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ARTICLE I.

DENOMINATIONAL EDUCATION.

Dr. R. D. Meekins

The connexion of the Church of God, with the general education of the people, is a subject in regard to which more is said, and felt, than thought. It is a subject at all times, and every where, of immense importance; and no where, and at no time, more so than at present in this country. Perhaps it may not be useless, to attempt an examination of the question, as one of principle, and to make an effort, candidly and thoroughly, to estimate the grounds upon which its determination ought to rest. It is certainly a very serious thing for the Church as a body, or any Denomination, in particular—either to omit a high duty—or to intrude violently into matters belonging to other authorities not less divinely instituted than itself. And it is therefore not without its value to recall public attention, from exhortations and emotions, delivered and excited upon this subject, as if it were one settled past doubt, in a particular way, to a serious revision of the original grounds of decision in the case, and a fair estimate of the great principles which must control it—or if they are neglected, must ultimately defeat all our attempts to control them.

There are several aspects in which our duties are obliged to be considered. if we would arrive at clear views in relation to them. We are under obligations to do many things, and to abstain from doing many things, considered merely as separate and individual beings; beings created,

will be under the influences of the Anglo-Saxon, to an extent scarcely admitting of limitation. The wall of obdurate exclusiveness by which China has not only shut out whatever is not assimilated to herself, but concealed what it *may* be the interest of humanity to discover, and the intention of prophecies to declare, will be then shattered to its foundation by the moral influences both from the East and from the West. To which ever sea she turns, even now, the Anglo-Saxon is her nearest neighbour. The ships that bear exotic wealth to her, and are messengers to the ends of the earth, are *his*. From no other tutor will she derive her new civilization, if she is to have one. By no other powers will she be politically influenced, than the two branches of this chosen race. May God grant that, aside from their prospective co-operation for the realization of His written will, the peculiarity of their position may not engender opposite ends, jealousy and strife.

ARTICLE VI.

THE UNITY OF THE RACE.

1. *Researches into the Physical History of Mankind.* By JAMES COWLES PRICHARD, M. D., F. R. S., M. R. I. A., Corresponding Member of the National Institute of France, Honorary Fellow of King's and Queen's College of Physicians in Ireland, Member of the Royal Academy of Medicine of Paris. 3d Edition. London: 1836—47. Five vols. 8vo.
2. *Lectures on Comparative Anatomy, Physiology, Zoology, and the Natural History of Man.* By WILLIAM LAWRENCE, F. R. S. London: 1823.
3. *Crania Americana; or a comparative view of the skulls of various aboriginal nations of North and South America: to which is prefixed an Essay on the varieties of the Human Species.* By SAMUEL GEORGE MORTON, M. D., Member of the Academy of Natural Sciences of Philadelphia; of the Am. Phil. Soc., &c. &c. Philadelphia and London: 1839.

4. *Crania Egyptiaca; or Observations on Egyptian Ethnography—derived from Anatomy, History, and the Monuments.* By SAMUEL GEORGE MORTON, M. D. Philadelphia and London: 1844.

“When I consider the heavens the work of thy fingers, the moon and the stars which thou hast ordained; what is man that thou art mindful of him, and the son of man that thou visitest him?” Bearing but an infinitesimal proportion to the mass of the entire creation, and at his first existence on the earth, the feeblest, most dependent, and defenceless of God’s creatures, he at length, notwithstanding, comes to exercise dominion over all the works of the Creator; all things are put, by the divine arrangement, under his feet; all sheep and oxen, the beasts of the field, the fowl of the air, the fish of the sea, and whatsoever passeth through the paths of the sea. He subjugates the ferocious beasts of the forest, erects his works, his monuments of pride, and engines of art; by his commerce he binds divided continents together, by his science he measures the stars, by his research and combinations he uses the untamable elements of nature as his playthings to amuse him, his agents in scientific pursuits, or his obedient servants to bear his messages around the globe in an instant of time, or to accomplish for him the practical objects of life. When we see, in revelation, God’s care of him, the angelic ministries that wait around him, the provisions made to enlighten and save him, and the immortal life to which his present state introduces him, he is invested with a dignity which outweighs that of the material systems, or the innumerable beings beneath him. Wherever he is found, however down-trodden and degraded by outward oppression, or sunk by the proclivity of his own nature, the most interesting object to man is his fellow-man.

And yet how various is the form, complexion, and condition in which he appears:

“If a person unaware of the existence of these diversities, after surveying some brilliant ceremony or court-pageant in one of the splendid cities of Europe, were suddenly carried to a hamlet in Negroland, at an hour when the sable tribes recreate themselves with dancing and barbarous music, or if he were trans-

ported to the saline plains, over which bald and tawny Mongolians roam, differing but little in hue from the yellow soil of their steppes, brightened by the saffron flowers of the iris and tulip; if he were placed near the solitary dens of the Bushmen, where the lean and hungry savage crouches in silence, like a beast of prey, watching with fixed eyes the birds which enter his pit-fall, or the insects and reptiles which chance may bring within his grasp; if he were carried into the midst of an Australian forest, where the squalid companions of kangaroos may be seen crawling in procession in imitation of quadrupeds, would the spectator of such phenomena imagine the different groups which he had surveyed, to be the offspring of one family? and if he were led to adopt that opinion, how would he attempt to account for the striking diversities in their aspect and manner of existence?"

—*Prichard, Vol. I, p. 1, 2.*

The difficulty is increased as a narrow view is taken of the diversity between the races of Africa and those of Europe in colour, between the crisp and woolly hair of the negro and the flowing, silky locks of the Esquimaux, the broad face of the Kalmuk, the pot-belly of the Samoiedes, the hump and other deformities of the Bushman, the hairy bodies and apish countenances of the Mallicolese, and the beautifully chiselled features of the Greek, and the fine proportions and fair complexion of the Caucasian. The multiplicity of jarring tongues, too, constitute another difficult problem to solve, which has tasked the ingenuity of the most learned and philosophic men. As far back as we can trace the nations in authentic history, in their separate existence, we find evidence of a diversity of tongues. How are we to account for these differences of complexion, form and language, on the supposition of the common origin of the various races of men?

The subject has occupied the attention of men in different ages, nor has it in any degree ceased to be a matter of interested enquiry.

Those of the ancients who did not believe the human race to be propagated by eternal generations successively produced, imagined that each portion of the world had its "autochthones" or indigenous inhabitants, adapted in their constitution to its own peculiar climate. The supposition suits the diversities of race and language, and if it could be allowed, would save us the trouble of accounting for the peopling of those distant and insular portions of our

globe in which men are found in an extremely rude and barbarous state, often wholly unacquainted with the art of navigation, without any knowledge or tradition of any other human beings than themselves, and destitute of those arts which, if they had ever possessed them in any former generation, it would seem impossible that they should have lost.

This theory, which was adorned with the genius of Lucretius, was equally advocated by the Epicureans and Stoics. They believed man to have sprung, with the animals and plants, from the virgin soil of the new formed earth, which at first was peculiarly genial and prolific. Myriads of wombs arose like mole-hills over the surface of the earth, in which he was produced, and were afterwards transformed into glandular and milky breasts for his nourishment in his infantile years. Linnæus, Buffon, Helvetius, Monboddo, Virey and Lamarck have believed that men were derived from the race of monkeys, and that in the chimpanze and orang we have the intermediate step between the lowest specimens of humanity and the highest of the brute creation. And both Dr. Darwin and the more recent author of the "*Vestiges of Creation*," regard man as having originated from minute germinal vesicles, according to the latter, started into existence "by a chemic-electric operation." He belonged to the aquatic order at first, in the process of ages developed gills and assumed an oyster-like form, after other ages became a reptile, still advancing in the process of developement he becomes an animal of higher type, at length he assumes the form of a monkey, and then after a long time that of man. It has sometimes been pretended that men have been discovered in the intermediate stages of transformation from the inferior tribes, but the cases alleged have either been gathered from the wild tales of ignorant mariners, a class of men proverbial for exaggeration, or have been idiots, or insane persons escaped from the hands of their keepers. In one instance the wild specimen caught in the woods of Campagne, which was exhibited under the name *la belle sauvage*, the painting of which has long been the sign-board of the Bell Savage Inn in London, proved to be a young negress who escaped from the wreck of a slave ship on the coast of France, and who was care-

fully taught the French language by the family into whose hands she fell.*

Other theories have been proposed to account for the diversities of race, and to meet the remaining difficulties. By some it has been conjectured that many different pairs of men were brought into existence by the Creator, from whom the varieties in the human family have been transmitted, and that these varieties could not have been produced by climate and manner of life. One of the most singular theories was that of Isaac Peyrere, librarian to the prince of Conde, who in his book styled "Pre-adamitae," published in 1655, brought forth the theory of the Preadamites, maintaining that Adam and Eve were the progenitors of the Jews, that their creation is described in the second chapter of Genesis, but that there was a race before them whose creation is spoken of in Gen. i. 26—30, as occurring on the same day that the beasts were made, and these were the progenitors of the heathen world. He also found his Preadamites in Romans v. 12—14, and contended that it must have been they of whom Cain stood in dread when he went forth from his father's family; that it was one of the daughters of this race he married, when he went out into the land of Nod, where he built a city, and called it Enoch, after the name of his son.

We need not stop to say, that the account of the creation of man in the second of Genesis is but an amplification of that in the first, and that in the 130 years in which the first pair lived together before the birth of Seth, a numerous family must have grown up around them; that it is implied in the sacred narrative, that there was other progeny from the first pair than those whose names are expressly mentioned, and that there are many reasons for believing that those natural powers which we find man and other creatures endowed with now, were in the primeval period greatly quickened in their action.

Dr. Prichard, in the commencement of his book, remarks, "that those who hold with entire conviction the divine authority of the Holy Scriptures, are yet accustomed to receive different portions of their contents, if not with different degrees of assent, yet with an assent modified by

* Good's Book of Nature.

different considerations." "On such matters as transcend the scope of human faculties, the Holy Scriptures are the sole "*principium cognoscendi*" and the only appeal is to them." But the most sincere believers in revelation do not give the same species of assent to those parts of the sacred writings which relate to subjects open to the ordinary methods of investigation; such as matters of fact and historical testimony." While we agree with him that such "portions of Scripture have ever been regarded as admitting and even challenging the most unwearied and severe scrutiny," we are not conscious of receiving them with a less confident faith, then we do those which relate to matters of pure revelation. We expect the volume of nature, written as it is by the same immutable God, to be harmonious in its teachings with the volume of inspiration, and are assured that philosophy and science truly, so called, cannot be inconsistent with the written word.

It certainly is the teaching of the Bible, that all men are from one original stock, He hath made of one blood all nations of men. By one man sin entered into the world and death by sin, and so death hath passed upon all men, for that all have sinned. Adam is represented as the root and federal head of the human race. And the doctrine of original sin, transmitted by ordinary generation to every member of the race from the first man, and the plan of salvation through the second Adam, alike imply the identity and common origin of men.

Dr. Prichard has collected the scattered rays of light shed on this subject from the various departments of human knowledge, and with an impartiality and thoroughness which are worthy of all praise. All future writers on this topic must be largely indebted to his volumes for the materials, which his industry and learning have brought together; and these materials we must take the liberty of freely using in the present expression of our opinions.

The first line of investigation which presents itself to the mind is, as to the order of nature in the entire world of organized beings; whether it has been the order "to produce one stock in each species" from which the whole of that species have been derived, "or to call the same species into existence by several distinct origins, and to dif-

fuse it generally without propagation from any central point."

On this head, in reference to the vegetable world, there are three conjectures: That all species of plants had their primary seat in one particular region, from which they have spread into the countries where they are now found: That every species originated from one central spot, but that the primary habitations of different species were in different parts of the globe: Or thirdly, that plants of every kind are brought into existence wherever all the conditions are favorable to their developement. The first of these hypotheses was defended by Linnaeus, and the last by Rudolphi. Dr. Prichard, though he rejects the form in which Linnaeus presented his theory, has come to the conclusion "that each tribe of plants, and especially of the more perfect plants, had on the earth one original habitation, from which it has been dispersed according to the capabilities afforded by its structure, and the aid of external agencies."

The means by which plants have been dispersed are easily seen. One manifest method is the agency of men. The *erigeron canadense* introduced into gardens near Paris from North America, in the course of a century was spread over all France, Italy, Sicily, Belgium, Germany, and the South of England. There has been a similar diffusion of the Jamestown weed in this country, and of many other plants of greater service to man. Another is the agency of animals; another aerial currents, which bear the lighter seeds to surprising distances;* another still, the element of water, either of running streams or the currents of the ocean.†

In some measure, as might be expected, it is found that in continents which approach each other the vegetation is similar on both in the parts where they approach, but different, though analagous, in those portions where they

* "Each [seminal particle] as it floats along the ever moving breeze, selects, as it were, its own suited bed of nutrition, and there unfolds its effervescence, and produces its successor." Turner's *Sac. Hist. of the World*, I. 165.

† A Cocoa nut (its rough outer coat protecting the germ and rendering it impervious to the salt water,) borne by the current from another island upon a coral reef, vegetates and propagates its species, covering the island newly forming, and fitting it to become the abode of man.

recede to a wide distance. Generally the flora of islands near the continents consist in great part of species found on the nearest main lands. In islands separated from all other parts of the world by wide expanses of water, the plants are few and very peculiar.

The same facts are true in relation to the inferior animals. In the extreme north, where the two great continents approximate, many species of animals are common to both: "in parallèll climates analogous tribe replace each other, sometimes the same genus is found in two separate continents; but the species which are natives of one region are not identical with corresponding races in the opposite hemisphere." It is also true that animals on islands near to continents, are of the same stock with those on the main land, and that small islands remote from continents are generally destitute of land quadrupeds, except such as appear to have been conveyed by man, or by accidental means.

"There appears to have resulted," says Dr. Prichard, "from the foregoing inquiry, sufficient evidence to establish one out of the three hypothetical statements which were expressed at the commencement of this investigation, and to show that the other two are irreconcilable with the phenomena of Nature.

1. The hypothesis of Linnæus, that all races of plants and animals originated in one common centre, or in one limited tract, involves difficulties, which in the present state of our knowledge amount to physical impossibilities. It is contradicted by the uniform tenour of facts, both in botany and zoology.

2. The second hypothesis, which supposes the same species to have arisen from many different origins, or to have been at the period of their first existence generally diffused over separated countries, is also irreconcilable with facts. It does not appear that Nature has everywhere called organized beings into existence, where the physical conditions requisite for their life and growth were to be found.

3. The inference to be collected from the facts at present known, seems to be as follows:—the various tribes of organized beings were originally placed by the Creator in certain regions, for which they are by their nature peculiarly adapted. Each species had only one beginning in a single stock; probably a single pair, as Linnæus supposed, was first called into being in some particular spot, and the progeny left to disperse them-

selves to as great a distance from the original centre of their existence, as the locomotive powers bestowed on them, or their capability of bearing changes of climate, and other physical agencies, may have enabled them to wander.

The bearing of this general conclusion on the inquiries hereafter to be pursued is sufficiently obvious. We have now to investigate the question whether all the races of men are of one species in the zoological sense, or of several distinct species. If it should be found that there is only one human species in existence, the universal analogy of the organized world would lead us to the conclusion that there is only one human race, or that all mankind are descended from one stock. It is the more improbable that a plurality of races exist in one species with reference to man than with regard to any inferior tribe, as the locomotive powers of mankind, aided by the resources of human sagacity, are greater than those of brute animals."

Before proceeding further in his work Dr. Prichard defines the more important terms used in treating of this subject. *Species* he defines to be "a race of animals or of plants marked by any peculiar character which has always been constant and undeviating." "Two races are considered as specifically different if they are distinguished from each other by some characteristic which the one cannot be supposed to have acquired, or the other to have lost through any known operation of physical causes." The same meaning was originally attached to the word *genus* *γενος*, which is now appropriated to species. While *species* is now applied to those individuals resembling each other, which, in accordance with the settled laws of nature, have descended from one common stock, the word *genus* is spoken of an assemblage of tribes arranged together on the principle of general resemblance, but not proceeding according to the laws of propagation from the same original stock. *Varieties* are modifications produced in the species of animals or plants, by the agency of various causes; they are produced within the limits of a particular stock, and have not existed from its first origin. *Permanent varieties* are such as, having once taken place, are propagated in perpetuity. The term *race* is often used in the sense of species, but it is properly a more general and indefinite term, signifying a succession of individuals proceeding from one common stock, without defining whether they are to be viewed as a distinct species, or whe-

ther they are mere varieties included in one and the same species,

The particular species have generally the same limit as to the duration of life, agree in the laws of reproduction:—among mammifers, as to the number of their progeny, the period of utero-gestation, the times and frequency of breeding; they are in general subject to the same diseases, have the same psychical powers, and a striking uniformity in their habits and instincts. Yet within the limits of these species there are diversities of inward temperament and constitution, and of outward appearance, as in the covering of the skin, whether hairy or woolly, the presence or absence of horns in the case of quadrupeds, the colour or complexion, and the number of fingers or toes, &c.

Now when we compare the several varieties in the human race with each other in all these particulars, it is plain that they are governed throughout by the same laws. As to the duration of life, there is no considerable difference between the European and the Negro. What difference there is would seem to indicate a greater longevity to the African race in those climates in which they and the Europeans reside side by side. In Guadaloupe from 1811 to 1824 the deaths among the whites were one in 22, among free men of colour 1 in 35. And the census of the United States for 1840 informs us that while there were but 741 whites over 100 years of age in a population of 14,189,108 there were 647 free coloured persons over 100 in a population of 386,245 and 1338 slaves over 100 in a population of 2,487,566. Or 1 centenarian among 17,925 whites. 1 among 598 free coloured persons and 1 to 1859 slaves.* The contrast between the African and indeed the whole race of man, and the family of Simiæ and Orangs, is remarkable. The full period of their existence does not extend to beyond 30 years at the utmost.

As it respects the natural and vital functions of the several races of men there is a great uniformity.

The age at which females become marriageable

* We cannot vouch for the perfect accuracy of these statistics, for besides the imperfection of memory, there is a great tendency to exaggeration on this point among aged negroes.

In England, is from	13 to 14 years,	Among the Bushmen of Africa	11
" Italy at	12	" Eboes	8 or 9
" Minorca "	11	Northern Indians of America	18
" Smyrna "	11	" of the Rocky Mountains	14
" Persia "	10	Algonquins	14
" Arabia "	10	Potowatomies	14
" Jamaica "	11	Dacotahs	16
		Chili	11 " 12
		California	11 " 12

In this respect then, and in the period of gestation there is no material difference in the races of men. In this country where the negro and the white races live side by side, no difference in these things is known to obtain. Were they of different species, this would not be the case. Uniformity therefore, of physical developement and of the vital functions, is evidence that they have one common nature, and a strong presumptive argument that they proceeded from one common stock.

The Pathology of the human races affords additional proof of a unity of species. There are indeed a few diseases, which, originating in one tribe of animals, may be communicated to another. Hydrophobia originating in the dog, is communicated to other animals and to man. The vaccine disease is communicated from the cow to man, and may be transferred to the sheep, the ass, the dog and the goat. Yet are there diseases peculiar to each species of animals that cannot be transferred to others. The lower animals have been inoculated with virus taken from the human subject without any effect being produced. Measles, scarlatina, whooping-cough, &c. never pass from man to the brute. Yet are they transmitted with equal ease from one race of men to another. The diseases which prevail on our plantations prevail among ourselves, and the negro takes from the white those contagious diseases, to which he is subject. It is true there are some endemic diseases, which, originating probably in local influences, produce in a long series of years, a morbid predisposition in particular races. Such are the plica polonica affecting the Sarmatian race, the elephantiasis of Barbadoes, the goitre of Switzerland. Some of these diseases seems to be confined to one race, others, after a length of time, gradually become endemic in other races; but as they originally proceeded from local influences which have modified the original constitution, they cannot be regarded

as any proof of a different origin of these races, but the whole history of human diseases establishes the fact that all men are possessors of one common nature, the different susceptibility to particular diseases in different races, having its parallel in the children often of one and the same family.

The *phenomena of hybrids* too confirm the distinctness of species, and go far to prove the unity of the human race. Only those species of animals which are very nearly allied to each other can be brought into that close union which will produce offspring. The offspring of such unions is usually sterile. It has been ordinarily supposed that they are utterly incapable of procreation. And the celebrated John Hunter has justly observed that the true distinction of species must in the last result be gathered from their incapacity of propagating with each other, and producing offspring capable of self perpetuation. The mule in this country, so far as we know, is incapable of procreation, but in Spain, Italy, and New Holland, examples have occurred of their breeding. But it has always been by a reunion with the original stock. Among themselves the hybrids of mammifers and except in a few instances, of birds also, have never been known to propagate their kind. It seems to some little extent to be otherwise with plants, though the cases of fertile hybrids here referred to are mostly doubtful. Hybrids among plants are produced by artificial impregnation, and as among animals their production almost always requires the hand of man. In the natural state of the vegetable tribes, the number of hybrid plants yet discovered amounts to about 40, most of which, if not all, are absolutely sterile. It is to this fact that the preservation of species is to be ascribed. How often is it the case that the pollen is wafted by the wind or borne by industrious insects to the stigmas of plants of a different species. Were it not the case that they reject this, and imbibe the anther-dust of their own species, all species and orders would long ago have been thrown into utter confusion, and a bald uniformity have come to exist in the vegetable world. Among animals mules have never been found in a wild state. Both mule plants and animals are sterile, except where a union is

formed with one of the parent stock, and these connections are themselves very rarely fruitful.*

Now the phenomena of hybrids tends strongly to show the absolute unity of all the races of men. They are all included as varieties under one and the same species. As in the case of the inferior animals, so far are mixed breeds from being incapable of continuing their kind, they are remarkably prolific. This is exemplified in the Griquas, a mixed race between the Dutch colonists and the aboriginal inhabitants of S. Africa, in the Falattahs of middle Africa, in the various intermediate races of S. America, which are said to be more prolific, hardy, and energetic, than either of the races from which they sprung. It is exemplified too in the mulattoes of this country, at least as far as respects their ability to fulfil the command to be fruitful, multiply, and replenish the earth.

It has indeed been contended that the mulattoes are more feeble and liable to disease than either of the pure races from which they have originated, and that if left to themselves they would become extinct. The fact as to a less degree of strength, and greater liability to disease may be as has been stated. And it is as easy to understand why the intermediate variety should have less strength and firmness of constitution than the original stock, as it is to understand why they should surpass them. A feebler race may also be as permanent as a stronger. A Bedouin tribe may be as permanent though feebler in physical force, as the more strong and vigorous races of Europe, and

* Dr. Morton in his paper on hybrids in Silliman's Journal Vol. III. new series, has adduced many facts and seeming facts to the contrary, and entirely rejects this argument for the unity of the human species. We use the argument not as the sole argument, but as a real one, and, as we regard it, of no little weight in cumulative proof. The numerous cases alleged of fertility in hybrids in part rest on theories which require to be themselves established. The remark of De Candolle still remains unimpugned, that "all such intermediate breeds tend incessantly to extinction by the difficulties which are opposed to their reproduction. This explains the rarity of their appearance, and reconciles the permanence which is observed among the distinct species of nature, with the real existence, often, however, exaggerated, of hybrid or temporary tribes, which are thus reduced to the class of monstrous productions." Among the myriad instances of reproduction in animated nature every moment occurring, how exceedingly few in number are the hybrids brought into being! They are probably not more numerous than those monstrous births which occur within the limits of the existing species.

as a distinct community of men may outlive them. They have continued from Abraham till the present day, and are likely to transmit their name and peculiarities to the latest time. As the progeny of the different races of men are prolific often beyond the original races, while the hybrids which arise between different species are sterile with but rare exceptions, we are brought to the conclusion that the several races of men are but varieties of one and the same species.

We next consider what Dr. Prichard terms the *Psychical* character of the various races of men.

But first it is necessary to say that there is scarcely any thing which so clearly distinguishes one species from another as those intellectual endowments, or quasi intellectual endowments, by which the Creator has distinguished them one from another. The dog who attaches himself to man, though greatly resembling the wolf in external form and inward structure, is wholly different from it in this, and the gregarious wolf is equally removed from the solitary fox. The inert and unresisting sheep differs from the agile, roaming goat; the young of the one helpless and defenceless, that of the other seeking from its earliest existence the craggy cliffs of the mountains. What more unlike than the industrious, judging, persevering, constructing beaver, and the indolent sloth? Among the fishes of the sea, the birds of the air and the beasts of the earth, each species has its dispositions and habits entirely different from those of every other species.

There are some resemblances in affection for their young, and in their control and discipline, between the monkey tribes and man. The chimpanzes, according to Cuvier, live in troops, construct themselves huts of leaves, arm themselves with sticks and stones, and employ these weapons to drive man and elephants from their dwellings. They assume often an erect attitude, as do also the orang and the ape. A female of the *simia entellus* has been seen when mortally wounded to collect her strength in a dying effort to remove her young to a place of safety. But in all these respects these animals are surpassed by others having no outward resemblance to man. The bird, the beaver, the bee and the ant excel them in powers of construction; the bear, the whale, the grampus, the

walrus, and many species of birds, excel them in connubial and maternal affections ; and the erect attitude which they are with difficulty taught to assume is one of constraint, the orang and chimpanze resting in these cases on the outside of the foot, and showing by their whole habits that they were made to support themselves on their four limbs, and to climb from tree to tree rather than to walk over the face of the earth. In the possession of speech, in the use of fire, the cooking of food, and the manufacture of clothing to protect themselves from the changes of season and climate, which of these animals resembles in any degree the human race ?

But there is a class of emotions and actions in which man differs wholly from them, and in which all varieties of the human family agree. We allude to their manifest and universal belief in a state of existence after death, and in the power exercised over them by invisible and spiritual agents. Witness, in proof, the various rites performed over the remains of the dead—of cremation, sepulture, embalming; the funeral pomps, the tumuli of forgotten races, the morais and the catacombs, the pyramids of Egypt and Anahuac, the sepulchral monuments and mausolea of various nations; the prayers, litanies, requiems for the dead ; the churches, temples, mosques and pagodas where worship is rendered to superior beings, or the dread Supreme ; the sacerdotal orders who intervene as his appointed ministers and their chosen intercessors between God and man; the various rites of religious worship, of sacrifice, penance, and painful pilgrimage ; and behold the convincing proof that man is immeasurably above the nearest of the tribes below him, and that all men, from the most civilized to the most barbarous, are possessors of one common nature, feel themselves under one and the same condemnation, responsible alike to some superior power, and anxious alike, though not in the same degree, to propitiate the objects of their adoration or fear.

These differences between man and the brute, which mark all men as of one and the same species, are found to obtain among the most degraded families of man. The Bushmen of S. Africa whom M. Bory de St. Vincent represents as differing most from the Japhetic man and as the transition link between the genus homo and the gen-

era of orangs, chimpanzes, and gibbons, as so brutish, lazy, and stupid, that they are not even fit to be made slaves of; who are always smeared with fat or sprinkled with their own urine; who make to themselves ornaments of the dried entrails of animals which they wear as bracelets and fillets; whose pomatum is a mixture of grease and earth; who are clad in undressed skins of beasts; who feed upon wild roots, or on the unwashed entrails and paunches of animals; passing their lives in sleep, or squat on the ground smoking the everlasting pipe, to light which appears to be almost the only use they have for fire; isolated, taciturn, fugitive, without houses or huts, living in dens and caves of the earth, hardly supporting their comfortless existence in their more active moments by a toilsome search for the eggs of ants, and by devouring lizards, snakes and loathsome insects; these men certainly are the lowest on the scale of human existence. Yet among these very men, the gospel has produced the most surprising results. "The missionaries very naturally expected that it would require a long and laborious course of culture and tuition before such pupils could be expected even to apprehend the doctrines of Christianity. This however was not the case. The light and power of the gospel at an early period of the mission, accompanied the proclamation of its glad tidings, and a number of these barbarous people, when they heard the word of life, believed. And here a Christian church arose, extensive gardens were laid out, and these cultivated with the Bushmen's own hands."* The habits of these people who gathered around the settlements of the missionaries were entirely changed. Some of them, says Dr. Philip, in a short time "acquired very rational ideas of the Christian religion." "It was delightful to hear the children sing the praises of Jehovah, and to witness the progress they had made in spelling and reading." "The same gospel," says Moffat, of the Bechuanas, "which had taught them that they were spiritually miserable, blind and naked, discovered to them also that they needed reform externally, and thus prepared them to adopt those modes of comfort, cleanliness and convenience which they had been accustomed

*Moffat's Southern Africa, p. 51.

to view only as the peculiarities of a strange people." "Our congregation now became a variegated mass including all descriptions, from the lubricated wild man of the desert, to the clean, comfortable well dressed believer." The conversion of the formidable Africaner, chief of the Namaqua Hottentots, is too well known to be repeated. From being a man of blood, and of the most savage appetites, he became a meek, intelligent, and lowly disciple of Christ, a wonder as he had been an object of terror to all who lived in Southern Africa.

But even in their pagan state the lowest tribes of men show that they belong to the same species with those who are deemed the highest. The Greenlanders believe in a future state, in the existence of spirits good and evil, and in Tongarsuk their chief, dwelling in his happy subterranean mansion. They too have bowed before the doctrine of the Cross, and at New Hernhut, Lichtenfels, Lictonian, and Fredericksthal, are found gathered into Christian villages, and enjoying, as far as their inhospitable clime will allow, the blessings of civilized life.

The Negro races who live beneath the equator are not without their religious notions. "They believe" says the missionary J. L. Wilson*, "in one supreme being," they "practice image worship or the worship of ancestry," "they worship reptiles, at Dix Cove the crocodile; at Whydah and Popo, [the serpent; at Benin, the guana; at Calabar, the shark." "Their belief in a future existence is common if not universal, and it is not a little affecting sometimes, to see multitudes of this simple hearted people clustering around the dying couch of one of their fellow men, to transmit messages of filial or fraternal regard to the spirits of their deceased friends. They also believe in a plurality of evil spirits, the more prevalent belief respecting whom is that they are spirits of dead men, especially of those who were most famous for their wickedness while living, in the worship of whom the inhabitants of Africa are generally united." Their sacrifices and fetishes or charms, their prayers and oblations, their funeral rites, their annual harvest feast, their order of priests, their omens and auguries, their belief in the transmigration of

* Southern Pres. Review, Sept. 1848.

souls, and their pilgrimages to sacred places, all show that they have religious sensibilities which are possessed in common by the whole family of man. The negroes who are around us here, whom the wickedness and cupidity of the white man has brought from their distant home, and who were old enough to remember the scenes of their youth, all testify that their people were worshippers of a supreme being. Many of them in this country and in the West Indies have embraced the Christian religion in sincerity; and few of us are there, who do not sit at the same communion table, as we celebrate the supper of the Lord, with the natives of Senegal, Gambia, and Guinea. These tribes in their own land were not a wholly uncivilized people. "They have permanent habitations, herds of domestic animals, and depend for subsistence upon agriculture." "The Mandingoes are said to be active and shrewd merchants, laborious and industrious agriculturists, breeding a good stock of cattle, oxen, sheep, and goats." In the northern parts of Central Africa south of the desert of Sahara, the Sahara-belama, the great dry ocean of Africa, the followers of Islam have introduced the Mohammedan religion, and to some extent the habits of civilized life. Ethiopian pilgrims from Central Africa are found on the Hadj routes pressing on to pay their devotions at the shrine of the prophet at Mecca. Among these negroes are extensive cities. The Foulahs have the art of working iron and silver, work skilfully with wood and leather, manufacture cloth, have clean and commodious dwellings, and have mosques and schools existing among them. We have lying before us vocabularies of words we have ourselves obtained from the lips of negroes of different tribes now in slavery amongst us, which accord with those found in the books of travellers, and in the pages of Prichard. And we have one or two specimens of Arabic, written by aged servants in this country, one of whom writes in a beautiful hand for one so old and long removed from his own land, and reads the sacred scriptures in the Arabic language with great fluency and much evident enjoyment and appreciation of their contents.

Much has been written in depreciation of the African character and intellect. It certainly has not shone forth as yet with any brilliancy. But as Dr. Prichard well re-

marks, it would be no difficult matter to discover particular men, and even entire families among the European races, who are intellectually weaker than any reasonable person could pretend the generality of Africans to be. According to the testimony of a beloved missionary, well known to many readers of these pages, who with self sacrificing zeal has spent the last fifteen years of his life on the coast of Africa, the African children assembled in the mission schools exhibit as much aptitude as white children of the same age; and the same brother speaks of Toko, at the Gaboon River, as one of the most intelligent men he has met with in any country, (except that he is destitute of learning, technically so called,) keen in all matters of business and trade, which he transacts to a considerable extent, extensively acquainted with the natural history of his own country, agreeable and instructive in conversation, having his memory stored with a vast number of legendary and romantic tales, such as the Africans in their social circles are fond of repeating to each other. Many a trader, visiting the coast of Africa for the first time, has found the natives too keen for him, and has been obliged to make an unprofitable voyage.

Travellers in South Africa have also been surprised at the evidences of vigour and acuteness of understanding displayed by the Amazuluh, Amakosah, Bechuana and other Kafir nations. Kolben declares that he has known many of them that were tolerable masters of the Dutch, French and Portuguese languages, and one in particular who learned English and Portuguese in a short time. Cloos, a Hottentot in the employ of Van der Stehl, governor at Cape Town, carried on a large trade in cattle, and executed his commission with signal success.

Now if these various evidences of capacity and intelligence, and, above all, these sentiments of religion found in these men who, by common consent, are on the lowest verge of human intelligence, do not, when compared with the European races, mark them all as belonging to one and the same species, we are at a loss what arguments to adduce to meet so determined a skepticism.

Above all, at what an infinite remove does it place them from those forms of the brute creation from which they have been thought to spring! Who would think of edu-

cating the orang and chimpanze in human learning, of teaching Portuguese, Dutch, French and English to a class of baboons, or of gathering a company of chattering monkeys and leering gibbering apes into a Mohammedan mosque or a Christian church, and discoursing to them on the themes of moral obligation and their eternal destinies?

But we proceed to speak of those great difficulties which have been supposed to stand in the way of the hypothesis of the unity of the human race. One of the most striking diversities observable in men, and which meets the eye at first, is in their complexion. But the colour of the hair and of the eye vary with that of the skin. Persons of a fair skin have usually light or red hair, and blue eyes. Owing to the transparency of the skin, which transmits the sanguine tint of the blood, they have a ruddy complexion. Black haired persons have sometimes skins as white, but not so fair and transparent; on exposure to the sun their complexion becomes brown or yellow, while that of the sanguine becomes inflamed and blistered. The complexion of these persons is very fair only when protected from the solar rays. The women of Syria and Barbary are often very white, as they live within doors and do not permit themselves to be exposed. In this country black haired women are called brunettes, from the brown tint their skin has on exposure to the solar light.

White haired or light flaxen haired persons very rarely have black eyes. Their eye is light blue, or, from the absence of the pigment in the choroid membrane, assumes a red colour, from the blood appearing through the transparent coats. Dr. Prichard, therefore, from whose accurate description we have drawn, has distinguished the complexions of the human family into the three following varieties: 1. The Melanocomous, Melanous, or black haired variety. This embraces the majority of the human family, and may be looked upon, Dr. Prichard thinks, as the original complexion of the species. The hair is black, and varies from the long, lank hair of the Americans, to the fine crisp hair of the negro. The skin, too, varies in hue, from the snow white of those of the more northern races who are secluded from the sun, through every shade

of duskiness to the deep black of some African nations. The dusky hue is combined in some nations with red, in others with yellow. In the one case it forms the copper colour of many natives of Africa and America—in the other, the various shades of olive, from the light olive of the northern Hindoos to the deep olive and almost black of the Malabars and some other nations of India.

2. The Xanthous variety, embracing all individuals who have light brown, auburn, yellow, or red hair, accompanied with a fair complexion, which on exposure to the sun becomes more or less red. The pigment of the eye is of a light colour, mostly a light grey or azure blue, but sometimes has various shades of yellow or brown, and occasionally a green yellow tint. It prevails the most in the temperately cold regions of Europe and Asia, and not unusually is found in high, mountainous tracts, while the neighbouring low grounds are occupied with the melanous variety.

3. The Leucous variety. This embraces the *Albinos*, the distinguishing character of whom is the red hue of the choroid, the hair white or cream colour, and of a very soft and flaxy texture, and sometimes silky, the skin very fair, and blistering on exposure to the sun. These albinos are most frequent among the dark colored races and in hot climates, but arise also in the Xanthous variety and in the temperate zone.

Albinos are found among the copper-coloured Indians of America. On the Isthmus of Darien there are said to be one among every two or three hundred. Their skin is a milk-white, the eyebrows of the same colour, their hair also; their eyes are weak, and cannot bear the strong light of the sun. The same were seen by Captain Cook on the island of Otaheite. They are met with in Java, Hindostan, and are quite frequent among the negro races of Africa. The negroes brought from the Gold Coast to Martinico, St. Domingo, and Guadaloupe are said to have one among 6 or 7 of their children, of this variety. In some instances the Albinos have some degree of ruddiness in their skin, the eye is blueish, and they approach nearer to the Xanthous variety. Albinos when arising among the Xanthous variety are usually sufficiently marked and peculiar, but sometimes approach the general characteristics of this variety.

The colour of the eye, the hair, and the skin, seems to depend upon the same general laws of the constitution. In the eye the pigment, when it exists, is secreted in the choroid, in the hair it seems to be diffused through the medullary substance which fills the external bony cylinder. It is perhaps secreted chiefly in the bulbs at the root of the hair. As to the skin, it is well known that the outer covering is nearly of the same white colour in all men.

The colour of the negro is owing to a substance lying immediately below the outer cuticle and above the true skin. It is a kind of mucous net work, containing a slimy unctuous substance which, showing through the transparent scarf-skin, gives the impression of colour.

Now the colour of the eyes, of the hair, and the skin are not in all cases permanent. The eyes and hair of very young children often grow darker as they advance in age. The Albino child in some instances has had the eye change from a red to a brown colour. The hair has been known to change, in less than eight days, and to become white from grief in a single night. The skin of many fair persons becomes freckled on exposure to the sun, and frequently tawny, and sometimes black coloured patches form and spread on white persons. Females in a state of pregnancy often exhibit these changes, the skin becoming brown, and in some cases, on portions of the body, entirely black. Cases have also been known in which negroes have lost their peculiar colour, the pigment of the skin being absorbed. Klinkosh speaks of a negro who became yellow; and we have known of at least one case where the colour of a mulatto man has been absorbed, and he now exhibits, except in his face, the fair skin of the xanthous variety of the white man. His face is peculiarly marked, and in many spots the yellow pigment has disappeared, leaving the other portion of his face yellow or of a dusky hue. And it has often been remarked that the negro complexion, in cases where there is no mixture of blood, becomes lighter in this country in the second and third generation.

The different varieties too spring up within the bounds of each other. The Jews are as pure a race as can be found on earth, having kept themselves from all foreign admixtures. They belong to the melanous variety, as they

generally have black hair. But there are many Jews from Germany and Belgium, with light hair and beards, and blue eyes. Those of this nation who have been settled for centuries in Cochin and Malabar, are so black as not to be distinguished from the other inhabitants. There is, on the contrary another colony in Cochin, who have settled there more recently, who are called the white Jews, they having not remained in that climate sufficiently long to have their complexion changed. The Laplanders are dark, while the Finns and other allied tribes are xanthous. The xanthous variety frequently arises among the negroes, both in Africa and elsewhere. Their complexion is ruddy, their eyes blue or hazel. The light hue of the European may be found in Africa. Mr. Hodgson represents the tribe of Mozabbi on the lofty table land of Mt. Aurasius in northern Africa, as fair and ruddy, with yellow hair, while the Kabyles are brown and nearly black, and the Tuaryk of Saharah are many of them, black, while others are copper coloured. The tribes of Ackmar and of Nouba, in Sennaar are of the xanthous variety, and differ from the African, having thinner lips and less prominent cheek bones. And in the high lands of Abyssinia the Edjow Galla are of a light brown complexion; except those who live in the low lands, who are black, the Sumali and the Suakini have soft hair, regular features and light complexion. The xanthous variety was found among the ancient Egyptians, and it still arises among the Mandingoes, the Congos of central, and the Kaffirs of south Africa, in the Marquesas, and the island of Otaheite.

On the other hand, the melanous variety arises, where the xanthous has prevailed. The Germans of the time of Tacitus were a yellow haired race, and had blue eyes, but this is not their most usual complexion now. And the dark haired races are perpetually exhibiting changes from a lighter to a darker hue. The Arabs near Muscat are of a sickly yellow, those near Mecca of a yellowish brown, those in the low countries bordering on the Nile nearly jet black. Mr. Buckingham informs us that the Arabs near the Jordan, where the climate is intensely hot, have dark skins, flat features and coarse hair; and in the Hauran beyond, he found a family with negro features, a jet black complexion and crisped hair, of whose genuine Arab

descent he could have no doubt. And Rozet says, that in Algiers, there are many Arabs as black as negroes, and yet preserving all the characteristics of the Arab race.

The general complexion of the Hindoos, says the missionary Ward, is a dark brown, but some are comparatively fair and others quite black. Bishop Heber was unprepared to find natives of India as black as African negroes. He says, "the great difference in the colour of the natives struck me much. Of the crowd by whom we were surrounded, some were as black as negroes, others merely copper coloured, and others little darker than the Tunisines whom I have seen at Liverpool." This surprise we also experienced when the missionary Rev. J. C. Rankin told us that perhaps one in six of the natives of Hindostan were as black as the full blooded African at that moment waiting at our table. The distinction of caste forbids this variety of colour from arising through mixture of races. Yet though the Brahmin is of lighter hue, and the Pariah, or lower class, very dark or quite black, a black Brahmin and white Pariah are sometimes seen. The portrait of Ramohun Roy prefixed to Dr. Prichard's 3rd vol. shows a darker complexion than that of many Africans, and curly hair. On the contrary Hindoos in the high Himalayan countries are frequently of the xanthous variety.

The American variety, the red man of Gmelin, is of an obscure orange, rusty iron, or copper colour, the eyes dark and deeply seated, and the hair black, strait or lank, and thick. Yet some N. American Indians are as fair as many Europeans, others brown or yellow, and others approach the negro tint. The Indians of N. Eastern Oregon are of a fair and sometimes ruddy complexion, of Northern Oregon a dingy copper, while in Southern Oregon or California they are dark, and some tribes wholly black.*

* The Mandan Indians exhibit various shades of complexion. Many are as light as half breeds; and among the women the skin is often almost white, with the most pleasing symmetry and proportion of features; with hazel, grey, or blue eyes. The diversity in the colour of the hair is equally great, every shade being seen which appears among the whites except red. There are some with hair that is white or a bright silvery grey. Their traditions afford no evidence of their having had any knowledge of white men before the visit of Lewis and Clarke in the winter of 1804-5.—*Callin's N. Am. Indians, Vol. I. Letter 13.*

If we examine into the causes of this diversity of complexion, we shall find two, which operating in some way, not always plain, upon the animal organization, produce these varieties. One of these is climate. If we will dismiss the ordinary division of the earth into the four quarters of the globe, and unite the northern and southern continents into one view, as did Eratosthenes of old, we shall have for the western division of the old world embracing Europe and Africa a country stretching from Nova Zembla to the cape of Good Hope through 113 degrees of latitude, 80° of which are north of the equator, and 33° south of it. Beginning in the northern part of this country and dividing it into 8 zones, we find, in the most northern of these divisions, the Swedes and Norwegians, a tall, white haired race with light grey eyes.

2. The next, embracing the northern part of Germany, England, Denmark, and Finland exhibits the xanthous variety. The Danes have always been known as a race of florid complexion, blue eyes and yellow hair. The Hollanders were known in ancient times as the "Auricomi Batavi."

3. In the next zone towards the south, the prevailing colour of the hair in the latitude of France is chesnut-brown, of the eyes the same, and to this the complexion sustains a certain relation.

4. Advancing southward in the countries surrounding the Mediterranean as far as the chain of Mt. Atlas, among the Spaniards, Italians, Greeks, the islanders of the Mediterranean, and the Moors of N. Africa, we find black hair, dark eyes, and a brownish white, or a brunette complexion. This is the predominant complexion, and hardly one in a hundred is of any other.

5. South of the Atlas, the native races are of a light or a dusky brown approximating to the black.

6. At the tropic of Cancer, in the latitude of Senegal the colour is almost universally black, except in the more elevated regions until we pass the tropic of Capricorn south of the equator.

7. Beyond this point and in Caffraria, the copper or red complexion predominates.

8. Towards the cape are the tawny Hottentots. Were there habitable land for 40° further, or beyond the antar-

tic circle we might find the hue again approaching that of northern Europe.

The same analogy might be carried out less perfectly in Asia, including N. Holland, and in N. and S. America, although Humboldt contends that there is a uniformity of tint in the American tribes throughout the whole length of the two continents.

Elevation produces the same effect as proximity to the polar regions. This is illustrated in botanical geography. As we ascend from the vallies to the tops of mountains we find vegetation changing, as you do in passing over the earth's surface from the equatorial regions to higher latitudes. The Swiss in the mountains above Lombardy have sandy or brown hair, the Milanese in the plains below have black hair and eyes, and oriental features. In the Basque country of dark complexioned Spain, in the more mountainous regions, we meet with fair complexions, blue eyes, and auburn or flaxen hair. In the region of Mt. Atlas the Berbers of the plains are of brown complexion, while the inhabitants of Mt. Aurasius have yellow or red hair, blue eyes, and a fair and ruddy complexion. The Foulas of the high regions of Senegambia are of light copper colour, the people of the low country on every side are negroes; and in eastern Africa, in nearly the same latitude, on the high plains of Kaffa, the inhabitants are described as fairer than those of southern Europe. The Galla and Abyssinians in the elevated portions of that country are fairer than the natives of the low lands, many of whom are nearly as black as the negroes.

A similar effect is produced by climate upon the lower animals, and upon the vegetable world. The birds, beasts, flowers and fishes of the equatorial regions, are brighter and deeper tinted in their spots, their feathers, and their scales, than in other regions of the world, and as we approach the poles every thing has a tendency to whiten. Bears, foxes, hares, falcons, crows, and blackbirds, conform to the general livery of the snowy regions.

The fowls in Guinea and the dogs also, are as black as the inhabitants; and the sheep would not be recognised as such, but for their bleating. Instead of wool they are covered with hair like a dog. The "world seems inverted, for the sheep are hairy and the men woolly." Around

Angora, so celebrated for its manufactures of hosiery and shawls, sheep, goats, rabbits and cats are covered with a long silken hair; and "hogs and dogs" according to Bishop Heber, "carried into the hills from India, are soon covered with wool like the shawl goats of that climate." The ears of European dogs when carried to the gold coast, become stiff and long like those of the fox, to whose colour they also incline; and their bark turns into a howl or yelp like that of the native breed.

The other main cause of variety of colour may be in the food. Animals fed on madder-root have their bones stained of a red colour, and it is said that the Chinese by a similar process change the hair of men to a darker hue. Oily food has a tendency to increase the biliary secretions and produce a sallow or oily shade.

Still another cause of change may be found in advancing civilization or the reverse. The people of Nigritia as soon as they escape from their degradation, and rise to a superior elevation in intellectual and moral worth, slough off the most extreme deformities of the negro. In proof of this, witness the Ashantis, the Sulima, and Dahomans of the coast of Guinea, and the fine races of Guber, Hausa, and the Jolofs, their near neighbours on the north.

There are an abundance of facts to sustain the common belief that a simple mode of life, abundant and nutritious food, and a salubrious atmosphere, give to men, and indeed to all organized existence, large and graceful forms; while, on the other hand, hot and insalubrious climes, inferior food, and sensual habits, produce opposite changes equally great.

We have abundant proofs of this operating among ourselves. In the low country of these southern States, white families, living constantly in the swamps and rice lands, gradually lose their fine complexions and their robust appearance; the roseate tint disappears from their cheek, their skin becomes colourless or tawny, their hair even in some instances changing to a dirty yellow, or flavous cream colour. The effect must be produced by the heat and miasmatic atmosphere generated in those low and marshy regions. In an entirely opposite country in the same latitudes, the middle or sand-hill region, a region universally healthy but barren, a similar effect is produced by the

miserable food and indolent life of the inhabitants. The poor and miserable tallow-faced, or tawny inhabitants, though of pure Anglo-Saxon origin, show, in an equal degree, the modifying influence of inferior and scanty food upon the human face divine. Even the children of such parents, from their earliest days, still more than the parents themselves, show all these effects. Indeed, in many parts of these southern regions, one accustomed only to the fresh and rosy complexion of the northern portions of our land, will be struck with the manifest change in the pure Anglo-Saxon race, which a residence of two or three generations under a southern sun has made, even where there has been abundance of the necessaries and luxuries even of life.

The argument, then, for a diversity of species in the human family, from the colour of the skin, eyes, and hair, is manifestly unavailing. To the inferior animals no one thinks of applying it as a distinctive mark of species. A black, white, red, or spotted colour in the horse or cow, the varieties of bay, sorrel, chestnut or gray in the one, or brindled and mottled in the other, are hardly regarded as indicating varieties in the same species.

A far more important difference obtains in the races of men in reference to form and structure. The heads of different nations are differently formed. And Prof. Camper first suggested a method by which the crania of different races of men and species of animals might be compared. This is the facial angle included between a line drawn from the *meatus auditorius*, or entrance of the ear, to the base of the nose, and another line touching the more prominent part of the upper jaw, and resting upon the most prominent part of the forehead. This angle, when the head is viewed in profile, differs in the various animals up to man, and in the different races of men up to the most intellectual, beautiful and perfect. In the bird it is the least, in the ape tribe, one species has a facial angle of 42° , in the one most approaching man the facial angle is 50° , in the negro and Kalmuc it is 70° , in the European 80° , in the profile of the Greek statues of Jupiter it is 95° or 100° .

Dr. Prichard objects to the method of Camper, that it does not indicate, as he supposed, the sagacity and intel-

lect of men. In the first place, it is not certain that the quantity of brain either positively or relatively indicates the measure of intellectual power. Many of the lower animals, especially insects, which have no cerebral lobes, as the bee and ant, manifest instincts having a wonderful resemblance to intellect in man. And in the second place the quantity of brain is not determined by the facial angle, for the greater prominence of the bones of the upper jaw will give a more acute angle in one individual who has precisely the same quantity of brains, than in another whose facial angle is more obtuse. And Blumenbach has objected that the facial angle is precisely the same often in skulls which, in other proportions, are wholly different. The skull of a Congo negro in his possession, and one of a Pole from Lithuania, were nearly equal in their facial angle, but the narrow, compressed head of the negro was exceedingly different from the square head of the Sarmatian. He adopted a different method of determining the distinctive differences in the configuration of the head. He viewed it from behind and above, adopting what he called the *vertical* method. Viewing the skulls of different nations in this way, he divided the human race into three families and two intermediate ones, the Caucasian, the Mongolian, and the Ethiopic — between the Caucasian and the Ethiopic is the Malay, and between the Caucasian and the Mongul, the American variety. In the Caucasian skull the form is symmetrical, the zygomatic arches are hardly perceptible from the point of view taken, and the cheek and jaw-bones are covered by the overhanging forehead. The negro skull is greatly flattened laterally, the zygomatic arches protrude greatly, and the whole lower part of the face projects so much that the upper jaw, the teeth and cheek bones, are visible from above. The Mongolian skull has an exceeding breadth in front, the zygomatic arches are exceedingly prominent, the forehead depressed, and the upper jaw visible from above. But Dr. Prichard, in determining the varieties of the bony structure of the head, views the base of the skull, though not to the neglect of other examinations and measurements. He also distinguishes three varieties in the skull: 1. The symmetrical or *oval* form. This is known by the expanded forehead, the symmetrical proportions of the zygo-

tic arches and the maxillary bones, giving to the contour of the face an oval shape. The upper jaw-bone is not projecting, but rounded and adapted to the general figure of the head, which gives a perpendicular position to the front teeth, so that they do not project. 2. The narrow and elongated skull of the negro of the Gold Coast. The temporal muscles rising very high in the parietal bones, and being very powerful, have compressed and elongated the head. The cheek bones project forward, the upper jaw also projects forward, carrying forward the alveolar process and the teeth, and diminishing thus the facial angle of Camper. 3. The broad and square-faced skull of the Turanian race. The Monguls afford a specimen of this variety—the Esquimaux an exaggerated one. In this the most noticeable feature is the outward projection of the zygomas. If a line be drawn from one to the other of these as a base, it will form with the apex of the forehead nearly a triangle. The orbits are large and deep, the upper part of the face flat, the nasal bones nearly on the same plane with the cheek bones. This variety Dr. Prichard calls the *pyramidal*, while to the second variety he gives the name the *prognathous*.

Regarding men as distinguishable into classes according to their structure, Dr. Prichard enumerates seven varieties of men. 1. The Iranian, who in the form of their skull and other physical characters, resemble the Europeans, though some nations in Asia and some in Africa are included in this variety. This division of the human family embraces Europe, North Africa, and Asia south of the Caucasus and the Himalaya mountains, and from the Ganges to the Mediterranean and the Red sea. Of these the Greeks, and the Persians as exhibited in the sculptures of Persepolis, form the most perfect models. The term Caucasian is avoided as a name of this class, as it would seem to indicate what is not true in fact, that these people, and these alone of the families of men, originated in the region of Mt. Caucasus. 2. The Turanian nations, as the Kalmucks, the Mongols, and the Chinese. This class embraces all nations of northern and eastern Asia, beyond the Ganges. With this also are reckoned the Esquimaux of N. America who have the same general appearance, and the Lappes of northern Europe. 3. The

native American nations, the Esquimaux excepted. 4. The Hottentot or Bushman race. 5. The Negroes. 6. The Papuans or woolly haired nations of Polynesia. 7. The Alfourou and Australian races.

The Iranian variety embraces the Caucasian family proper, the Germanic family, the Celtic, the Arabian, the Libyan, the Nilotic, and the Hindostanee families of nations.* These families of nations have the large oval skull with its anterior portion full and elevated, the nasal bones arched, the chin full, the teeth vertical, the face small but with regular features. Of these families the Jews included in the Arabian family, have a more receding forehead, an elongated face, and large aquiline nose. That the Nilotic family belong to this Iranian race, is now rendered certain by the valuable work of Dr. Morton, *Crania Egyptiaca*, in which are depicted one hundred and thirty-seven skulls, and mummified heads, from the pyramids and catacombs of Egypt. Of these, he informs us that eight tenths are of the unmixed Caucasian race, the structure of the bones as thin and delicate as the European; on thirty-six heads the hair is preserved, and is as fine as that of the fairest European nations at the present day; the nose straight or slightly aquiline as in the Hindoo, or more prominent as in the Pelasgic, or long, salient, and aquiline, as in the Arabian, and, more especially, in the Hebrew stock. The meatus auditorius presented no variation from the usual position. The Turanian variety has the pyramidal skull, the nose broad and short, the eyes small, black, obliquely placed, the forehead low, the skin sallow or olive, the hair long, black, straight, the beard thin. It embraces the Mongul Tartar family, the Turkish, the Chinese, the Indo-Chinese, the Polar family, including the Laplanders, Finns, Samoiedes, Ostiaks, and others in Asia, and the Esquimaux in America.

The American variety is fully exhibited in the splendid work of Dr. Morton, of Philadelphia, on the Aboriginal races of North and South America. He divides the races into two, the American and the Toltechan families. "They are marked by a red or brown complexion, long, black,

* See Morton's *Crania Americana*, p. 5. He follows Blemanbach's distribution of the races of men.

lank hair, and a deficient beard. Their eyes are black and deep set, the brow low, their cheek bones high, the nose large and aquiline, the mouth large, and the lips tumed and compressed. The skull is small, wide between the parietal protuberances, prominent at the vertex and flat on the occiput. The Toltecans are the race whose works are found from the river Gila in California, to the southern border of Peru, among which are pyramids, temples, grottoes, basilisks, and arabesques, with their roads, aqueducts, and fortifications. Dr. Morton thinks the American race differs from all others, even the Mongolians, i. e. the Turanian of Prichard. But Dr. Prichard supposes the Aboriginal Americans to exhibit the broad pyramidal skull of the Turanian race. The cheek bones are prominent but not quite so angular, the nose more so and aquiline, the complexion, hair, and defective beard assimilate them to the Turanian family of nations.

The Hottentot and Bushman race have broad and square heads, like the Kalmucks and other Turanians. The face is flat, especially between the cheek bones, the eyes of a deep chestnut colour, long, narrow, distant from each other like the Chinese, but possessing great powers of vision. Their habits are like those of the Kalmucks, they are nomadic tribes wandering over arid steppes covered with but a scanty herbage. The principal difference is in the texture of the hair, which though scanty in the Hottentot, is still woolly, but differing in its quantity from the thick wool of the negroes of middle Africa.

The negro skull is of the prognathous type, the narrowest and most elongated of human skulls, excepting those which have been subjected to artificial pressure, such as those of Titiaca in Peru,* and much has been said of its great resemblance to the cranium of the chimpanze and orang otang. But all the measurements of Camper, Tyson, and others, were of young specimens of these animals.

* Dr. Morton however supposes that the skull of the ancient Peruvians was elongated naturally, and the elongation only increased by compression, to heighten what was supposed to be a beauty. See *Crania Americana*, p. 98, and plate iv. where is delineated a Peruvian skull, as Dr. M. supposes, in its unaltered form. The retreating forehead and prognathous face, would argue an affinity with the negroes were it not that the hair is uniformly lank and long like that of the other American tribes.

Their brain is fully developed at an early period unlike the human brain which is comparatively slow in development; and before the jaws are fully enlarged by complete dentition, and the zygomatic arches fully extended, these measurements were taken. In these cases the cranium was relatively more protuberant, and the facial angle greater than in the adult skull. In this, the cranium shews itself as a small rounded case wholly posterior to, and not above and over the face, the zygoma is in the middle and not in the anterior region of the head, and the foramen magnum is in the middle of the posterior third, and not in the middle of the base of the skull as in man.

The skull of the negro is in general thicker, denser, and heavier than that of the most of men; but the great distinguishing difference is its narrowness, and the prominence of the alveolar processes of the upper jaw, causing, in this way, the retreating forehead. The Kaffir has a higher forehead, and less prominent jaws, but, on the whole, approaches to the prognathous type. It is obvious that the form of the skulls has little to do with the quantity of brain, provided where it is flattened or depressed in one direction it is extended in another, and Tiedeman has ascertained by comparing, by an accurate process, the capacity of the skulls of different nations, that the cavity of the negro skull, and of course the quantity of brain which fills this cavity is in no degree smaller than in European and other human races.

The Papuas or Oceanic negroes, inhabit New Guinea and other islands of the Indian Archipelago, and are found also in many islands of the Pacific. Their head resembles that of the negro, being of the prognathous type, their skin is of the deepest black, their hair short, woolly, and more compact on their head than in any other people, their eye is of a greenish brownish tint, their nose flat, mouth wide with thick lips. The Papuas proper, living on that island, are a mixed race, between the Malays and the Oceanic negroes. Their name in the language of the Malays signifies "frizzled head," they were called by Dampier "the mop-headed Papuas." They comb out these locks to their full extent on every side, which gives their head an enormous apparent size, being, it is said, three feet in diameter. The Australian skull exhibits a deep sinus between

the nose and the forehead, and the frontal ridges greatly overhang the eyes. It is of the extreme prognathous type with retreating low forehead. Their hair is longer than that of the negro, coarse and frizzled, or soft and straight as in the white man. Their colour black, or dark brown, though some of the women are as light as mulattoes. The Alfourus are of the same general type, and repulsive in the extreme in their whole appearance.

It will be remembered that the black complexion and the other distinguishing features of the Guinea negro do not always go together, that there are many nations of Africa extremely dark, whose skull approaches the oval form, whose lips are thin, their forehead and nose prominent, and who are finely formed. Such are the Berbers of Mt. Atlas, the Tuaryk of the desert of Sahara, the Tibbos of Borneo, the Fulahs, and Jolofs of Senegambia, a portion of the Ashantis, the race of Gubah and Hausa of Sudan, some tribes in Congo, and the blackest of the Kafirs in South Africa. There are others having the same features and colour whose hair is not woolly, as the Bishari, Danakil, Hazorta, and the darkest of the Abyssinians. Others still, have the negro type and complexion in every respect, while their hair flows in ringlets. The colour of the complexion and form of the skull do not therefore seem necessarily connected.

It has been supposed that national varieties exist in the form of the pelvis, and that these bear a relation to the shape of the skeleton and form of the skull. Drs. Vrolik, of Amsterdam, and Weber, at Bonn, have devoted their attention to these comparisons, and the latter, more especially, has distinguished four forms of the pelvis: 1. The oval. 2. The round. 3. The square. 4. The oblong or cuneiform. Prof. Weber has found examples of each of these forms in every one of the principal varieties of the human race; but gives it as his opinion that the most frequent form among Europeans is the oval form, among the American nations the round, the square among the Mongolians, and the oblong among the African races. To their forms he supposes the crania of these several varieties of man in general correspond. But we doubt not, if as much attention were bestowed upon the examination, and mensuration of the pelves of the inferior animals of

one and the same species, equal and greater variation, would be found in them.

These varieties of form in man are more important perhaps than the outward varieties of colour, and in themselves more strongly argue a different and independent origin of the several races of men. But it has often been remarked that there are stranger varieties arising among men than those which mark the differences of race, and that these are propagated for a length of years from father to son.

"Native or congenital peculiarities of form, like those of colour," says Lawrence, "are transmitted by generation. Hence we see a general similitude in persons of the same blood, and can distinguish one brother by his resemblance to another, or know a son by his likeness to the father or mother, or even to the grandfather or grandmother. All the individuals of some families are characterised by particular lines of countenance; and we frequently observe a peculiar feature continued in a family for many generations. The thick lip introduced into the imperial house of Austria, by the marriage of the Emperor Maximilian with Mary of Burgundy, is visible in their descendants to this day, after a lapse of three centuries. Haller observes that his own family had been distinguished by tallness of stature for three generations, without excepting one out of numerous grandsons descended from one grandfather.

Individuals are occasionally produced with supernumerary members on the hands or feet, or on both; and from these, whether males or females, the organic peculiarity frequently passes to their children. This does not constantly happen, because they intermarry with persons of the ordinary form; but if the six-fingered and six-toed could be matched together, and the breed could be preserved pure by excluding all who had not these additional members, there is no doubt that a permanent race might be formed constantly possessing this number of fingers and toes.

Pliny has mentioned examples of six fingered persons among the Romans: such individuals received the additional name of *sedigitus* or *sedigita*. C. Horatius had two daughters with this peculiarity. Reaumur speaks of a family in which a similar structure existed for three generations being transmitted both in the male and female lines. Mr. Carlisle has recorded the particulars of a family, in which he traced supernumerary toes and fingers for four generations. They were introduced by a female, who had six fingers on each hand, and six toes on each

foot. From her marriage with a man naturally formed were produced ten children with a supernumerary member on each limb; and an eleventh, in which the peculiarity existed in both feet and one hand; the other hand being naturally formed: The latter married a man of the ordinary formation; they had four children, of which three had one or two limbs natural, and the rest with the supernumerary parts, while the fourth had six fingers on each hand, and as many toes on each foot. The latter married a woman naturally formed, and had issue by her eight children, four with the usual structure, and the same number with supernumerary fingers or toes. Two of them were twins, of which one was naturally formed, the other six-fingered and six-toed.

Another remarkable example of the occurrence of a singular organic peculiarity, and of its hereditary transmission, is afforded by the English family of porcupine men, who have derived that name from the greater part of the body being covered by hard dark-coloured excrescences of a horny nature. The whole surface, excepting the head and face, the palms and soles, is occupied by this unnatural kind of integument. The first account of this family is found in the *Philosophical Transactions*, No. 424; and consists of the description of a boy, named Edward Lambert, fourteen years old, born in Suffolk, and exhibited to the Royal Society in 1731, by Mr. Machin, one of the secretaries. "It was not easy to think of any sort of skin or natural integument, that exactly resembled it. Some compared it to the bark of a tree; others thought it looked like seal-skin; others like the skin of an elephant, or the skin about the legs of the rhinoceros; and some took it to be like a great wart, or number of warts uniting and overspreading the whole body. The bristly parts, which were chiefly about the belly and flanks, looked and rustled like the bristles or quills of a hedgehog, shorn off within an inch of the skin." These productions were hard, callous and insensible—other children of the same parents were naturally formed.

In a subsequent account presented to the Society twenty-four years afterwards, by Mr. H. Baker, and illustrated with a figure of the hands, this man is said to continue in the same state. He was a good-looking person, and enjoyed good health: every thing connected with his excretions was natural; and he derived no inconvenience from the state of his skin, except that it would crack and bleed after very hard work. He had now been shewn in London under the name of the Porcupine Man. "The covering," says Mr. Baker, "seemed most nearly to resemble an innumerable company of warts of a dark brown colour, and a cyl-

indrical figure, rising to a like height (an inch, at their full size,) and growing as close as possible to one another, but so stiff and and elastic, that when the hand is drawn over them they make a rustling noise."

They are shed annually, in the autumn or winter, and succeeded by a fresh growth, which at first are of a paler brown. "He has had the small pox, and been twice salivated, in hopes of getting rid of this disagreeable covering; during which disorders the warts came off, and his skin appeared white and smooth, like that of other people; but on his recovery it soon became as it was before. His health at other times has been very good during his whole life." "He has had six children, all with the same rugged covering as himself; the first appearance whereof in them, as well as in him, came on in about nine weeks after the birth. Only one of them is living, a very pretty boy, eight years of age, whom I saw examined with his father, and who is exactly in the same condition."

Two brothers, John Lambert, aged 22, and Richard, aged 14, who must have been grandsons of the original porcupine man, Edward Lambert, were shewn in Germany, and had the cutaneous incrustation already described.

Let us suppose that the porcupine family had been exiled from human society, and been obliged to take up their abode in some solitary spot or desert island. By matching with each other, a race would have been produced, more widely different from us in external appearance than the Negro. If they had been discovered at some remote period, our philosophers would have explained to us how the soil, air, or climate had produced so strange an organization; or would have demonstrated that they must have sprung from an originally different race: for who would acknowledge such bristly beings for brothers?

The giants collected by Frederic William I. for his regiment of guards produced a very tall race in the town where they were quartered: in the language of Dr. Johnson, they "propagated procerity."

This resemblance of offspring to parents, in native peculiarities of structure, prevails so extensively, that those minute, and in many cases imperceptible differences of organization or vital properties, which render men disposed to particular diseases, are conveyed from father to son for age after age. This is matter of common notoriety with respect to scrofula, consumption, gout, rheumatism, insanity and other affections of the head. There is more doubt in some other cases, as hare-lip, squinting, club foot, hernia, aneurism, cataract, fatuity, &c.; of which, however, there are many well-authenticated examples." There is an

hereditary blindness in a family in North America which has always affected some individuals for the last hundred years."—*Lawrence's Lectt. p. 438. et seq.*

"In a family at Iver, the individuals for nine generations had perfect thumbs, but instead of fingers had only the first phalanx of each, and the first and second joint of the ring finger of the left hand, these rudiments of fingers having no nails. This is said to be the description of the whole family, as it had been with slight variations that of nine numerous generations."—*Prichard I. 245.*

The same perpetuation of casual varieties is seen in the lower animals. The first ancestor of the Otter variety of sheep in New England, was a male lamb, produced by an ewe of the common description. This lamb was of singular structure, having a large body and short legs the fore legs being crooked. The variety has been perpetuated, and is valued from its inability to jump over fences. The Durham breed of cattle was artificially produced upon the basis of the small Highland breed, and the varieties of the dog and horse are best accounted for from the same cause.

Varieties are thus occurring daily in the human form and proportions, even without the influence of difference of climate, and manner of life. When these are superadded, we may expect to find the natives of different countries differing from each other more than the natives of one and the same country do among themselves. Even the same races when diffused through different and remote countries vary from their original type. The Arabs who have emigrated to Africa 11 or 12 hundred years ago, have become larger, stouter, more regular in their features, and of a different complexion from the original stock. Some have become entirely black, while they retain much of their original type. The Jew living in countries where the races are of a different hue, becomes, in some measure, assimilated to them. In England they are of a light brunette; in Germany xanthous, in Portugal very dark, in Cochin China and Malabar black. Transplanted negroes, long resident in temperate climes, seem to be slowly approximating in hue and form, even when there is no intermixture, to the races among whom they reside. And if the same is not true of the European and Asiatic varieties, dwelling in inter-tropical Africa, it may well be ascribed to the fact that they

have not conformed to the manners and habits of this degraded people. Where the Caucasian race has been compelled by necessity to adopt the habits of the inferior tribes of men, they too have degenerated. "There are," says the *Dublin University Magazine*, and the *Edinburg Review*, "certain districts in Leitrim, Sligo, and Mayo, chiefly inhabited by the descendants of the native Irish, driven by the British from Armagh and the south of Down, about two centuries ago. These people whose ancestors were well-grown, able-bodied, and comely, are now reduced to an average station of five feet two inches, are pot-bellied, bow-legged and abortively featured; and are especially remarkable for open projecting mouths, with prominent teeth and exposed gums, their advanced cheek bones and depressed noses bearing barbarism on their very front. Within so short a time they seem to have acquired a prognathous type of skull; like the natives of Australia;—thus giving such an example of deterioration from known causes; as almost compensates, by its value to future ages, for the suffering and debasement which past generations have endured in perfecting this appalling lesson. It is marvellous how close is the physical resemblance between the lowest class of the Irish population and the natives of Australia as depicted in the voyage of the "Astrolabe." Although the ancestral types of the two were in all probability very different, the changes induced by deficiency of food and social degradation, have tended in a remarkable manner to bring about the same results.*

The races of inferior animals present more striking instances of variation. It is with justice believed that all varieties of swine descend from the wild boar. Yet those carried to America by the Spaniards have varied from the original stock. Those taken to Cubagua became a race with toes half a span long, and those of Cuba twice the size of their progenitors. In Norway they are remarkable for length of bone in the hind leg. Large breeds of them with solid hoofs are found in Hungary and Sweden. In some the hoof is divided into five clefts. In China they have large bellies and short legs, at Cape Verd

* *Dublin University Magazine* xlvi, p. 658. *Edin. Review*, Oct. 1848, and Prichard II. 349.

large curved tusks, in Guinea long ears couched upon the back. And Blumenbach remarks that the whole difference between the cranium of the negro and that of the European is not greater than that between the wild boar and the domestic swine.

Having dwelt as long as our limits will allow upon the positive proofs of the identity of the human race, it remains that we should attempt to answer certain objections which have arisen in the minds of all who have thoughtfully considered the facts that have been adduced.

It has been denied that climate, food, and mode of life, have any effect in producing the varieties of complexion, of hair, and conformation, which are observable in the family of man. It is contended that whatever effects these produce, are limited to the individuals exposed to their influence, and are not in any way transmitted from them to their near or their remote descendants. That in precisely the same latitudes and circumstances men live of wholly different complexions, whereas if these external causes have any effect, their influence ought to be uniform upon all. It has been alleged, that there has been a permanence of all alleged to be wholly unaccountable that beneath the equator, in S. America and the islands of the Pacific, comparatively light coloured races should be found, and dark ones at the distance of 20° , 30° or 50° from it. And finally, it the characteristic features, hair, and complexion of men from the remotest times to which these matters can be traced. The characteristic differences of complexion are found exhibited, for example, on the sculptured monuments of Egypt, and the plates Dr. Morton has given of the heads taken from mummy pits of that country, exhibit the characteristic form, features, and hair of the Ethiopian, Jewish, and Pelasgic varieties, which were the same they now are 2200 years ago.

These, it must be admitted, are formidable difficulties in the way of our hypothesis, and have induced many to deny the unity of the race, which they have done sometimes, with no little contempt expressed for those who are so weak, ignorant, prejudiced, or superstitious, as to believe in so great an absurdity. Some, with a more becoming reverence for the scriptures, have met the difficulty by referring it to the direct intervention of the Almighty, who

in his benevolence, immediately after the flood, adapted the race, by an extraordinary intervention, to the situations they were to occupy, originating thus, at that time, the principal diversities which now exist.* Dr. Murray has spoken of the coincidence, that both Cuvier and Prichard have made but three principal typical varieties of man, and that there were just three branches of the family of Noah; Japhet, Shem and Ham.†

For our own part, it has seemed to us, that while the theory of the common origin of the race from one pair, demands our assent, because it is taught in the divine word, it also is most accordant with all the facts of history, and with the physical phenomena our race exhibits. If we suppose typical forms for every variety of man, existing from the first, there will have to be many originals of the race, both for all the variations of craniological developement, and all the variations of stature, or of the osteological form; for the various shades of colour, and the different texture and quality of the hair and beard. There will be scarcely any end to these original types. There must be one for every variety of the race. But we do know that varieties accidental to us, are produced and may be perpetuated, and if one, why not all. If new breeds of animals come into existence by the interference of man, why may not, in an early age of the world, new varieties of our own kind have been originated, and under favorable circumstances been perpetuated. And why may we not suppose, that in the early period after the flood, when men were first anew spread over a world, which under the deluge underwent great changes, there was a more speedy change effected by natural or providential causes, than perhaps is occurring now. When the difficulties of chronology shall at length be adjusted, we shall find a sufficient time to have elapsed between the flood and the building of the pyramids, for these changes to have occurred. Having once occurred they seem to have had a good degree of indelibility imposed upon them. Not merely climate, food, outward natural causes, but this inward unknown tendency to produce variations from the common

* See Morton's *Crania Americana*, p. 3.

† *Encyclopedia of Geography*, by Hugh Murray, F. R. S. E. I. p. 263.

type, we suppose to have concurred in their production. The comparative isolation of these varieties thus produced, from other portions of the race, in the dispersion of the family of man, may have tended to their perpetuation and to the stamp of permanency they now exhibit. It is not necessary to suppose that they are now found in all cases in the locations where they originated. Man is a migratory animal. War, commerce, famine, adventure, or pleasure carry him away from his ancient haunts, and place him in other circumstances than those in which his predecessors lived. That these changes of clime and manner of life do in some cases effect physical changes in him we think is clear. But that his distinctive traits do to a great extent resist them, when these are once fixed, is also perhaps equally plain. It is difficult not to believe that the hard life and cold climate of Lapland have affected the physical system of its inhabitants, and that the abundance and intelligence of England have shown themselves in the physical developement of the more prosperous of her people. As to the great and distinguishing characteristics of the human races, Mr. Lyell's remarks, in his *Geology*, respecting the lower animals, seem to us founded in truth and applicable here, "that a short period of time is generally sufficient to effect nearly the whole change which the alteration of external circumstances can bring about in the habits of a species," that "the alteration in form and organization is often rapid during a short period, but when the circumstances are made to vary further, all modification ceases," "indefinite divergence either in the way of improvement or deterioration being prevented."

We have now seen that though the races of mankind are distinguishable by different types, these races are not so distinct that individuals of each do not approximate or fully reach the type of the others; that these types do not vary from each other more than the forms of the lower animals vary within the limits of one and the same species; that those of the same type differ often in colour of the skin, eyes, and hair, while those of the same colour differ in their primitive type; that accidental varieties arising within the limits of a species can be propagated from generation to generation; that climate, food, manner of life, culture of mind, co-operating with unknown and se-

cret causes of change in the animal economy itself, produce change of complexion, and conformation; that all the varieties of man are fruitful *inter se*, and can perpetuate themselves without known limit, an argument that they are not hybrids between distinct species but varieties in one and the same species; that they agree together in all their animal economy, as e. g. in the duration of life, their period of gestation, and the diseases which assail them, which animals of different species do not; that they agree in their psychical characteristics which place them infinitely above the brutes; (while in the analogical traits found in the brutes, different dispositions are developed in different species;) that the analogy of both the vegetable and animal world shews that the several species have been diffused from their own centres; where the evidence of alliance between members of the human family has historically failed, evidence from similarity of conformation, or complexion has been found; where both have been wanting, psychical or pathological has been afforded; and did our limits allow us to enter upon the wide field of the analogy and derivation of languages, a topic we must defer for a future occasion, a new and valuable source of evidence would be available, to show the affiliation of all the families of men, and their common descent. The conclusion to which we are brought, by what we fear will be to our readers a tedious deduction from facts, is what Adam in the beginning in some measure prophetically announced, that Eve, "is the mother of all living," and that God hath made of one blood, race, and lineage, all the families of men that dwell upon the earth; that they therefore are our brethren, and, descending from one and the same federal head, are under the same condemnation, from which they are to be delivered by the same economy of redemption. To the Christian man, national distinctions disappear, in some measure when he looks upon them as originated by diversity of race, and still more when he looks upon them in the light of revelation and the plan of mercy, in which there is neither Greek, nor Jew, Barbarian nor Scythian, bond nor free.