the question for us to consider was, what should these ignorant degraded savages be taught? Would it suffice to teach them, as the Bishop proposed, the "Lord's Prayer" and the "Sermon on the Mount"? There were two parties present, and he thought Bishop Colenso's statements would not please either. Should they accept the facts which had been laid before them, and as a true conservative society make use of the existing missionaries, or should they try to teach them a simple system of moral philosophy, on which there could be no quarrelling? He most heartily joined the Bishop in asking, "were they never to tell Englishmen or Zulus the truth?" In conclusion, he must state that the Fellows of the Anthropological Society were not at enmity with Missionary Societies—but they were the friends of the inferior races of man, wherever they were to be found. He was sure the Fellows of the Society were thankful to Bishop Colenso for his outspoken, manly, and eloquent discourse. They, too, were the seekers and lovers of truth, though they would not follow Dr. Colenso into the dispute between him and other members of the Church.

The Rev. DUNBAR HEATH hoped that no admiration of the eminent man whose paper they had heard would prevent calm and impartial discussion on so important a subject. He would not waste time in compliments of the very interesting and graphic description Dr. Colenso had presented of the struggle for religious existence among the races of men in South Africa. He was a Darwinian, and carried those opinions into all these questions. He thought the meeting had to consider what was likely to be the ultimate success of missionary labours in spreading religion among a race where it was struggling to modify itself, and where it would rectify itself in time. From what had been said, we could imagine that the people of the settlements and the natives were each struggling for existence. There were also two mission institutions among them which had nominally the same object, but whose methods of proceeding were as different and as contrary as any two in the world. For his part, he did not know what the saving of souls meant. It seemed to him that it was chiefly desirable to elevate the whole human race as much as possible, and by infusing a Christian spirit and fair play in the world, to raise the character of man. History told them that no two races had ever lived long near one another without modification or amalgamation. In most cases, it was mutual modification that took place. There were three instances of this in the Christian religion itself. It had been three times modified before reaching them, and it would have to be again modified before it was diffused in Africa. It was well known that the book of Daniel, which contained so many lofty thoughts, was of Gen-

tile origin. Again, the Christian religion was profoundly modified by the Aryan Greeks, who were not a Semitic race. And next the Aryanism of the Greek met with the Teutonic conceptions, when such things as heaven and hell were introduced, for they had been nowhere found in the Bible. It was now known by a recent decision in his own case, that the phrases going to heaven and going to hell might be rejected by any clergyman of the Church of England. The four powers he had alluded to might still contend, but he was the last to curtail true Christian influence, which was certain to be eventually beneficial.

Mr. WINWOOD READE and the Rev. WILLIAM ARTHUR then rose almost simultaneously, and appeals being made to the chair, the President announced that the former gentleman would address the meeting as soon as the disturbance had ceased.

Mr. READE thought they had arrived at a remarkable epoch as theologians and men of science. He had nothing to dissent from in the remarks of Bishop Colenso, though there were many points on which his Lordship had differed from him. Those points had been dealt with in a moderate and gentlemanly manner, and he had nothing to say upon them. He was opposed to Christian missions as now generally conducted, but he did not object to them as conducted by Bishop Colenso. He might congratulate the meeting on having heard the truth, for that was the first time that a missionary in a public meeting had ventured openly to speak the truth. He would like to see missions for arts and trade; and when the people were sufficiently cultivated, for science also. The French had done this in the Senegal River; for that was a Mohammedan country, and if the missionaries had taught religion, the sons of the chiefs would have ceased to go to them for instruction in art. The fact was that missionary enterprise was the romance of religion, and it would be a long time before this romance was eradicated. It was the duty of a traveller to point out defects that they might be remedied. He thought that the missionaries themselves were not disinclined to give in to advanced notions. For instance, in regard to polygamy, Mr. Colenso himself did not make that a barrier to the teaching of the natives. In his opinion, the real opponents of missionary labour were at home, and were to be found among the directors of missionary work, who did not understand the real bearings of the case. If polygamy was legal among the natives, it was better to put up with it. He would ask, whether when missionaries found they could not induce the men to get rid of their wives, it was better to excommunicate them, or to endeavour to teach them notwithstanding. There were many Fetish customs loudly complained of, which to the natives were not more Fetish than the familiar custom of putting holly and evergreens in our houses at Christmas.

The Rev. WILLIAM ARTHUR conceived the question was rather one of missionary efforts among savages, than of doctrine. It was not a question of race merely. Much had, indeed, been said on that subject, and many equivocal facts had been adduced. He would not be doing his duty were he to attest facts by doctrine, for doctrine

should rather be attested by facts. The President's question as to what part religion had in the condition of a people was, in his opinion, a fair one. In their normal state, the negroes had but one religion, and it was fair to discuss their condition after Christian contact. When Christianity first reached the negro, he was uncontaminated; then he became contaminated by a partial conversion, and was partly Christian and partly heathen; and, lastly, he was, or was thought to be, entirely converted. He would ask, whether the morals of the negro were not better where Christianity had not reached him? Was not the negro at Sierra Leone, for instance, morally inferior to his fellow in Central Africa? The Aryan race might have wrought some improvement, but it had not had sufficient time to propagate itself extensively. The next point was, whether Christianity had made them better or worse, where it had penetrated? Which natives were the best, those who were most Christian, or those who were not at all Christian? It had been said that Christian missionary efforts would not succeed, because the people were Aryan, and that time would again modify the Christianity, as at Alexandria; but he contended that the modifications had been in a backward direction, and that there were not now the simple Semitic forms of the past. He would take, for example, the greatest modification of all, which took place at the Reformation—that had nothing to do with race. He had no objection to Bishop Colenso's theory of conversion. Could he bring them to an island of people converted on that plan? It should be remembered that blessing was not philosophy.

The Rev. Dr. IRONS observed that it had been said it was a rarity for a clergyman to speak the truth.

Mr. READE explained that he had used the word *missionary*.

The PRESIDENT, being referred to, confirmed Mr. Reade's statement.

The Rev. Dr. IRONS said he was satisfied if Mr. Reade withdrew that remark. He continued, that the question appeared to him to be, had the Christian missions been a failure or not? Should they be encouraged or discouraged? That was really the question in its simplest form. Bishop Colenso's paper exhibited courage, simplicity, and many touches of noble-heartedness, but he did not gather from it how the matter was to be dealt with. Were they to infer that the missionaries were engaged in hopeless endeavours? He protested against opinions on theological questions being thrown out, as had been done by Dr. Colenso, when they could not, on account of the place and occasion, be met by reply, which he would freely give if permitted. He considered it unfair, but he used that expression not offensively, but in the "anthropological sense". He had hoped the Bishop would have said in what sense the Apostles meant the saving of souls, but they were left in the dark as to whether he believed in that at all, though he had not scrupled to cast aside the creeds of eighteen hundred years.

The PRESIDENT interrupted the speaker, to remind him that the Society had not met to discuss what Bishop Colenso had not said, but what he had.

The Rev. Dr. IRONS further complained that he had not been told

how far Christian missions could succeed among the heathen. They had been told by the Rev. Dunbar Heath that Christianity had gone through three modifications; but that gentleman might rather have said thirty-three. They had nothing to do there with the doctrines of the Trinity, etc. But, if Christianity were true (and he had no doubt of it himself), they ought to learn what it was doing among these savage peoples; and on that subject they had received no information. He would say, however, that, but for the missionaries, there would have been no Anthropological Society. It was their efforts that had furnished the base of the science; and, in his opinion, anthropology owed everything to them. He believed in a bright prospect wherever British effort was directed; and, if they did not despair of the doctrines they believed, those doctrines should be pushed wherever Britons went. The apostles did not propose the plan suggested by Bishop Colenso.

The PRESIDENT remarked that it was not a question of method, but of failure or success.

The Rev. Dr. IRONS continued by observing that the apostles did not begin by teaching from books at all, yet they did their work. How did they do it? What was termed the literary method, viz., translations, etc., had been tried in the present day; but how did the apostles do their work? He feared he should offend a great many gentlemen there present by the remark he was about to make on this subject, but he was not afraid of offending them. The fact was, that the apostles did their work by colonising wherever they went. They collected a band of converts, who acted as a centre from which their doctrines were spread around; and, indeed, this system of colonising or church-making was the only way of propagating a faith. In the earliest ages there were no documents, and hence there could have been no reference to documents as such. He did not think written doctrine at all necessary; for surely God did not intend a literary method to be employed, when only one in ten persons would have understood it. In the second century, Christianity was propagated among the heathen without books; why could it not be done so now?

Mr. BENDYSHE thought there were two reasons for the ill success of the missionaries besides the question of race. These were the general superiority of the missionaries to the natives, and the public theatre in which they were compelled to act. The public criticism to which they were subjected was very unfavourable. Dr. Irons had said that the apostles taught without the aid of books; but, for his part, he had come to the very opposite conclusion. He did not know when that gentleman thought Christianity began, but St. Paul taught first by books, for did he not write epistles?

The Rev. Dr. IRONS here said that the epistles of the New Testament were not written till thirty or forty years after the time of our Lord.

Mr. BENDYSHE continued, by drawing attention to the false gospels. Some of the earliest spurious publications had imposed even on St. Jude himself, and others. What was wanted at the present time, was a series of stories to suit the capabilities of the hearers; and since the missionaries were not allowed to forge stories for this

purpose, they were not successful. The apostles owed a great deal of their success to stories in their time. In many places where Christianity did exist, it was now extinct; as, for instance, in Palestine, Turkey, etc. In fact, Christianity was not suited for propagation. How were our ancestors converted? Certainly not by pure gospel—that would have made no impression on them. He attributed the want of success to the lack of false stories; for Christianity only appeared to succeed through human agency, and by human devices. There were no negro dogmas, and hence the dogmas of Christianity assumed no shape in the negro mind. It might be expected to go through all the phases in Africa that it had gone through in Europe: but the negroes received it in whatever shape it was presented to them, and this he regarded as a bad sign. The question to be determined was, whether this Christianity could ever be inserted into the negro mind.

Mr. REDDIE said that he should not follow the remarks of Mr. Bendyshe; but if that gentleman's theory were a correct one, it had negatived the chance of the rev. prelate's success as a missionary in South Africa; for according to his theory, fables are required to make Christianity succeed. He did not wish to discuss the existence of heaven and hell; but, with regard to the negro or other pagans, he did not admit that Christianity taught they were all doomed to the latter place. On the contrary, the heathen were regarded generally as left to "the uncovenanted mercies of God." He would say that the *Record* and Dr. M'Neile, as quoted by the bishop, did not represent the authorised teaching of Christians. He congratulated Bishop Colenso on having at any rate converted Mr. Reade, who had just said that he did not dissent from his lordship's remarks.

Mr. READE rose to say that he meant he would not dissent, for that he would not then discuss the matter.

Mr. REDDIE repeated that he understood Mr. Reade had agreed with the bishop; and the words he had used he believed were spoken by Mr. Reade. As to polygamy, he had called the opinion that the negroes liked polygamy, "Anthropology in petticoats".

The PRESIDENT reminded him that that was not what they had met to discuss.

Mr. REDDIE continued, that polygamy was identified with female slavery; and he was again interrupted by

The PRESIDENT, who said that they were not discussing polygamy, but the advantages of missionary work.

Mr. REDDIE then proceeded with his remarks on polygamy, when

Mr. HENRY BROOKES rose to order; for he thought the real question was the capacity of the negro to receive the Christian faith, and the method of teaching.

Mr. REDDIE accepted Mr. Brooks' definition, and was proceeding with his views on polygamy, as bearing upon "the method of teaching", when he was reminded by

The PRESIDENT that Bishop Colenso had not discussed that question at all, that he had laid a separate paper respecting it on the table, and that the meeting could not entertain what was not in the paper before them, which referred only to missionary labour.

Mr. REDDIE resumed, by remarking that Bishop Colenso had stated that this question of polygamy was one with which he had had great difficulty in dealing, and had even been obliged to ignore; but this was surprising, as Mohammedism was making great progress, though enjoining great restrictions in this matter. Polygamy was always associated with a degraded state of woman, and it was impossible to elevate man where woman was degraded. But Christianity, with all its faults in Europe, was not to be compared with the degradation and vices among Mohammedans. As to the bishop's scheme of educating the negro children, he thought it would be found impracticable. The first Christians did not begin by teaching the children, and leave their parents without instructing them in the principles of Christianity. From what was known of the mechanical teaching, advocated by Dr. Colenso, he considered that it had quite failed to produce the results intended when formerly tried. There was testimony of this in the Report of the Select Committee "On Aborigines (British Settlements)" in 1836; and, for his part, he felt sure that the only way to elevate man was by the elevating influences of religion.

Mr. WALLACE observed that, after so eloquent and amusing a discussion, there was not much for him to say; but as a traveller he had seen something of the missionaries and their works, and his general impression was that the success attained was due rather to personal character than to doctrine. He was delighted with the bishop's view of the subject; for, in his opinion, nothing but simple teaching could be effective among savage peoples. The Zulus, with whom Dr. Colenso had to do, were considerably higher in intellectual status than, for instance, the aborigines of Australia, who can hardly count above three or five, and are incapable of comprehending that two and three make five. To such people it is idle to speak of religion, they cannot understand what it means. The best effects are produced when the missionary shows that he has no selfish interest—that he seeks only to do good; and this, in the speaker's opinion, would move the people more than aught besides.

Notwithstanding the lateness of the hour, Captain FISHBOURNE, Dr. UNDERHILL, and Mr. BURNARD OWEN here rose to speak, when

The PRESIDENT took the opinion of the meeting as to whether the discussion should be continued, as the engagements of the Society prevented the possibility of adjournment. It then appeared that there were only thirteen votes for the continuance and an overwhelming majority against it, and the President therefore called upon the Bishop of Natal to reply.

The BISHOP OF NATAL observed that he should only detain the meeting a few moments in replying to one or two of the comments which had been made. He had been told that he had not stated what progress had been really made by the missionaries; but he must remind the meeting under what conditions his paper had been written. When Mr. Reade's paper appeared, he felt he was in duty bound to show what were the unavoidable drawbacks on missionary efforts, which partly accounted for the appearance of failure, and at the same time to

point out some of the removeable causes of the defects he had mentioned; and this was what he had endeavoured to do. As to apostolic teaching, St. Paul had not hesitated to make use of his literary powers, which he exhibited in the quotations from other writers which his epistles contain. It was true that there were no printed books then, but there were parchments, which answered the same purpose; and St. Paul was particularly careful to charge Timothy not to forget to bring them with him. Moreover, if St. Paul wrote letters to his flocks, he must have had converts who could read them; and, in short, he made all the use that he could of the education of his time, and would, no doubt, have employed the printing-press, if he had had it at his command. But, as he had said, he was not going to discuss many of the questions that had been raised. He thought that God had given them powers to convert the natives, and we had no more right to keep back from them scientific truths, than those of the Bible. We ought to make use of all God's agents, among which was science. He further stated his opinion that, when a missionary went out as a scientific man, his superior skill and learning, coming to the natives from a distant nation, appeared to them quite miraculous, and wrought upon their wonderment and awe. The right rev. bishop stated, in conclusion, that he thanked the meeting for the patience with which they had listened to the long address with which he had felt it necessary to trouble them.

The meeting then adjourned.

JUNE 6TH, 1865.

THE PRESIDENT, DR. JAMES HUNT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The names of the following twenty-two gentlemen, who had been elected Fellows since the last meeting, were announced:—Arthur Vacher, Esq., 29, Parliament Street, S.W.; J. Spence Ramskill, Esq., M.D., M.R.C.P., 5, St. Helen's Place, London; R. S. Sisson, Esq., M.D., 3, Warrington Terrace, Maida Vale, W.; J. B. Symonds, Esq., Clifton Hill House, Bristol; J. Langdon H. Down, Esq., M.D. Lond., Earlswood Asylum, Redhill; James H. Moore, Esq., Brook Street, Cheetham, Manchester; T. S. Barrett, Esq., A.A., Langley House, Grove Lane, Camberwell; Joseph Cowen, jun., Esq., Stella House, Newcastle; Frank Wrentmore, Esq., 3, Little Argyle Street, Regent Street; Edward Anderson, Esq., M.R.C.S., 3, Tavistock Street, Covent Garden; John Allen Brown, Esq., F.R.G.S., Scaleby Lodge, 241, Camden Road, N.W.; Champion Wetton, Esq., F.R.G.S., Somerset Hill, near Dorking; T. J. Sanderson, Esq., 5, Regent's Park Terrace; Major-Gen. William Lang, 33, Bury Street, St. James's; W. T. Marriott, Esq., 36, Half Moon Street, Piccadilly; James T. J. Doyle, Esq., Assist.-Surgeon, Madras Army; William Martin Wilkinson, Esq., New West End, Hampstead, N.; Robert Wood, Esq., 26, Cable Street, Liverpool; F. Braby, Esq., F.G.S., 28, Osnaburgh Street, N.W.; William Story, Esq., Grove Street, South Hackney, N.E.;

Rev. W. G. Cookesley, St. Peter's Square, Hammersmith; Ralph Tate, Esq., F.G.S., Geological Society, Somerset House.

Presents.—The following presents were announced to have been received from J. Fred. Collingwood, Esq., V.P.A.S.L.:—Faiths of the World (Gardner); Analysis of Beauty (Walker); Layard's Nineveh (Layard); Antiquity of Man (Lyell); Origin of Species (Darwin); Past and Present Life on the Globe (Page); Life in its Origin and Races (Phillips); Lectures on Origin of Species (Huxley); Races of Man (Knox); Races of Man (Pickering); Races of the Old World (Brace); Hottentot Fables (Bleek); Naturalist in Amazon (Bates); Ethnology of British Colonies (Latham); Ethnology of British Isles (ditto); Man and his Migrations (ditto); Miscegenation (Owen); Classification of Sciences (Spencer); Natural History of Man (Prichard); Atlas to ditto (ditto); Andaman Islanders (Moatt); Varieties of Man (Latham); Physiology and Zoology (Lawrence); Veracity of Genesis (Hoare); Life of Jesus (Renan); Female Penitents (Hale); Three Barriers (Rorison); Anatomy for Artists (Fau and Knox); Atlas to ditto (ditto); Atlas of Universal History (Bell); Report of British Association, 1862; Dictionary of English Language (Johnson); Greek Lexicon (Jones); Latin Dictionary (Adams); Life of Julius Cæsar (Napoleon III); Human Physiology (Carpenter); History of Magic (Ennemoser); Life of Jesus (Strauss); Prophet of Nazareth (Evan Meredith). There have been also received from Professor Carl Vogt, Discours prononcé par M. le Professeur Charles Vogt à Genève; from M. d'Archiac, Leçons sur la faune quaternaire; from J. W. Conrad Cox, Esq., Faber's Pagan Idolatry; and from W. Winwood Reade, Esq., Savage Africa.

The PRESIDENT observed, that it would be perceived that about fifty volumes had been presented to the Society's library by Mr. Collingwood; and it was usual when such an example of liberality had been displayed, to give a special vote of thanks, which he had no doubt would be accorded on that occasion.

The vote of thanks having been carried, the PRESIDENT then called on Mr. Carter Blake to read a letter of personal explanation, which had been received from Captain Burton, in reference to the remarks made at the previous meeting.

Mr. CARTER BLAKE then read the letter, as follows:—

Letter from Capt. R. F. BURTON, V.P.A.S.L., to the Editor of the Journal of the Anthropological Society.

I am at a loss what to say, when looking over the voluminous mass of matter which appeared on the occasion of our last meeting. The President seems to have expressed the sensible hope that speakers should be brief, whereas gentlemen with speeches in their pockets determined to be terribly long; and rarely, indeed, has so much been spoken, and so little said.

As regards Mr. George Dibley, F.A.S.L., who resumed the discussion on Mr. Burnard Owen's paper, we must agree that there are tribes amongst whom missionary efforts are about as effectual as ad-

ministering medicine to a corpse. That work, and not education, is the most healthy treatment for the barbarian, we know by hard experience. Unfortunately, this is a rule which missions in general do not carry out. With Mr. Dibley, I wish that the picture of savage improvement through missionary operations was true; my personal experience tells me that in most cases it is not. That £21,000 per annum should be wasted on the West Coast of Africa, when our unfortunates at home want every farthing of it, is what we all lament. Finally, I would also, with Mr. Dibley, suggest that something better should be supplied, in lieu of a system which in so many cases has been proved incapable of effecting its ends.

With regard to Mr. Reddie, I can only regret that this gentleman, whose travels and experience extend so little beyond the Admiralty, should have departed from his hitherto invariable habit, by putting his arguments on paper. It is somewhat diverting to see this mind, in which self-sufficiency is the only marked feature, obliged to 'use the caustic freely, and to cut unflinchingly'; neither the caustic nor the cuts are likely to damage Mr. Winwood Reade, or any other man. Mr. Reddie, as usual, misquotes me, in stating that I called Mr. W. Reade's paper a photograph. I applied the term to the candid experience of Mr. Harris. As regards the 'clear-headed Chancellor of the Exchequer', I am not at all aware that Mr. Gladstone has had any personal experience of missions; and I object to be browbeaten by a great name. In conclusion, I cannot remark too strongly on the tone adopted by Mr. Reddie towards those who have had the misfortune to enjoy more experience than he has; its exceeding personality and utter want of courteous feeling, not only prejudice his own cause, but render a reply in kind necessary.

I cannot agree with Mr. Schrenk, who thinks that a 'man takes his neighbour's wives' in Mohammedanism more than in Christianity. My personal acquaintance with the converts of the Basle missions, and their teachers, convinces me that they are not, in this respect, better than their neighbours. I can only join issue in the most direct way with Mr. Schrenk, when he confidently asserts that the missionaries have done great things in Western Africa.

The Rev. Mr. Martin, with consummate good taste, read amidst 'cheers and laughter' a note which I wrote from Dahome, June 13th, 1863. It is a mere personal token of good will to Mr. Bernasko, the Wesleyan missionary, who had been civil and useful to me in the interior, and who was then threatened with loss of pay and position.

I agree with Capt. Fishbourne, that the influence of the Christian traders on the negroes of Zanzibar has been exceedingly injurious. But also I assert that the missions there established have been model failures, even where the traders had no power.

To the remarks of Mr. Harris I must again assent, although he belongs to the 'tabooed class of travellers and traders'; it is curious to remark the difference between a picture of Africa drawn in Africa, and a picture of Africa drawn in London. The idea of sending out an unbiassed person to report upon the subject of Christian missions, is perhaps hardly practicable. But it would be easy to form a com-

mittee, somewhat after the form of the Select Committee of the House of Commons, and examine *videlicet* all witnesses willing to appear before it.

I will end these remarks by expressing, with the long-enduring President, my amazement at the form taken by the discussions of the last two meetings; and, with the Secretary, deeply to regret that a tone of language has been used which has necessitated on the other side of the argument the use of expressions equally derogatory to the rules of scientific discussion.

The PRESIDENT said the Council had also received a letter containing personal explanations from Mr. Winwood Reade, which he desired to be read to the meeting.

That letter was then read by Mr. CARTER BLAKE, as under:—

To the Editor of the Journal of the Anthropological Society.

May 19, 1885.

SIR,—On March 14th, I had the honour of reading before the Anthropological Society, a paper entitled *Missionary Efforts among Savages*. I afterwards addressed a letter to the President of that Society, upon the same subject. In these communications I carefully abstained from personalities; such remarks as I made, applied to systems and to classes, not to individuals. The only names mentioned were those of Messrs. Walker and Mackey, American missionaries, and of the Bishop of Natal; those names were mentioned that I might express my admiration of them. I brought forward facts which I had gathered during my travels in Western Africa, and expressed opinions based upon them. Those facts were confirmed, and those opinions supported, by Capt. Burton, by Mr. R. B. Walker, and by Mr. Harris, all of whom were well acquainted with the western coast of Africa. I learnt only on my return from abroad that a paper had been read by Mr. Burnard Owen, in reply to mine. This gentleman and his supporters should have regarded the Society as a court of justice, in which evidence is to be met by evidence. But, being unable to oppose the testimony of unprejudiced travellers to that which we had given, they attempted to atone for the weakness of their cause by personal abuse. One of them—a Mr. Reddie—has also indulged in misrepresentation. As I was not present when he made the remarks of which I complain, and as they are, I understand, to be published in your *Journal*, I trust that you will allow me to offer some explanations in my own defence.

I spoke of polygamy as the great obstacle to missionary enterprise in Africa, and asserted that it was insurmountable. It is popularly believed here that the negroes are as strongly opposed to polygamy as our English women would be. I showed that this was not the case. Polygamy in Africa answers pretty closely to prostitution in Europe: but because I ridicule the folly of attempting to suppress either the one or the other, it is scarcely reasonable to infer that as institutions I revere them. But Mr. Reddie affects to suppose so: I find reported from his speech:—

“Mr. Reade, after chalking up ‘No Christianity for Negroes’

upon our notice board, runs away to Italy—why not to Utah rather, where he would find what he might call a reformed Christianity?”

I must also beg to state, with respect to my “running away”, that I was prepared when I read my paper to receive and reply to all objections that might be made to it. Very few were made. Mr. Reddie, especially, was very mild in his opposition: he is one of those who have too much delicacy to insult persons except behind their backs. As I am not acquainted with him personally, except from meeting him at the rooms of the Society, I am at a loss to understand the following graceful sentence:—

“I shall, for the same reason, be obliged to appeal from the paper and epistle Mr. Reade has boldly put before us while setting out upon fresh travels—I believe this time in search of the Romantic—to what he had previously stated before us with pretty nearly equal assurance, soon after his return from searching for bubbles and female ideas in Africa.”

From what source Mr. Reddie has learnt the objects of my visits to Africa and Italy, and what is their scientific bearing upon Christian missions, it would be difficult to say. These flourishes were possibly intended as ornaments to his speech, but they do not appear to me to be in very good taste.

In the next extract, your readers will see that Capt. Burton and myself are accused of adultery—at least by insinuation:—

“But then, sir, I must admit that, though without experience as actual polygamists themselves, they may have had extensive converse and intimacy with the wives of polygamists; and, at least, we have their own word for it, that they know the negresses are furious for polygamy.”

By referring to my paper, it will be seen that I stated, not that the negresses were “furious for polygamy”, but furious against the missionaries, who wished their husbands to abandon them—a line of conduct which the Bishop of Natal expressly stated he did not think it justifiable for them to pursue. But Mr. Reddie shows little diffidence in piling falsehood upon slander.

Having learnt that I belonged to the Conservative Club, he takes advantage of that fact to break out in the following strain of refined satire:—

“Is this a symptom that the advanced opinions so lately propounded to Westminster by Mr. John Stuart Mill, in favour of female suffrages, has penetrated to the Conservative Club, which Mr. Reade sometimes patronises, although, if not in politics, at least in religion, he is an uncompromising radical reformer?”

Finally, he actually delivered the following sentence to a meeting of educated men:—

“Besides the days he spent under the roof of two American missionaries, and the days which he spent in actual travelling, he has told us in his very candid *Savage Africa*, that he did spend some days—or at least some nights—under other roofs; and he gives us some account of how he then occupied himself—to wit, in actually beslobbering the oily faces (to say no more) of these swarthy high-smelling ‘brutes’ and very ‘inferior beings’, the negresses, these ‘not nice animals’, whom

he tells us, with all the pride of superior knowledge, are all for polygamy.'

I am sure, sir, that those who have read my *Savage Africa*, will allow that it contains nothing to justify this gross abuse, and these insinuations; and I feel surprised that any one in this Society could be capable of giving vent to expressions which are unworthy either of a man of science or a gentleman.

I am, etc.,

W. WINWOOD READE.

The PRESIDENT then called on Dr. Seemann for his paper on "the Esquimaux, and on North Polar Exploration" which was read by Mr. C. R. Markham.

On the Anthropology of Western Eskimo Land, and on the Desirability of Further Arctic Research. By BERTHOLD SEEMANN, Ph.D., V.P.A.S.L., F.L.S., F.R.G.S.

ALL men of science must feel deeply indebted to Captain Sherard Osborn for commencing, and Mr. Clements Markham for continuing, an agitation in favour of a renewal of Arctic research; and the Anthropological Society has had great pleasure in joining the Royal Geographical Society and other learned bodies in urging upon Her Majesty's Government the propriety of another Polar expedition. Two routes have been pointed out as the most desirable for such an expedition to take: that of Spitzbergen and that of Smith's Sound. Arguments of great weight have been produced in favour of either of these routes, and as they must be familiar to all present, I will not recapitulate them. An Arctic expedition is to accomplish two principal objects: to reach the North Pole and to explore the unknown wilds of the Polar region. Now, the greater portion of these unknown tracts, as a reference to the map will show, is not situated near Spitzbergen, but near Smith's Sound; and men of science who wish for the advancement of all branches of human knowledge, should, in my opinion, express a preference to the Smith's Sound route, remembering that even if it be possible to go to the North Pole and back in a couple of months, if there should be open water, we should gain less information than if sledge parties were to push their way slowly, but surely, north of Smith's Sound. Indeed, I should hold it to be a misfortune to science, if the North Pole were reached before the greater part of the Arctic region had been explored. The vulgar many would probably be terribly disappointed when the uninteresting nature of that geographical point was revealed, the discoverers would become the lions of the London season, and any future attempt to get up a sound scientific expedition would be treated with indifference. It would be otherwise if the Smith's Sound route were chosen. Every step would yield additions to all branches of science, and a legitimate interest would be growing up. I should rather like the Pole to be, scientifically, what the crowning of the edifice is, politically, to our neighbours across the Channel; or the pinch of snuff to the Scotchman outside a tobacconist shop,—a thing which he is always going to take but never does.

The Arctic region offers yet a wide field for anthropological re-

search. We have some knowledge of the races who inhabit it, but that is as yet very imperfect. We are not even acquainted with their exact geographical range, and the question, how far towards the North Pole human beings have taken up their abode, is still to be answered. That part of the Arctic region around which scientific interest at present centres, the groups of islands north of America, are inhabited by one of the most widely-spread nations in the world, the Eskimos. From Greenland to the Aleutian Islands this singular people are to be met with living principally on the produce of the chase, and clothing themselves with the skins of the wild animals they have slain. Are they indigenous to the country which they inhabit, or descended from some north Siberian tribes? Anthropologists have answered this question differently, and it would lead me too far away from my subject if I were to enter into it in this place. I may remark, however, that an active and well-ascertained intercourse is still kept up in these high latitudes between Asia and America. I cannot do better than quote on this point the account which my lamented friend the late Mr. John Simpson, R.N., of H.M.S. *Plover*, has published in the *Nautical Magazine* for 1854, and I may take this opportunity of stating that his paper on the "Western Eskimos" is highly trustworthy, and though published after my "Narrative of the Voyage of H.M.S. *Herald*", it was written quite independent of that work, during the long winter nights of the Arctic region, and may be regarded as a confirmation and extension of what I previously published.

Speaking of the articles in common use among the Western Eskimos, to which they are indebted to strangers, such as kettles, knives, tobacco, beads, and tin for making pipes, Simpson says:—

"The great trading places are King-ing, at Cape Prince of Wales; Se-sú-a-ling, at the mouth of the Nun-na-tak; Nig-a-lek, at the mouth of the Colville, within their own country; and Nu-wu-ak, at Point Barter to the eastward, between all of which there is a yearly communication. It might be expected that the Russian ports near Norton Sound would supply the Russian goods, but such is not the case, as they are all, or nearly all, brought from the Kokh'-lit Nuna, as they call Asia. They say four or five Asiatic boats cross the straits after midsummer, proceeding from the East Cape to the Diomed Islands, and thence to Cape Prince of Wales, where trade is carried on with people belonging to the neighbourhood of Norton Sound, Port Clarence, etc. The boats then proceed along the shore of Kotzebue Sound, until the high land near Cape Krusensten comes into view, when they steer by it for Hotham Inlet, and encamp at Se-sú-a-ling. At this place, towards the latter end of July, people from all the coasts and rivers to a great distance meet, and an extensive barter takes place amongst the Eskimos themselves, as well as with the Asiatics, amid feasting, dancing, and other enjoyments. A large proportion of the goods falls into the hands of people living on the Nunna-tak, who carry it into the interior and either transfer it to others or descend the Colville with it themselves the following year to meet their friends from Point Barrow. At the Colville the same scene of barter and amusement takes place in the latter part of July; and

early in August the goods are carried to Point Barter by the Point Barrow traders to be exchanged for the English and other produce of the east. The Nuna-tang'-meun, or Nun-na-tak people thus become the carriers of the Russian kettles, knives, etc., to be found along the north coast; and being only known by name to the inhabitants east of the Colville as the people from whom these articles were procured, it is easy to perceive how Sir John Franklin and Mr. Simpson were led to conjecture that a Russian post existed upon that river, and that the agents residing there were called Nu-na-tang'-meun. The word Nun-na-tak appears to signify "inland," from its being commonly applied to persons coming from any part of the interior; but they do not use any corresponding word to comprehend the different tribes on the coast.

"At the Colville the Nu-na-tang'-meun offer the goods procured at Se-sú-a-ling or Kotzebue Sound from the Asiatics, Kokh-lit'-en'-yu-in, in the previous summer, consisting of iron and copper kettles, women's knives (o-lu), double-edged knives (pan'-na), tobacco, beads, and tin for making pipes; and from their own countrymen on the Kó-wak River, stones for making labrets or whet-stones, or these ready-made arrow-heads and plumbago. Besides these, are enumerated deer and fawn skins, and coats made of them, the skin, teeth, and horns of the im'-na (arg-ali?), black fox, marten, and ermine skins, and feathers for arrows and head-dresses. In exchange for these the Point Barrow people (Nu-wung'-meun) give the goods procured to the eastward the year before and their own sea produce, viz.—whale or seal oil, whale-bone, walrus tusks, stout thongs made from walrus hide, seal skins, etc., and proceed with their new stock to Point Barter. Here they offer it to the Kang'-ma-li-en'-yu-in, who may be called, for distinction, Western Mackenzie Eskimos, and receive in return wolverine, wolf, imna, and narwhal skins (kil-lel'-lu'-a), thongs of deer skin, oil-burners, English knives, small white beads, and, latterly, guns and ammunition. In the course of the winter occasional trade takes place in these with the people of Point Hope, but most of the knives, beads, oil-burners, and wolverine skins are taken to the Colville the following year, and, in the next after, make their appearance at Kotzebue Sound and on the coast of Asia.

"From what we know positively of the trade thus far, we are inclined to believe that there is a tolerably regular yearly communication between each Eskimo tribe and their neighbours of the same race on either side [of America]. It seems highly probable that the pan'-na, or double-edged knife, described by Sir W. E. Parry as in use among the tribe he met at Winter Island, may have been of Siberian origin, from being of the same form and identical in name with that brought by the Asiatics to Hotham Inlet; where they receive in return oil-burners or stone lamps, which we have often seen in their tents in 1848-9, of a shape corresponding exactly with the drawing in that gentleman's *Journal of his second Voyage*: they bear also a similar name, Kod'-lan, and are said to be brought from a very distant eastern country. Supposing a knife of this kind, made in Siberia, to be carried at the usual rate, we compute that it would not arrive at

Winter Island before the sixth year, and having been exchanged the year before for a stone-lamp, this might come into the hands of the Asiatics on the ninth. The knife would remain the first winter in the possession of the reindeer Tchuktchi (or Tsan-chu); the second, with the inland Eskimos, Nu-na-tang-meun; the third, at Demarcation Point, with the Kang'-ma-li-meun; the fourth, with the East Mackenzie, or the Cape Bathurst tribes; on the fifth, possibly fall into the hands of the people who make the lamps. The lamp returning the same way, would remain the sixth winter at Cape Bathurst; the seventh, at Demarcation Point; the eighth, at Point Barrow; the ninth, in the interior: and be received by the Asiatics on the following summer."

That the Eskimos, or let us rather say human beings of some kind, are living a good distance further northwards than we have actually ascertained them to do, is highly probable. What is known about the distribution of the temperature in the Arctic region would show that man could, at all events, live farther north if he chose to do so. The hypothesis that the North Pole is the coldest part of that region, has been abandoned as unsound. Petermann has long since shown that the Pole of Cold, *i.e.*, the spot where the lowest degree of temperature has been observed, and the North Pole, are widely apart; the Pole of Cold not being even within the Arctic region, but some distance below it. Moreover, the tables which that eminent physical geographer has constructed bring out the additional fact that there is in the northern hemisphere a shifting Pole of Cold; that is to say, during the summer the lowest temperature is found to be at Winter Island (in about the same locality as Ross's Magnetic Pole); but during the winter the greatest cold is observed on the continent of Asia, about Yakutsk. Now, as near and about both these places, the coldest points on the whole northern hemisphere, human beings do thrive, it is not a very hazardous conclusion that mankind can thrive at the very Pole itself; and that a race so fond of performing long and arduous journeys as the Eskimos are, has probably spread considerably farther northwards than we have ascertained it to have done. There is some confirmatory, but vague information to be gleaned from the Eskimos themselves. One specimen, bodily taken from Simpson, will suffice. Speaking of the natives of Point Barrow, the northernmost extremity of the west coast of the American Continent, he says that they have some traditions referring to a land named Iglu, far away to the north-east of that place:—

"The story is, that several men, who were carried away in the olden time by the ice breaking under the influence of a southerly wind, after many weeks arrived at a hilly country inhabited by a people like themselves, who spoke the same language. They were well received, and had whale's flesh given them to eat. Some of these wanderers found their way back to Point Barrow, and told the tale of their adventures. After some time, during a spring when there was no movement in the sea ice, these men set out to visit this unknown country, taking provisions on their backs; and, having performed their journey without mishap, brought home confirmation of the pre-

vious accounts. Nothing further could be learnt concerning this northern expedition, except that each man wore out three pairs mocassin soles in the journey; and since then there has been no communication with the Ig'-lun-nú-no; but they believe some others who have been carried away on the ice may have reached it in safety."

We have as yet hardly any Arctic data for what our President justly terms Historical Anthropology. If we exclude all fanciful speculation, we have still the solid fact to deal with, that at a comparatively recent period of the earth's history, and within the existing creation, there was in the higher latitudes a climate sufficiently mild to allow the growth of large trees in districts now entirely denuded of them, and covered merely with the low vegetation such as we find it at the tops of our more elevated European mountains or on our moorlands. Where such trees could grow, animal life could exist in abundance; and where animals were to be caught in such abundance, we may be quite sure that man was not absent. But I should be glad to have other than these mere speculative proofs; and I think that further researches may possibly bring them to light. If man ever was living far north, traces of him must yet be preserved, when even the bark of the extinct trees is still sufficiently preserved to allow the species to which they belong to be recognised.

The distribution of temperature during summer and winter has also a bearing on the physical development of an Arctic people, of whom I have some personal knowledge, gathered during my three cruises to the Polar region, by way of Behring Strait. Anybody comparing the eastern and western Eskimos will be struck by the superiority of the latter. The fact is easily explained by elementary principles. The vegetation of a country is more checked by a low temperature during the summer months than by excessive cold during the winter. Now, as Winter Island on the eastern side of America has the lowest summer (July) temperature, it follows that the vegetation there must be poorer, that the boundary of the trees must be pushed much further south, that animal life must be less abundant, and that man must have a more precarious and irregular supply of food, acting upon his bodily and mental development. And such is actually the case. The Eskimo of North-Western America, are therefore the flower of the race to which they belong, and it may not be deemed inappropriate at a time when interest in Arctic affairs is happily reviving, if we take a brief survey of them and the country which they inhabit.

The coast of Western Esquimaux-land, after describing Norton Sound, projects into a peninsula, which, in conjunction with the eastern shores of Asia, forms Behring Strait. The distance between the continents in these parts is so small that, in passing through the Strait, both Asia and America are visible at the same time,—a grand and imposing spectacle, only equalled by that presented by Europe and Africa in the Straits of Gibraltar, and Asia and Africa, in the Red Sea. From the peninsula the coast makes a deep curve, forming Kotzebue Sound, and then stretching towards the north-west, it again projects at Cape Lisburne, in lat. 68 deg. 52 min.

6 sec. north. Cape Lisburne is composed of two promontories, the north-eastern of which rises to the height of about nine hundred feet. Imaginative minds have suggested that at one time Asia and America were connected. Without indulging in similar speculations, it is impossible to look at a map without being struck with the parallel direction of their shores in these parts; and, if pushed together, how nicely East Cape would fit into Kotzebue Sound, and Cape Tchaplín join to Cape Prince of Wales. From Cape Lisburne to Point Barrow the land is almost a continued flat, and the coast, falling back to the north-east, forms Icy Cape, Wainwright Inlet, and ultimately Point Barrow, the northern extremity of Western America.

The climate is considerably milder than that of the eastern shores of America. The proofs we need not deduce from artificial tables, Nature herself has written them on the face of the country. The abundance of animal life, the occurrence of many southern plants, and, above all, the limit of the woods, if compared with the opposite shores, furnish indisputable evidence. On the eastern side of America no forests are found above the mouth of the river Egg, above the sixtieth degree of latitude; on the western, they extend as far as lat. 66 deg. 44 min. north, or nearly seven degrees further towards the Pole. There are but two seasons, which follow each other in quick succession. Towards the middle of October the winter approaches. All life seems extinct; the sky is cloudless, the air calm, and most of the animals, the visitors of the mossy steppes during the few weeks of uninterrupted daylight, have left for milder regions, in order to obtain those supplies which the Polar world begins to deny them. For nearly nine months the waters are covered with ice, the land with snow; and the temperature is sometimes so low, falling as it does to 47 deg. Fahr. below zero, that rum and quicksilver become solid the instant they are exposed. The air is so clear that voices may be heard at a distance of two miles. As the winter advances, the days become shorter; in November, they last but a few hours; in December, the sun is hardly above the horizon, and in some latitudes never seen. At last, the sun returns; the days increase, and the temperature rises. At the end of June, the land is free from snow, and the ice breaking up. The summer sets in most rapidly. The landscape is quickly overspread with a lively green, flocks of geese and ducks arrive from the south; the plover, the snipe, and many other birds enliven the air with their notes; while the murmuring of rivulets, and the hum of insects, give evidence that winter has passed, and summer fairly set in. The sun is now always above the horizon, and for some weeks there is no distinction between day and night, except that at midnight the light is less bright than at noon, the former differing from the latter about as much as a November and a June day in England. The rays falling continually upon the surface of the earth prevent the temperature from cooling down much, and thus, notwithstanding the low altitude of the sun, a degree of warmth is produced which, under other circumstances, would not be possible; the thermometer rises as high as 61 deg. Fahr.

The region is as yet unchanged by human efforts. Villages exist,

yet all that our minds associate with them is wanting. On approaching, we expect to meet with roads and bridges and smiling fields, to behold peaceful dwellings peeping through green boughs, and the steeple of the church towering heavenwards: in an Eskimo village, these pleasing features are looked for in vain. At the commencement of summer, the habitations are deserted, the natives having left for the coast, in order to lay in a stock of whale and seal blubber. The underground dwellings look cheerless and are filled with water, the surrounding ground is strewn with bones and fragments of skin, broken sledges, and other remnants; the paths are overgrown with herbage,—the whole presenting a picture of misery and desolation. The Eskimos have not yet learned that migratory habits and progress in civilisation are opposed to each other; nor have they learned to make the soil supply more than it is willing spontaneously to yield.

The only domestic animal of the natives is the Esquimaux dog, which some naturalists consider to be a tame wolf. The resemblance between the two is indeed striking. Both have the same low melancholy howl; but the head and ears of the dog are shorter, its eyes smaller and more sunk, its tail handsomely curled over the back, its paws smaller and less spread, and its colour of every hue. The natives are very proud of their dogs, and some of the principal men have teams corresponding in colour and size, as a wealthy European would have his horses. The dogs are employed for no other purpose than that of drawing the sledges and boats. While yet puppies, they are placed in harness, and thus early accustomed to the labour they are to perform. When tied to a sledge, they evince their joy by the wildest antics; and set off at a quick pace, which however soon changes to a steady trot. The females are seldom used for draught, and only a few kept for breeding. The dogs, upon scenting, will start in full pursuit, but unless driven by hunger, never attack the deer. The natives treat them with kindness and attention, and never use harsh measures; a word is generally sufficient to quicken their pace or bring them to a halt. The women even go so far as to chew the food for the pups, and give them a share of the furs. This treatment, indeed, differs essentially from that inflicted by the Tchukchis, on the north-eastern shores of Asia, who beat their dogs most unmercifully.

The inhabitants call themselves "Innuït," a term signifying in their language, *Man*; the more usual term, Eskimos, or Esquimaux, is said to be a corruption of *Eskimantik*, i. e., raw-fish-eaters, a nickname originating with the Mohicans. They are one of the most widely-spread races existing, ranging through 140 degrees of longitude, or an extent of 3,500 miles. But this enormous surface is thinly inhabited. The very nature of the country and climate seems opposed to a rapid increase of the population, or any large aggregation of communities; indeed, a rough estimate of merely the coast of Western Eskimo-land—for of the interior we are ignorant—would give no more than a total number of 2,500.

The various tribes, however widely separated geographically, differ

but slightly from each other in appearance, manners, customs, or language. Both sexes are well proportioned, stout, muscular, and active. The hands and feet are small and beautifully formed, which is ascribed by some writers to their sedentary habits; but this cannot be the case, as probably no people take more active exercise, or are more constantly employed. They are, however, by no means as uniform in size as might have been expected: those inhabiting the vicinity of Norton and Kotzebue Sounds are by far the finest, the men often being six feet tall, while those living between Cape Lisburne and Point Barrow are, like the tribes of the eastern portions of America, much shorter in stature, and bespeak the inferiority of the districts in which they live. Simpson states that the tallest Point Barrow Eskimo was five feet ten inches and a half, the shortest five feet one inch; the heaviest man weighed 195 lbs., and the lightest 125 lbs.

Their faces are flat, their cheek-bones projecting, and their eyes small, deeply set, and, like the eyebrows, black. Their noses are broad; their ears are large, and generally lengthened by the appendage of weighty ornaments; their mouths are well formed; their lips are thin, and, in the men, distorted by large beads or circular ivory labrets, protruding from diagonal cuts under them. These labrets correspond in shape and size with those formerly in use among the ancient Mexican warriors, shewn to me in Mexico. This fact might be considered merely as one of those curious coincidences so frequently met with among nations widely separated from each other, if there were not another consideration more important. During the winter—by far the greater portion of the year—the Eskimos are frequently obliged, on account of the excessive cold, to take them out. From this, it would appear that the custom could not have originated in the frigid zone, although it may have been retained after being once adopted.

The teeth of the Eskimos are regular, but, from the nature of their food, and from their practice of preparing hides by chewing, are worn down almost to the gums at an early age. Their hair is straight, black, and coarse; the men have it closely cut on the crown, like that of a Capuchin friar, leaving a band, about two inches broad, which gradually increases in length towards the back of the neck; the women merely part their hair in the middle, and, if well off, ornament it with strings of beads. The possession of a beard is very rare, but a slight moustache is not infrequent. Their complexion, if divested of its usual covering of dirt, can hardly be called dark; on the contrary, it displays a healthy, rosy tint; and were it not for the custom of tattooing the chin, some of the girls might be called pretty, even in the European acceptance of the term. A few individuals, however, differ in their countenances from the normal cast. A man belonging to the Hotham Inlet tribe bore so strong a resemblance to a negro, that, in order to settle the question satisfactorily, he was subjected on board the *Plover* to much scrutiny, an investigation which so frightened the poor fellow, that it was some time before he could be induced to renew his visits to the ship. Another man, from Spafarief Inlet, possessed to a remarkable degree the hooked nose and large black eyes peculiar to the Hebrew.

The dress of the Eskimos is admirably adapted for the country they inhabit; and it is hardly possible to conceive the degree of comfort it affords in an Arctic winter. The garments consist of a double suit, both corresponding in size and shape, and only differing in the way they are worn: the inner has the hair next to the body, the outer *vice versâ*. The boots, trousers, and outer coat, are made of deer-skin; the inner garments are made of fawn, or the skin of some fur-bearing animal. The men wear a coat which reaches to a little above the knee, and is confined closely to the body by a belt, having behind the tail of some animal; a hood, tastefully trimmed with wolfskin, is attached to this garment, and renders any other covering for the head unnecessary. The trousers reach a little below the knee, and are overlapped by the boots, to which they are secured by a string. In the soles of the boots straw is placed, which is frequently changed, and appears to afford considerable warmth. Their gloves are generally made of the skin of young deer; but as these would not sufficiently exclude the cold, large thick mittens are worn over them. During the summer, when on whaling or sealing excursions, a coat of the gut of the whale, and boots of seal or walrus hide, are used as waterproof coverings. The *walguti*, a pouch containing pipes, tobacco, flint and steel, or, in the absence of the latter, two sticks for producing fire by friction, is worn at the belt, and completes the costume. The clothing of the women differs but slightly: the coat reaches lower down, has a scollop before and behind, and a hood sufficiently large to carry an infant; the trousers and boots consist of one piece only, and the tail behind is wanting; in other respects they can be hardly distinguished from the men.

The arms of the natives are adapted rather for the chase than for warfare. Their spears are made of drift-wood, principally that of the white spruce, and pointed with ivory obtained from the tusks of the walrus. Their lances, darts, and arrows consist of the same material, and are variously pointed with flint, bone, slate, or ivory. Their bow, made of beech if procurable, is most ingeniously strengthened by thongs of deer-sinew, which are neatly plaited; the string consists of fine deer-sinew threads, laid together like the hairs of a fiddle-bow. The old ivory knives and flint axes are now superseded, the Russians having introduced the common European sheath-knife and the hatchet. The board for throwing darts is in use, and is similar to that of the Polynesians.

Animal food, venison, seal, and whale, and walrus blubber, is abundant, and forms the chief portion of their diet. The blubber is never cooked, and, being considered a delicacy, is given as such to children: that of the walrus is not disagreeable, indeed I have tasted some which greatly resembled cheese; that of the whale is rancid. It appears to be a matter of indifference whether the food be raw or boiled, fresh or tainted. The venison, even when it has undergone the process of cooking, is always accompanied by a plentiful sauce of train oil. The oil is sometimes mixed with berries, and then forms a dish which ranks high in the native fare. Fish is eaten raw, and generally forms a stock for journeys: it is preserved

either by being dried in the sun, or buried directly after being caught in the frozen subsoil. Vegetable food must necessarily form the smaller portion of the subsistence of a people who neither do nor could cultivate a soil always frozen a few inches below the surface. The acid leaves of the sorrel (*Rumex domesticus*, Hartm.), immediately they appear above the ground, and, indeed, throughout the summer, are eaten by handfuls as an antiscorbutic. The root of the ma-shu (*Polygonum Bistorta*, Linn.) is another article of food: after being roasted on the ashes, it is not unlike the potato, though not so soft and nutritious. The principal winter stock is obtained from berries, of which nature has provided prodigious quantities of eight different kinds—*Empetrum nigrum*, *Rubus acaulis*, *R. chamaemorus*, *Vaccinium uliginosum*, *V. vitis-idaea*, *V. oxycoccus*, *Cornus suecica*, and *Arbutus alpinus*. They are gathered in the autumn, and preserved by being frozen in wooden boxes, out of which they have to be cut by an axe or some other sharp instrument.

Their beverage is water; in very cold weather, however, they drink train oil, and assert that it produces a higher degree of bodily heat. Intoxicating liquors are fortunately unknown among the northern tribes; but in Norton Sound, from constant intercourse with Russian traders, a predilection for them has been acquired.

The *baidar*, or *omiak*, can hardly, as on the eastern side of the continent, be called a woman's boat, because it is used indiscriminately for many purposes. Its length is about thirty feet, extreme breadth six feet, and depth three feet. It tapers uniformly towards the bow and stern, and somewhat resembles the Madras massulah boat. The frame is made of drift-wood, chiefly pine, and lashed together with thongs of walrus-hide and whalebone. The floor is flat, and there are generally six thwarts or seats. The whole frame is covered with walrus-hides, which, while yet wet, are tightly and neatly stitched. A *baidar* is capable of holding from fifteen to twenty men, without drawing more than one foot of water; when more heavily laden, inflated seal-skins are lashed on the outside, which prevent the boat from capsizing. Although propelled by twelve or fourteen paddles, their speed is not great, and against a strong wind or a rough sea they hardly hold their way. The paddles are about fifteen feet in length, and have a handle at the top. A long piece of wood, secured to the gunwale of the bow, is used as an oar—a bad imitation of our method of propelling boats. The office of steersman is generally taken by an old man, who is provided with a paddle rather longer than the rest. A sail made of walrus-gut or deer-skin is also employed; but, as the peculiar construction of the boats renders them incapable of beating to windward, it is only set in a fair wind. The *kayaks* are only sixteen feet long by two feet broad, and so light that on a sailing or whaling excursion they are placed in the *baidar*, and are not taken out until the prey is in sight. They take a turn upwards at each end, and have at the centre a circular hole large enough to admit the body of the owner. The river and sea *kayaks* differ in their construction: the latter are rather smaller and more slightly made, and not so high out of the water. On pressing occasions two men

may be seen in the same *kayak*, though it was a matter of surprise that even one should be able to maintain his erect position. A double-bladed paddle is used to propel them, and this operation is performed with great rapidity and speed. The paddle is, in the hands of the Eskimo, what the balancing-pole is in the hands of the tight-rope dancer; and people who seat themselves for the first time in these *kayaks*, without being aware of this peculiarity, are sure to turn completely over.

Their sledges are formed of wood, and differ in construction from those of all other nations. They average twelve feet in length, two feet six inches in height, two feet broad, and have the fore part turned up in a gentle curve. The runners are narrow, and shod with the bone taken from the jaws of the whale, which is affixed to them by wooden pegs. The floor resembles a grating without crossbars, and is almost a foot from the level of the snow. Thongs of deer-sinew, walrus-hide, and whalebone are used to secure the different parts, which are sufficiently strong to bear a weight of from 500 to 700 lbs.

Their houses, or *yourts*, unlike those of the Eastern Eskimos, are built of drift-wood. They are more than half underground, and generally situated in low, and, if possible, sandy ground. An excavation, about twenty feet square and eight feet deep, is lined with trunks of small trees, and caulked in the interstices with moss: the rich inhabitants plank this part with boards which have previously been smoothed with an axe. The roof shelves from the centre of a large square aperture, exactly resembling the combings of a hatchway, through which light is admitted and the smoke escapes: every other part of the roof is covered with turf. The entrance leads underground through a passage thirty or forty feet long, and level with the floor, and has an easterly direction from the house. At each extremity is a small chamber, the one communicating upwards by a hole from the house, the other with the open air; the latter serves for shaking off the loose snow from the clothes before going into the warm hut. Both extremities are carefully clothed with deer-skins, to keep out the cold air. The floor is marked out with sleeping places on each side, except that of the entrance: the bedsteads are merely boards raised eighteen inches from the ground by being placed on trunks of trees; in some huts they are strewn with branches of willow, over which at night the furs are placed. A few stones form the fireplace, which, like the rest of the centre, is covered with a few loose planks, movable at pleasure when it is required to light a fire. The square aperture is covered with a piece of whale-gut, which admits the light, and is sufficiently strong to resist a heavy fall of snow. In each corner is a stone, hollowed out to contain oil, in which a little moss (*Sphagnum fimbriatum*, Hook and Wils.) is placed as a wick, thus forming a lamp, over which a sort of network is spread for the reception of wet or damp clothes. The fire in the centre is never lit merely for the sake of warmth, as the lamps are sufficient for that purpose, and great heat would cause the thawing of the roof, and consequent wetting of the whole apartment.

The interior of some of the huts is kept clean and tidy. The degree of comfort within is surprising. The lamps diffuse warmth and light; and when the traveller has put off his wet clothes, and reclines on the soft deer-skins regardless of the boisterous and snowy weather without, the pity he felt for the condition of the poor Eskimos rapidly evaporates, and he finds that, remote as they are from civilisation, their condition is by no means so deplorable as is generally considered. The reception met with also strengthens this idea: the contents of the larder are placed before him, a dance, with its accompanying song, follows, and every one exerts himself to the utmost for the gratification of the stranger: after the performance, each brings a small present; and, although he is certain of a return, it would be unfair to deny an evident hospitality and wish to please.

During the winter, when thickly covered with snow, the huts are not easily distinguished, and they would often be passed unobserved, were it not for a tall stage near them, intended to elevate the kayak, harness, etc., above the reach of injury from the dogs. Each hut has its underground storehouse, dug out of the frozen soil, and lined with straw mats; they are distinct from the *yourts*, and contain fish, berries, blubber, venison, etc. A sort of pigeon-house raised on poles, used for the reception of skins, garments, furs, or any article not in use, is placed near the stage, and assists in pointing out the locality of the huts.

It is rare to find a village without its accompanying dance-house—a building erected by the united efforts of the whole community, and constructed on the same plan as the common dwellings, but larger, and, the floor being raised some three feet from the ground, more free from wet. The walls are decorated with tambourines, and sometimes with wooden masks: lamps, to which each man contributes his share of blubber, are kept burning all round.

When the warmth of summer dissolves the snow, the floors of the winter huts are covered with water several inches deep, and it then becomes necessary to take refuge in tents. The tents are made of untanned deer-skins, are of a conical form, and without any aperture at the top, as fires are never kindled within: they are pitched in a few minutes, and as quickly repacked. A small fire just outside the entrance, tended with care, keeps off the mosquitos.

The government—if the loose tie which connects an Eskimo tribe is deserving of that name—is a combination of the monarchical and republican forms. Slavery, even in its mildest aspect, is totally unknown; every one is on a perfect level with the rest of his countrymen; yet all acknowledge an hereditary chief, whose authority, however, is very limited: he receives no tribute from his subjects, nor can he dispose of their labour or property; making treaties, or granting permission for hunting on the grounds belonging to his own tribe, appears to be the whole extent of his power.

When the snow is soft, snow-shoes are worn. Hunting and fishing form almost the sole occupation of the men, who with their small means exhibit great ingenuity.

In summer the Eskimos are in a most disgusting state of filth:

in winter they look quite the reverse, although their antipathy to water is then quite as strong. Occasionally they wash their bodies with urine, but even this process is seldom gone through.

Their method of eating is primitive. A wooden platter full of meat, and another vessel containing train oil, are placed in the centre of the party, who squat down on their hams. Every one selects the piece of meat he prefers; if it proves too large to be at once introduced into the mouth, a slice is cut off; one end of the meat is held with the teeth, the other with the left hand, while the right goes through the process of severing it asunder: the knife passes thus in dangerous proximity to the nose. Sometimes the meal is finished by a dish of berries mixed with seal oil—which, by the bye, is not to be despised; a smoke then follows, and the breakfast, dinner, supper, or whatever it may be called (for they have no stated hours for their meals), is concluded. Our food and method of eating being so different from theirs, caused at first great surprise, but left a sufficiently favourable impression to induce them in various instances to adopt our plan. Spoons and forks rose in value, and it now became unnecessary to take them with us on excursions in the vicinity of Kotzebue Sound. The women take their meals by themselves, and are not permitted to join the men, which reminds one of the Ecuadorian highlands, where the same bad taste prevails.

Their dance is of the rudest kind, and consists merely in violent motion of the arms and legs. It is generally performed by one man, but any number of individuals may join. The performer, before commencing, generally changes his dress, putting on a white coat and gloves, and placing a band around his head, the beak of a bird or the snout of some animal in the centre of his forehead, and a feather over each ear. He begins by stamping violently with the right foot, and throwing out his arms in wild gesticulations, besides leering horribly on the surrounding spectators, shaking his head. He then uses the left foot, and changes again when inclined. The exertions are too violent to be long sustained; the performer is, therefore, often relieved by another. Sometimes several men take part in the dance, and occasionally the women join; but the latter merely move the body and wave their arms, without changing the position of their feet. The men sometimes shout, but the women never utter a sound.

In their power of imitation they are almost equal to the Chinese. Whenever they saw any of our articles which they could adopt with advantage, they invariably tried to imitate it, and generally succeeded in making it similar in appearance, though perhaps not so perfect in construction. Knives, forks, spoons, were thus copied, and even a fiddle was once attempted—of course, quite incapable of producing harmonious sounds. This turn of their mind will become of importance; and when they are more civilised, and have received proper tuition, they may, during their long winter, manufacture a variety of curious and elaborate articles.

The character of the Eskimos makes a favourable impression. Hospitality is never refused by them. At their meals a stranger joins as a matter of course, and the best the household affords

is set before him. If the party is large, the men assist in any work that may be going on, while the women cluster together, and aid each other in making coats and boots. A scene familiar in most households at home ensues: one, perhaps a good bootmaker, imparts her mode of cutting out; another, skilled in tailoring, relates her peculiar method for the benefit of the hostess. Amongst themselves honesty is tolerably strictly observed; towards us this principle was less generally acted upon; several trifling things, but of inestimable value to them, were pilfered from us. The race of housebreakers, however, also exists in this country, and the natives have a peculiar trap to catch them, or rather to give the alarm. Their attachment to children is great, but their treatment varies according to the sex; a boy is petted, while a girl becomes a drudge at an early age. Mothers as well as fathers entertain the same opinion on these points, and they both express their regret on the birth of a female infant. Still, infanticide—a crime so common among savages—does not appear to exist, and was always indignantly denied. Bartering children is never resorted to. The women are treated, although not as equals, at least with more consideration than is customary among barbarous nations, for the Esquimaux, not being a warrior, can find time to enjoy the comforts of domestic life; and, as in more refined communities, it not unfrequently happens that the woman is the chief authority of the house; the man never makes a bargain without consulting his wife, and, if she does not approve, it is rejected. The aged never suffer from want of food, nor are they deserted on the bleak steppes to die a lingering death, as is said to be the practice of the Eskimos of the eastern side of America.

The mode of marriage is curious. When a man has fixed upon his choice, he proceeds to the girl's mother, and asks at once for the girl's hand; if the mother is satisfied that he can support a wife by the produce of his chase, and besides has nothing objectionable, she gives her consent. The bridegroom then gets a complete suit of clothing, and tenders it for the girl's acceptance; the bride takes it to her mother, and on returning dressed in it, she is considered his wife. In the same manner, two men together sometimes marry the same woman, and lighten the burden of her maintenance; a species of polyandry reminding us of what formerly existed in Great Britain, and exists at the present day in Ceylon, and the Coorg, Todars, and Tiars of the East Indies, described by Mr. Markham (*Travels in Peru and India*). After marriage infidelity is rare; though some of the elder women behaved in rather a shameless manner during our intercourse with them. A few of the wealthier men are bigamists.

The Eskimos under consideration, with the exception of a few in Norton Sound who have nominally become converts to the Greek Church, appear to be without any religion whatever. They believe in the existence of good and evil spirits, who inhabit the earth, the air, and the sea; but all of them are on a footing of equality. Evil spirits are sometimes driven away from localities they are supposed to work mischief in. Diseases are also regarded as the manifestations of evil spirits, or perhaps evil spirits themselves. They believe that

after death a certain amount of consciousness remains, but whether it continues for ever or terminates at any period, they do not seem to have considered. The raven is deemed the maker of the world, and a high opinion is entertained of its cunning; but it is nevertheless not venerated, and was always pointed out as a fit mark for our guns, possibly from a belief that it could not be hit. It is, however, the only bird never eaten. The light in which the raven is regarded by them should be made the subject of future inquiry, as it assumes importance when taken in connection with the part played by that bird in the superstitions of the Vancouver Island and British Columbia Indians, and especially in the Odin religion of Northern Europe, including Scandinavia and Iceland. Like everything else once sacred to our ancestors, the raven, in the Odin religion the fit companion of the supreme God, was degraded by the early Christian missionaries into a bird of evil omen and an associate of the devil. In fact, unless the evil one was thus accompanied, people were in doubt about his being it himself. Goethe was well aware of the existence of this superstition; and in his *Faust*, when Mephistopheles upbraids the witch for not having recognised him, she is made to say in excuse, "Where are your two ravens?" Here we have one of the many proofs how the so-called religious truths of one age, become but the sport of superstitious fancy, if nothing worse, of the next.*

The PRESIDENT proposed the thanks of the meeting to Dr. Seemann for his able and elaborate paper; and also to Mr. Markham for having kindly undertaken to read it. He then called on Mr. Carter

* I cannot refrain from adding in a foot note a passage from J. Grimm's *Deutsche Mythologie*, p. 636, one of the most learned works ever produced, and brim full of valuable anthropological data. Speaking of the ancient religious belief of the nations of Northern Europe, Grimm says:—"In our fables, the raven seems to take the place of both the wolf and the fox, possessing the voraciousness of the one and the cunning of the other. As Odin is constantly accompanied by two wolves, so he is by two ravens, Huginn and Muninn, their names signifying powers of thought and memory, and they supply him with information on all that has occurred. These birds of Odin are variously mentioned in the sagas; for instance, in *Olaf Tryggv.*, cap. 28, screaming ravens signify that Odin has accepted a sacrifice; Two ravens fly with a man for a whole day (*Nialls.*, 119); St. Gregory is accompanied by three flying ravens (*Paul. Diac.*, i, 26); In the charming myths of King Oswald a raven, whose feathers have been covered with gold, plays a prominent part; and he has nothing of that wicked diabolic nature which afterwards was attributed to this bird. Characteristic is it also that the raven which Noah despatched from the ark, of which, Genesis viii, 7, it is merely said 'καὶ ἐξέβηκεν ὄρεν ἀνέσρευσε', is in the German version settling upon dung (*Cædm.*, 87, 11, *Diut.*, 3, 60). King Artus, whom in another place we find as a bear, is said to have been turned into a raven (que anda hasta ahora convertido en cuervo, y le esperen en su regno per momentos, *Don Quixote*, i, 49). In popular songs birds occupy the office of messengers; they bring tidings of what has happened, and are charged with communications. In Bohemian they have the phrase, 'I have heard something from the birds' [and in English 'A little bird whispered to me,' etc.]. In the Sagas birds converse amongst themselves about the doings of men, and they prophesy. Ravens inform the blind man of a remedy which will help him to a restoration of his sight." (*K. M.*, n. 107.)

Blake to read the following letter that had been received from Mr. Chambers.

To the President and Council of the Anthropological Society of London.

Gentlemen,—You did me the honour of referring to me a letter received from the President of the Geographical Society, begging that you would join with that and other learned societies in pressing upon the government the advisability of an expedition or expeditions for the purpose of exploring the regions immediately about the North Pole.

I have given the subject and that letter my earnest attention, and although I hope that, as I requested at the time, you have persuaded a member of the Council, who himself has been in those regions, and has a very great acquaintance with the subject of arctic exploration, Dr. Seemann, to give his views upon the question, I think I should be wanting in respect to you, as I am unable to be present in person, if I did not give you the result of my impressions upon the schemes in question.

I may be allowed to say, before giving my own opinion, that I have a perfect recollection of hearing, some fifteen years ago, Professor Sedgwick, than whom no man was more able to form a just opinion, express very strongly his belief in the comparative barrenness of the probable results of such expeditions in a scientific point of view, and the mistake of spending money and men's lives in them when there were so many other directions in which we required earnest and reliable scientific observations.

I cannot say that I think the time which has elapsed, and the experience gained in that time of that region, has given any reasons for modifying that belief.

I was not present at the first meeting of the Geographical Society on the subject, but I attended the second, at which a number of arctic navigators spoke, among whom were Sir Edward Belcher and Sir G. Back. I cannot say that what I heard was reassuring as to the probable success of the expeditions proposed.

The plans for expeditions are two-fold :—

1. What we may call the land plan.
2. The water plan.

By the first, it is proposed to push ships as far as possible up Baffin's Bay, and having established stations so as to keep up communications with the ships, to push on sledge parties direct to the Pole. We need not give our attention to the question until the sledging begins, and here there appears to be great difference of opinion as to the feasibility of such a plan, as should the parties find any large piece of open water, a stop will be put to their further progress.

2. The plan of going by water involves sending ships to Spitzbergen, and forming a station or *dépôt* there or at some small islands to the north of it, from which communication can be kept up with England, and attempting in an open season to push on with ships to the Polar region—the ground for thinking this plan feasible being that certain Dutch captains are asserted to have actually sailed over the Pole in old days, and to have found no obstruction from ice.

I shall not enter into the question of the difficulties which appear to beset both these plans, except so far as to say that it appears generally believed by those most able to form an opinion that there is open water near the Pole and not land, and that it is surrounded by a considerable zone of ice, which, as some believe, may be occasionally sufficiently open to allow ships to pass in.

From this view, which seems to be that which on the ground of authority is most reliable, there would not appear to be any gain to anthropological science in investigations in that quarter. Something has been said of arctic highlanders—but they appear to be situated in land to the north-west of Baffin's Bay; they have been seen and often find their way south, and are not materially different from the Esquimaux. It is possible that some interesting magnetic experiments might be made, were it possible to establish any station for a sufficient time near the Pole; but in the case of sledge parties, there would simply be a hard run to the Pole and back, and ships would always be in danger of being effectually iced up, as an open winter might be followed by a very severe one; in other respects, I do not see that there can be any gain to science in such expeditions.

Yours faithfully, CHARLES H. CHAMBERS.

Mr. TRELAWNEY SAUNDERS said he should have hesitated to make any remarks on the paper if the question of north polar exploration had not been thrown open by the remarks in the letter of Mr. Chambers. For his own part, he had been surprised that only two propositions had been made for effecting that object—the plan of Captain Sherard Osborn, and that of Dr. Petermann. If the route of the former were adopted, it would be starting from a known point, and from the known they would at each advance be gaining knowledge of the unknown. But if the other route from Spitzbergen were taken, there would be a probability of reaching the north pole without meeting with any land; and he considered it would be a great disadvantage to the acquirement of further scientific and geographical knowledge of the arctic regions if by the aid of steam vessels the present spirit of inquiry in that direction should end with such a result, and that they should obtain nothing but a bare track line on the sea from Spitzbergen to the Pole. No one, he believed, doubted the importance of the results to be gained by a land expedition, and he should like to have discussed the proposition of a land expedition by way of Greenland. They were acquainted with the south-east part of Greenland, but nothing had been done towards exploring the northern parts since the days of Scoresby. He thought it would be very desirable that there should be an expedition in that direction. The knowledge of the coast would be by that means extended, and it was impossible to foresee what the result of such an exploration might be where everything would be new. Whichever course was adopted, a land expedition to the North Pole could not fail to be of great advantage to every branch of science.

Mr. REDDIE observed that Dr. Seemann's interesting paper might afford an argument against further exploration in the arctic regions, for his account of the natives inhabiting the vast range of territory on

the north of America was so complete, that it seemed there was little left to discover. He was especially interested in what he said respecting the Arctic Highlanders, and those natives who were described as being like a negro and a Jew. With regard to the desirability of another arctic expedition, Dr. Seemann had not favoured the meeting with much argument; and from what he (Mr. Reddie) had read on the subject recently, and at former times, he had come to the conclusion that it was not desirable another expedition should be recommended. It appeared, indeed, that it was rather on account of probable geographical and cosmological discoveries that it would be of any value, and not for any expected light it would throw on the science of anthropology. He was inclined, therefore, to take the same view as Mr. Chambers; and though the resolution to join other societies in supporting another polar expedition had passed the Council of this Society, he agreed nevertheless with Mr. Chambers on the general question. He should be glad, however, to hear arguments on the other side.

Mr. MARKHAM said he would endeavour to show the feasibility, and almost the certainty, of great scientific results being obtained from an exploration of the Polar regions by way of Smith's Sound, and the safety of it. Suppose two screw steamers, of sixty horse power—ordinary gun boats, in short—were to start on the expedition, they might proceed by way of Baffin's Bay to Smith's Sound without any difficulty. They could to a certainty reach the entrance to Smith's Sound, and there one might be established as a *dépôt* ship, from which a retreat to this country would be perfectly secure. Many ships had gone through Baffin's Bay, and only two had failed, and their failure was owing to their not having started early enough in the year. On reaching Smith's Sound, the crews of the two ships would winter there. In the following February, two sledge expeditions, of fifty men each, would start in parties of eight in two different directions; one of them proceeding due north. By this means they would each discover six hundred miles of unknown land. The other expedition would proceed along the northern coast of Greenland, completing the survey of that coast, and effecting great discoveries. Thus two discoveries would be made in the first season. In the next season, they would set out again to reach more extreme points, also in different directions, and thus at least 2,400 miles of unknown land would be explored. Was not that worth sending an expedition for? Specimens of plants, and the forms of animal life in the polar regions, geological facts, and astronomical observations, would be collected and observed, and other additions to scientific knowledge would be gained, which might prove of great importance. Mr. Saunders had suggested that the expedition should proceed by the eastern coast of Greenland, but the Danish government have lately authorised an expedition along that coast, and it would be very interesting, if it should be successful, thus to complete the survey of Greenland by parties advancing in different directions. The investigation of the character of the inhabitants of the North Pole—if inhabitants there were—was an anthropological want. The Esquimaux, it was

known, had wandered farther than other people, and along the coasts of all those islands in the arctic regions which had been visited there were found round stone buildings of the kind exhibited [Mr. Markham pointed to a drawing of a portion of a round tower]. At the extreme northern point yet reached, the remains of such a building had been found, and near it was the broken runner of a sledge. The Esquimaux could not exist without open water, for they depended on the walruses and other inhabitants of the sea for their food. It was not known where the Esquimaux came from, and it would be extremely interesting to anthropologists if the Polar expedition should throw light on that question. Traces of them had been found at the most extreme northerly points that had been reached, and they might even be living near to the North Pole itself. It appeared that they wandered round Greenland, for Captain Clavering found two isolated families of Esquimaux in a remote part of Greenland, who were apparently not connected with any others. What could be more interesting to anthropologists than the discovery of a race of men entirely isolated from every other? They had not yet been able to find such a race, and if discovered in the Polar regions, they would exhibit the example of a people who had been preserved in their original state since the glacial epoch.

Mr. K. R. H. MACKENZIE said he fully endorsed what had been observed by Mr. Markham, and he thought that no greater benefit could be conferred on anthropology than by the discovery of such an isolated people as might be existing near the North Pole. It might be observed, as a general rule, that civilisation and Christianity went so much hand in hand that they were beginning to wink at each other, as the Roman augurs were said to have done when they met. Inconceivable benefit had been derived in times past from those who engaged in Polar enterprise, and had it not been for the immortal discovery by Ross of the magnetic pole, and of other northern explorers, science, civilisation and commerce would have been in a very low state. He thought that when men like Captain Sherard Osborn were to be found willing to go there and risk their lives in the cause of scientific discovery, that their services should be gratefully accepted. He, therefore, hoped that another Polar expedition would be sent, and that they should be able to cheer it back again.

Mr. CARTER BLAKE said some queries had been put by Mr. Chambers in his letter, to which the special attention of the Society should be drawn. He said that the Arctic Highlanders were not "materially different" from the Esquimaux. Now he (Mr. Blake) believed no one had ever supposed that they would be a different race from the Esquimaux of the north-eastern division of America. There was a curious anthropological question involved in the consideration of the people who are found throughout the whole range of the North American coast. In all the measurements of the skulls that have been taken, they had the same common character; but at the extreme north-west, there was found a different class of skulls. The skulls there bore great affinity to the skulls of the Tschuktchi, the Koriaks, and even the Aleutians. It would be an important accession to an-

thropological science if an expedition to the Polar regions could determine whether there is any affinity between those races of man. With respect to the opinion of Professor Sedgwick, which had been mentioned by Mr. Chambers, it was an opinion expressed fifteen years ago, and an objector might as well have gone three or four hundred years back. The requirements of science fifteen years ago were very different from what they are now; and if they went four hundred years back, they might find a reason of a different kind for exploring the North Pole. It was then said that the ten lost tribes of Israel went northwards, and that at the North Pole there was a great chasm which engulfed them. It might be said, therefore, that the individual mentioned by Dr. Seemann with Jewish features was a descendant from one of those lost tribes. Another reason was that in the old maps we saw a large space round the North Pole, which is indicated as being inhabited by "devils, and other wild beasts." Another question on which light might be thrown was the influence of man on the animals he domesticates. The Esquimaux dog, for instance, was said to be descended from the wolf; and all anatomical facts corroborated that supposition. A domestic dog also exists near the Mackenzie River that is undoubtedly the descendant of the arctic fox. Considering, therefore, the many questions, anthropological, geographical, traditional, and otherwise, on which an expedition to the North Pole might throw considerable light, he hoped that the Society would wish them success and "a good voyage!"

Mr. CONRAD COX remarked, in reference to that part of Mr. Chambers's letter referring to some persons who were said to have gone beyond the North Pole, that the assertion had originated with Capt. Sherard Osborn, who spoke of it as a statement made by a drunken sailor.

Mr. SAUNDERS thought that a great deal of information might be derived from the talk of navigators among themselves.

Mr. TATE considered that a Polar expedition would contribute to the advancement of science generally. There were at present many unsolved problems that startled scientific men, which such an expedition might tend to elucidate. It was not known how to account for the change of temperature which the globe had undergone at the arctic regions. He conceived that such an expedition would supply data for the solution of that problem. Had such a change really taken place? He did not doubt the fact; nevertheless he should be glad to have further data to confirm it. It was known that astronomically no such change of temperature could have occurred. It must have been produced, therefore, by changes on the earth's surface; probably by relative changes in the distribution of land and water. Facts were wanted to solve that great problem; and he looked to the proposed exploration of the North Pole as important if it afforded any facts bearing on that question. The nature and constitution of the globe in the arctic regions was another important subject required to be known. A few geological specimens only from Spitzbergen and from Greenland had been obtained, but they were quite inadequate to afford any correct knowledge of the geological condition of that part of the earth. They

wanted to know the nature of the rocks and strata, so as to complete our knowledge of the constitution of the globe. Such an exploration was also likely to afford important additional knowledge of the human family. It appeared to him, from the discovery of those round buildings, that a higher race must have inhabited those regions. That architectural structure (of which a drawing was exhibited) indicated considerable advance in the arts. The stones were squared, and presented something of the principle of the arch. A higher temperature might have something to do with the existence of a higher race; for heat is the great motive principle of life on the globe, and is intimately connected with the intellectual development of man. A high temperature, indeed, deteriorates the mental condition; and a low temperature is also unfavourable, though it is not so detrimental to the vigorous action of the mind as the higher temperatures which enervate the body. One of the questions, therefore, on which valuable data might be obtained by an expedition to the North Pole would be, what relation does the temperature of the earth bear to the physical and intellectual condition of man? He was sure that the paper which had been read was a very valuable one, and they might take that paper as the starting point in their inquiries.

Mr. MARKHAM adverted to the story of the sailor who said he had gone beyond the North Pole. He was a Dutchman, and he had said, among other things, that it was hotter at the North Pole than it had been in Amsterdam. All the Dutch records of voyages to the Polar regions had, however, been examined, and it did not appear that any navigators had gone farther north than 82°. There was a Polar pack of ice which had stopped every expedition that had attempted to penetrate to the North Pole in the Spitzbergen meridian.

The PRESIDENT said that the more he considered the subject, the more he became convinced that it was the duty of the Anthropological Society to join with other scientific societies in endeavouring to promote an expedition to the North Pole. Even if no benefits were expected to be derived by anthropology, he felt it would be selfish on their part not to join with others in urging the government to send such an expedition, which would be beneficial to science generally. It had been remarked that the paper they had heard was so complete in its information that there seemed to be little left to discover, but Dr. Seemann was not prepared to accept that compliment, for in his opinion there was little known of the inhabitants of the Polar regions compared with what remained unknown. It would, no doubt, be most important to anthropology to discover the isolated race that had been mentioned, if there were such an one; and it was their duty to urge the government to attempt to make the discovery. It would be important to ascertain more particularly the influence of physical circumstances on human races, and such an expedition would tend to throw light upon the question. The influence of temperature on diseases was also a question it was most desirable to solve, and how far great reduction of temperature affects the nervous system and various organs of the body. He said he should like to hear from Mr. Markham some more particulars about the building, the drawing of which he had exhibited, the shape of the stones and their size.

Mr. MARKHAM stated that the diameter of the building was about twenty feet, and the height about four feet and a half. The stones were square, and looked as if they had been cut by an implement, but the stone splits naturally into that form. The building shown exactly resembled the stone huts of the Arctic Highlanders.

Dr. SEEMANN said that, as to the Esquimaux, nothing was known but of those inhabiting the line of coast, whom he had described. As to the question of temperature, he believed the Polar regions were getting colder every year; but on that point they might have obtained more information from Dr. Schimper, who had come to England for the purpose of making investigations relative to the glacial period. It is supposed that there were, in fact, two such periods. That fact had been established by observations in Switzerland and Germany, and Dr. Schimper had come to this country to endeavour to prove that it had been the same in England and in Scotland. Though that gentleman could not be induced to address the meeting, he (Dr. Seemann) might state that it was his opinion that we are approaching another glacial period, which will occur in about ten thousand years.

The PRESIDENT said it had been the custom that he should at the last meeting of the session inform the members of the chief features of their transactions. He was gratified, in the first place, to mention the large number of members who had been elected since the commencement of the session, and that the Society now consists of nearly 600. He hoped that at the next anniversary meeting he should be able to announce that it amounted to 1000. The Council had held many meetings, and they were now engaged in bringing out a list of books in the library of the Society, and he should be glad if any gentleman intending to send in copies of works would do so before the list was completed. The translation of Professor Gastaldi's work would be ready to be delivered to the members in a few weeks, and another volume is in the press. The *Journal* of the Society would be published in July. It would be a double number, and would contain the whole of the missionary discussions. He hoped that never again, so long as he was President of the Society, would that subject be renewed. It was a subject which nearly every gentleman who took part, instead of discussing it in a scientific manner, looked at from his own little stand-point. In conclusion, he begged to express the hope that however much members might differ on other points, that they would all join heartily in trying to carry successfully the application to be made at the next meeting of the British Association for a special section for anthropology. He hoped gentlemen would give in the names of the papers they intended to read; and that they would attend the meeting at Birmingham with the determination to give to anthropology the position which it ought to hold in this country: they had only to work together, and to demand the recognition of the science of anthropology in the British Association.

The session was then formally adjourned until November.

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