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JOURNAL OF  
THE TRANSACTIONS  
OF  
The Victoria Institute,  
OR  
Philosophical Society of Great Britain.

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EDITED BY THE HONORARY SECRETARY.

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VOL. III.



LONDON:

(Published for the Institute)

ROBERT HARDWICKE, 192, PICCADILLY, W.

1869.

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## ORDINARY MEETING, JANUARY 4, 1869.

THE REV. WALTER MITCHELL, M.A., VICE-PRESIDENT, IN  
THE CHAIR.

The Minutes of the last Meeting were read and confirmed.

In the absence of the Author, the Secretary read the following paper:—

*SOME USES OF SACRED PRIMEVAL HISTORY.* By  
DOMINICK McCausland, Esq., Q.C., LL.D., *Mem.*  
*Vict. Inst.*

WHATEVER may be the avowed objects and rules of the Victoria Institute, its aim and end must be to harmonize the facts of science with the word of God, as contained in the Holy Scriptures. It was brought into existence by the charge that there were discrepancies and inconsistencies between the facts of science and the language of the Bible; and until that charge is refuted its work can never be completed. The progress that has been made towards that end is, therefore, worthy of consideration, and will enable us to determine the position the question holds in the great march of increasing knowledge.

The rapid advances of science have, within a comparatively short period of time, improved our knowledge of the primeval history of our race that is contained in the early chapters of Genesis. Few are now found to maintain that the earth and all its animal and vegetable organisms were created in six natural days. Few will deny that the Noachian deluge was partial in its extent and destructive effects. And the science of language has furnished the student of Scripture with intelligible and definite notions of the archaic record of the dispersion and confusion of language at Shinar, and of the extent of their operation in the history of the civilized world. So far an advance has been made, in the face of deeply-rooted prejudices and preconceptions, towards a reconciliation of Scripture with facts established by scientific researches. The

true meaning of the Semitic text has been developed by the inductions of the philosophers ; and we shall presently find that some truths, which are mere speculations so far as philosophy is concerned, may be rendered certain when Scripture is called in aid as an interpreter.

To any person who has given attention to the subject, and taken note of the progress of opinion, it must be obvious that there has always been a disinclination, even among the best informed and most religiously inclined members of the community, to engage in the actual work of bringing Scripture and science into harmony. Timid counsels have prevailed in high places, and earnest inquiry has been discountenanced. At one time, it has been urged that the facts of science are not sufficiently ascertained ; and at another time, that the language of Scripture is not sufficiently certain. The question is always adjourned to a more convenient season, which never arrives ; and in the mean time, not only have great opportunities of putting the relations of Scripture and science on a solid foundation been lost, but the position has been prejudiced by presenting a weak front to the enemy. For instance, when Mr. Goodwin's article on the Mosaic Cosmogony appeared in *Essays and Reviews*, the equally mischievous article of Mr. Rorison was put forward by the clergy of the Church of England as the best answer that could be given to it ; and in the "*Aids to Faith*" the cosmogony of Dr. McCaul did not add much to his reputation as an astronomer or geologist, or advance the claims of the Mosaic record to be a divine inspiration.

Some there are who understand and value science, and disregard and ignore revelation ; and some who value the Scriptures and disregard science. Both these classes—and they are numerous and influential—are equally hostile to, and deprecate, any attempt to reconcile Scripture and science ; the former because they despise Scripture and repudiate its authority ; the latter because they cannot, or will not, distinguish between what is true and what is false in science. But there is a third class, composed of those who regard Scripture as the exposition of divine and infallible truth, and who, at the same time, respect science as the true interpreter of the phenomena of nature. Such men are honestly seeking for the harmony that must necessarily exist between the well-ascertained facts of science and the rightly understood words of revelation, and are not to be silenced. Their demand is fair, and must be satisfied. It will not do to tell them, in the exploded language of a bygone generation, that scientific inquiries are not only an unprofitable pursuit, but absolutely

noxious to the believer in the inspiration of Holy Writ. Nor will it do to tell them, as some of a more recent school are inclined to teach, that philosophers, in their pursuit of knowledge, have so frequently erred and retraced their steps—have so often propounded hasty and fallacious theories, to explain the phenomena of the material world—that little or no reliance is to be placed on any scientific dogmas; and that, therefore, it is premature to entertain the question of the reconciliation of the fallible and the infallible. Their common sense rejects such lessons, for they know that scientific truth is attainable, though it is seldom attained without repeated failures; and that there are truths established by philosophy, whose foundations are sure and cannot be shaken, which must be brought into conformity to, and harmonize with, the divine truths which are revealed in the Word of God. The tone of disparagement respecting scientific research and inferences in which so many well-meaning men indulge, is hostile to the advance of true knowledge, and leaves a painful impression on the minds of many that the labours of the philosopher have been vain, or that they are prejudicial to the cause of revealed religion.

In dealing with this subject, the important consideration is, not what theories have been displaced or modified, but what are the facts which scientific inquiries have established beyond dispute; for with them the Scriptures of truth must harmonize. The contest between secular and revealed truths is as old as the revival of science in the seventeenth century, when the existence of the law of gravitation and the motions of the heavenly bodies were denounced by Churchmen as false theories, as strongly and dogmatically as some of the best established geological facts have been questioned in our own days. But time is proving, to those who are willing to learn, that there is as little ground for apprehension to the cause of revelation from the science of geology as from astronomy.

As regards geological science, it must be admitted that the causes of some of the phenomena that present themselves are not so well ascertained and fixed that new explanations may not be suggested to account for them. Such, among others, are the origin of granite, the composition of the atmosphere at different periods of the earth's history, the causes of the effects commonly ascribed to glacial action, and of the position of fossil tropical plants in Arctic regions. These are sufficiently undetermined and open questions to afford legitimate opportunities for new or modified theories and speculations; and until they have passed from the domain of conjecture into certainty there is no necessity for the religionist, who is only called on to deal with established facts, to enter the arena of

discussion for the purpose of either crediting or discrediting the suggestions of the philosopher concerning them.

On the other hand, some scientific facts and principles are so well established that those who are acquainted with them, and who also value the integrity of the Scriptures, cannot disregard them, and shut their eyes to the necessity of bringing them into conformity to what has been written with the pen of inspiration. Thus, who is there, in the present day, with a competent knowledge of geological science, that questions the fact of the succession of the sedimentary strata in the earth's crust; that is to say, that the primary system of rocks preceded the secondary, and that the secondary preceded the tertiary, and that the different formations that make up those respective systems, from the lowest known member of the primary to the superficial deposits of the tertiary, succeed each other in a well-defined order—and that too, although the system of Laurentian rocks has been recently discovered below the Cambrian, which till then was supposed to have been the lowest and earliest deposited of the sedimentary strata?

Again, what geologist questions the progress of life with the progress of time—from the lower to the higher species of animal vitalities—from the lowest known form of submarine life, through the higher forms of submarine life, and upward and onward through reptiles, birds, and mammals, to the human races, though more recent investigations have added a zone of animal life in the subjacent Laurentian rocks? for such discovery has only confirmed and consolidated the principle of progressive creation, inasmuch as the type of animal life that has been developed in these bottom rocks is of the *lowest organization*. Had reptile or mammal remains been found in these newly-discovered rocks, or had human remains been brought to light either there or in any part of the primary or secondary systems, it might be suggested with truth, that the theory of progression is in a sick and dying state. As it is, these additions to our geological knowledge have strengthened the principle of progression, and demand that we should deal with it as an ascertained fact, and not as a doubtful theory. Such loosening of the foundations of acquired knowledge are as treasonable to the cause of scientific truth as the denial of the divine origin of the Mosaic record is to the cause of Scripture inspiration. Well-established truths of this nature ought not to be discredited, more especially as they tell the same story of the divine *modus operandi* in the creation of life as is told in the first chapter of Genesis—that is to say, that the life-giving Spirit of God poured vitality into the waters while primeval darkness was on the face of the

deep ; that amphibious reptiles and birds succeeded, and were followed by the mammal races, and lastly by the human races, represented in Scripture by their highest type. The book of Genesis and the book of nature, correctly expounded, reveal the same orders of creation ; so that to question the doctrine of the progression of life is to deprive the believers of the most tangible and intelligible evidence that time has ever produced of the divine origin of the Mosaic record of the creation. In dealing thus with primeval history, and bringing it into conformity with ascertained primeval facts, we utilize the first page of the Bible to establish the most important of all truths—the authenticity and inspiration of the Scriptures.

But there are other questions connected with the primeval history of our race, of less importance than Scripture inspiration, but which have proved most attractive to the philosophic instinct that leads men to pry into the secret recesses of nature. It is a common maxim that the Scriptures were not written to teach mankind the physical sciences, God having supplied him with capacity and intellect to work out such knowledge for himself. This is a true and sound principle ; and in all matters of physical science, within the sphere of human knowledge, the Scriptures teach us nothing. No aid is required of them, and none is afforded. But the truths to which we refer are truths which lie beyond the range of human discovery, and which must ever remain matter of conjecture and speculation, so far as unaided human reason and argument are concerned ; and yet, strange to say, in such inquiries and discussions, the only authentic written record of primeval events in the possession of man is ignored, even by many who profess to believe in it as of divine origin. Yet *there* may be found evidences of the truth or falsehood of disputed theories which are not to be found elsewhere, and by which we may arrive at conclusions to which the mere philosopher, with all his scientific acquirements and intellectual powers, can never attain.

The Darwinian theory of *the origin of species* is one of those speculations that can never be proved or disproved by unaided human intellect. The nature of the question, and the discussions it has undergone, prove that man may refine and propound plausible theories on the subject, but that, without a divine revelation, his inductions will not transcend the sphere of conjecture. In this respect, the inquiry is like the Berkeleyan theory of ideas, which occupied attention, and was for many years the theme of controversy among metaphysicians, until it was recognized to be a question incapable of solution, and thenceforth faded out of the field of discussion. The

theory of the origin of species by natural selection, like its predecessors of transmutation and development, is founded on the proposition that, in the furnishing of the earth with its organisms, there has been no interposition of a higher power in the sense of creation, except, perhaps, in a very remote first and undefined step. However philosophers may differ on the subject, the believer in the authenticity of the Bible record has no difficulty as to the true doctrine of the exercise of creative power. He finds it written, and he is bound to believe and uphold it, that when the earth was without form and void, and darkness on the face of the deep, the Spirit of God brooded on the face of the waters—a plain assurance that submarine life was first brought into existence by the direct influence of God's Spirit. And, in the work of the fifth day, there is an equally plain statement that the moving, or, as more properly translated, the *creeping* creatures from *the waters*, and winged fowl—amphibious reptiles and birds—came into being at the bidding of the Almighty. And so, with respect to “cattle and creeping things, and beasts of *the earth*”—the mammal races—they too came subsequently into existence by the fiat of God. And lastly, a man, we are told, was made by the creative powers in the *image of God*, his Creator. Thus we know that as regards the first appearance of each of the great leading families of the animal world—fishes, reptiles, birds, mammals, and man—there was an exercise of the divine will, and a direct interposition of a divine power in the sense of creation. All the animals that are now on the face of the earth may, or may not, have been evolved by natural selection from those first created beings, each after its own kind, throughout the geological eras; and to that extent the Darwinian theory may, or may not, be well-founded; but no further concession can be made by the religionist without surrendering the evidence of creation so mysteriously preserved for his use in the first chapter of Genesis. How many of each class were created does not appear; but sufficient is stated in Scripture to show that Darwin's suggestion, that all vegetables and animals may have been derived from, at most, only four or five progenitors, is without foundation; and that there is no ground at all for his avowed belief that they have all descended from one prototype, from some one primordial form into which life was breathed. So far our old primeval history of the creation has decided, for those who believe in its authenticity, an interesting and important question, which man's intellect and research, without such aid, are powerless to decide.

*The unity or plurality of the races of mankind* is another of those vexed questions, which has undergone considerable dis-

cussion, and presents much diversity of opinion among philosophers—some contending that all the races of man which are found on the earth, are derived from a single pair of ancestors—others insisting that they have been derived from different pairs of ancestors. Again, those who uphold the doctrine of the unity of race differ from each other as to whether the first ancestors were of the higher or of the lower type, or, in other words, whether the Caucasian is the result of a process of elevation from the lower to the higher, or the Savage is the result of a process of degradation from the higher to the lower type of humanity.

Here the religionist, who has been contending on supposed *Scripture* grounds for the unity of race, will find himself at issue with the philosopher contending for the same proposition on *scientific* grounds—the one assuming that the highest type of humanity was the first in existence, and the other insisting that the lowest had the precedence in time. Neither of these disputants has any right, as frequently done, to rely on the authority of the other in aid of their respective positions. The phrase “unity, or origin, of race” has a different meaning according as it is used by one or the other. The philosopher, on alleged scientific grounds, derives Caucasian man, not merely from the lowest specimen of humanity, but descends to a lower depth to seek his parentage in the monkey, the ape, or gorilla. On the other hand, the religionist derives all the human races, savage as well as sage, as lineal blood descendants from the Adam of Genesis, created in the image of God six thousand years ago, the highest step in the scale of humanity. Does the truth rest with either of these, or is it to be found with those who account for the state of the world by advocating the doctrine of the plurality of races—that is to say, that Mongols, Negroes, and other semi-civilized and savage races have descended from ancestors of similar types, and the civilized man from the man made after the likeness of his Creator; and who alone, by the exercise of his intellectual powers, has found his way into the sanctuary of God’s counsels in His mode of framing and furnishing, sustaining and perfecting, the heavens and the earth and all that is therein? The solution of these questions lies manifestly beyond the bounds of human research and reasoning. How far does Scripture aid the inquiry?

The first chapter of Genesis puts an end to the doctrine that Caucasian man, the great civilizer of himself and others, is the result of a process of elevation from the savage to civilized man; for we are told that Adam was *created* by the Almighty, and in *His own image*—a description wholly inapplicable to an

uncivilized savage. The question is thus narrowed to the inquiry, whether the savage is a blood descendant of the Adam of Genesis, or of ancestors similar to himself. What saith the Scripture?

Our translation of the early chapters of Genesis has, by rendering the word "Adam" sometimes to designate "man" in the abstract, and sometimes the individual Adam, misled those who are not qualified to consult the original Hebrew text, and many even who are, to the conclusion that Adam was the first of the human race that appeared on earth. But a more critical examination shows us that the sacred record is a record of the creation of "*the man*" described as made in *God's image*, that is to say, with superior instincts and capacities that have distinguished his progeny from all the other human races, as is confirmed by all history, sacred and profane, by the science of language, and the mental and physical peculiarities which have ever distinguished the tribes that went forth from the plains of Shinar to colonize and civilize, to multiply and replenish, the earth. This is quite consistent with the existence of inferior races of men on the earth at the time of Adam's creation—and so far, does not contradict the doctrine of the plurality of races. On the other hand, there are well-known statements in Scripture that can only be satisfied by admitting the coexistence of other inhabitants of the earth in the days of Adam, outside the family of Adam—for instance, the appeal of Cain to God for protection when expelled from his father's home, and his building of a city in the land of Nod.

But there is more. The chronology of the Bible is part and parcel of God's revelation to him, and is as much of divine origin as any other statement of Scripture. The religionist must take Adam with his chronology, or abandon him altogether. For to part with Scripture chronology, we must regard the antediluvian patriarchs as mythical personages; and without Seth and Enos, Methuselah, Lamech, and Noah, when and where, in time and space, are Adam and Eve to be found? If their descendants are mythical, it would be difficult to maintain the reality of the ancestors. And if the chronology of primeval times is to be expanded, to get rid of *supposed difficulties*, how many patriarchs are to be imagined and added to those that are recorded in Genesis and by St. Luke as having lived and died between Adam and Abraham? Assuming, then, that the Bible chronology is correct, how do we account for black Negroes, yellow Mongols, and red Egyptians, proved by the ancient monuments of Egypt to have been in existence in large and distinct communities about the time of the exodus, 1500 B.C., unless we are prepared to admit

that they had other progenitors than the Caucasian Adam? The time that elapsed between Adam and the exodus, or, more properly speaking, between the dispersion and the exodus, is altogether too short to account for a change so decided and fixed as that between the Caucasian and the Negro. Prichard, who to the most extensive and accurate knowledge of the physical and moral attributes of the various races of mankind added a due reverence for the Scriptures, avows that the doctrine of unity of race in Adam, which he upholds, is incompatible with the chronology of the Bible. From which it follows that if the Scripture chronology is to be maintained, the doctrine of the unity of race must be given up. We prefer to retain the Scripture chronology, and adopt the alternative of the plurality of races, as the Scripture narrative is thereby preserved in its integrity, and, conceding to the savage another ancestry than that of Adam's race, we escape all the difficulties which arise from the disputed question of the antiquity of man, and account for the existence of those inferior races which are abundantly proved by the geologist and archæologist to have been inhabitants of Western Europe before the immigration of the sons of Japhet, after the dispersion at Shinar.

The authenticity of the Bible ought not to be permitted to rest on the untenable proposition that Africa became peopled with negro descendants of Caucasian Adam in the brief space of time that elapsed between the dispersion and the exodus; nor on the assumption that when the Israelite encountered the negro in Egypt in the days of Joseph, or when the sons of Japhet, carrying out their destiny of multiplying and replenishing the earth, encountered the aboriginal savage in Europe, or, at a later period, in America and Australia, they came face to face with members of their own family, whose forefathers had emigrated to those regions at an earlier period, and had forgotten their lineage, discarded their language, and had become transformed, not only in features and complexion, but in moral capacity and anatomical configuration. It would be difficult to avoid the further step, that, unless the laws of nature are changed, a similar change may be looked for in our own descendants after the residence of a few hundred years in Africa, America, or Australia. Profane history and the Brahminic vedas tell the same story as the Bible, that the Caucasian Greek, Hindoo, and Hebrew were, in the days of Abraham and Moses, physically and intellectually the equals of the highest specimens of modern Caucasians. And what reason can be suggested why the descendants of an early Caucasian emigrant should have become degraded to savages,

that would not apply to sink the progeny of the European of the present day, dwelling for a few centuries in Africa or Australia, to the level of the uncivilized aborigines of those countries? These are some of the considerations that have proved stumbling-blocks in the way of the mere philosophers to a recognition of the authority of Scripture history; and it will be well for the cause of Biblical truth that they should be removed, by confining the primeval records of the Old Testament to the history of *the man* created in the image of God, and his race. Thus it is that the doctrine of the plurality of race is established by the primeval history of Adam's race, which has been preserved for us in the Book of Genesis. We may add that it is also in accordance with the great doctrines of the atonement, redemption, and justification by and through the second Adam, and with all that has been written by the prophets and apostles of things that were, and are, and are to be. But this is not the time, or perhaps the place, to discuss so large and important a subject.

Another question, somewhat allied to the last under consideration, has occupied the attention of philosophers, whose solution is also unattainable by unaided human research and reasoning—*the origin of language*. Some contend that the various families of language throughout the earth have had a common origin, while others insist that they have had a variety of origins. It is admitted by those who uphold the unity of language, that all attempt to *prove* a common origin is *vain and futile*; the utmost that can be maintained is *the possibility of a common origin*. This is the proposition of Boeghtlink, and approved of by Max Müller and Bunsen, all of them strong advocates for the possibility of all languages having had a common origin. The question, therefore, is not to be solved by human reason; and we may be permitted to consult the pages of Scripture to ascertain the true state of the case.

Those who uphold the unity of languages on scientific principles maintain that the order in which they came into existence was, that the agglutinate languages of central and northern Asia, the earliest member of which was the *Chinese monosyllabic*, were the first, and were followed by the family of inflectional languages, which comprise the Indo-European and Semitic languages—the languages of civilization and literature. The more perfect were developed from the less perfect. Such is the basis on which the theory of a common origin of languages rests. Is it confirmed by Scripture?

Adam had a language in the Garden of Eden. The circumstance is specially noted in the second chapter of Genesis.

That language was, of course, of the same family as the language of his descendants, the Hebrews. The language, therefore, of Adam must have been inflectional, and originated within the last 6,000 years, and was not developed from a monosyllabic or agglutinate language. The agglutinate languages must, therefore, have had a different origin; for no one has ever suggested the possibility of an agglutinate or monosyllabic language being derived from an inflectional. It may be said that the diversity of languages may be accounted for as having originated within the last 4,000 years by the confusion of language at Shinar. But a consideration of the tenth and eleventh chapters of Genesis will show that the dispersion at Shinar was a *tribal separation* of the three families of Shem, Ham, and Japhet, for the carrying out of the divine purposes declared concerning them through their father Noah, and was caused by the disruption of the primitive language into the three families of inflectional languages—the Semitic, the Japhetic, and the Hamitic—all of which were at one time in existence, and two of which remain to the present day, to attest the truth of the miracle. The inflectional family of language has existed since the creation of Adam, and was, no doubt, one of those special gifts conferred upon him, and through him, on his race, as a necessary qualification for the great work of replenishing or civilizing the earth, in which they are still engaged.

Let these principles prevail, and let the voice of the mysterious opening pages of our Bible be thus heard in the discussion of such questions as the origin of species, of the races of mankind, and of their languages; and their sound will go forth with a power and authority never before known. The philosopher has hitherto been endeavouring to construct primeval history from the relics of the remote past, comparing them with existing phenomena, ignoring altogether that strange primeval history of our race which has been written and preserved, in a wondrous manner, for our learning. And why? Chiefly, if not wholly, because the sacred record has been interpreted to pronounce dogmatically that the Adam of Genesis, who came into the world 6,000 years ago, was the first born, and progenitor after the flesh, of all mankind, from the highly civilized European to the low and abject Hottentot and Bushman, instead of that section of it represented by the Caucasian, whose mission it was to increase, and multiply, and replenish the earth. This erroneous construction is so opposed to all well-ascertained and settled physical and linguistic facts, as to have been destructive of the authority of that portion of the Scriptures in the estimation of the philosopher. Let the

error be corrected by restoring the Adam of Genesis to his proper place in the procession of humanity, the parent of his own race, and of no other, and our ancient and precious Biblical record of primeval events will be allowed by many who now despise it, to speak with authority, and perhaps to decide some of the conflicting theories which are engaging the attention of the scientific world. Under such influence, the relics of antiquity, now scattered abroad, will come together like the dry bones in the valley, and stand up an exceeding great army of facts, to attest the power and wisdom of the Almighty in His works, and the truth and inspiration of His written Word.

The CHAIRMAN.—I now ask you to give your thanks to Dr. McCausland for his paper, and I shall be glad to hear what any gentleman has to say on the subject.

Mr. POYER.—Dr. McCausland raises the question of the unity or diversity of the origin of race. He inclines to the theory of diversity; and supposes that, if it be accepted, certain chronological difficulties in the Scriptures will be discharged. Now there may certainly be chronological difficulties in the Bible, but it seems to me a matter of still greater difficulty to accept his solution of the diversity of origin. I cannot conceive that the degenerate type of the negro—to take the strongest instance—can possibly have emanated aboriginally from the Godhead. By way of illustration I will put an artistic case. Let it be conceived, if possible, that some daub of a third or fourth-rate artist should be assigned to Raphael or some other great master of art: would not such a suggestion be received with indignation, almost with scorn? Is there not a relation of necessary congruity between every artist and his creation? I can conceive it just possible that in the case of Raphael, through some defect of power, or originating from whatever reason, he may at a certain moment have failed in his art, and have produced something irrelative to his intrinsic capacity, but such a suggestion cannot be referred to the Godhead at all, for God's powers are perfect and always perfect. I therefore incline most emphatically to the theory of the aboriginal unity of the origin of man. Dr. McCausland has referred to the Scriptures in elucidation of his position, but I think the Scriptures are rather more antagonistic than favourable to his theory. We have clearly at the very opening of the record the fact that God created man—or the Adam—in His own image. No doubt we are not restricted to apprehend that statement in relation to an individual Adam, but rather to take it generally:—"Male and female created He them, and called their name Adam." But the fact stated is that He created Adam in His own image; and I am at a loss to conceive in what other image he could have been created. But still there is the fact of declension and degeneration, and we have to account for it. Dr. McCausland refers to Scripture, and I think the Scriptures do throw some light upon it.

Dr. McCausland of course is not unaware of the narrative with respect to Ham, the father of Canaan. I need not trouble you with any extended reference to the fact, which is of course cognizant to all present, and I will therefore only mention the curse which was pronounced upon Ham. Ham had infringed the law of the decalogue; he had been guilty of filial impiety. When his father had in his infirmity disgraced himself, no doubt filial piety, if it had operated in a noble nature, would have afflicted Ham with sorrow and distress, but it seems to be implied in the narrative that he made a jest of his father's dishonour. That suggests to me that he must then have been in a state of moral declension—in a very low moral condition—or he would have been differently affected by his father's conduct. The result is that a curse is pronounced upon Ham in these words:—"Accursed be Ham; the servant of servants shall he be to his brethren." That curse took effect. It might not immediately develop the lower type of the negro or anything of that sort, but it resulted ultimately I presume in that degeneracy, and that appears to me to be the only possible solution of such degeneracy. Dr. McCausland says:—

"The time that elapsed between Adam and the exodus, or, more properly speaking, between the dispersion and the exodus, is altogether too short to account for a change so decided and fixed as that between the Caucasian and the negro."

But I find that that interval is one of no less than 847 years, and surely eight and a half centuries give ample time for the development of that low type. There is quite time enough to account for the degeneracy which took place. Then the theory of unity of origin is supported by other considerations. I read in the same record, that God made of one blood all nations to dwell on the face of the earth. One blood—what does that mean? It means one life, for the life is in the blood—the blood is simply the vehicle by which life is conveyed through the organism. Therefore God made them of one life, and one life is one organisation; for organisation, I take it, must refer itself to life—the organising force or principle must be life. Then one organisation means one organism, and if that be so, any declension must be explained in some other manner than by diversity of origin. Another thing strikes me, in relation to what Dr. McCausland has said as to the original unity of language. I find it written in a very early portion of the record that the whole earth was of one language, of one speech. That again establishes to my mind—unity of origin. If there was one language, one speech, it implies to my mind essential unity of origin, for with diversity of origin you would have diversity of language.

Rev. C. A. Row.—I shall confine my observations to the last portion of Dr. McCausland's essay, as to how far the science of language bears out the chronology of the Bible; and my own opinion is, that so far as the science of language has yet gone, it being imperfect, but daily progressing towards perfection, it does demand a longer chronology than 6,000 years from the creation, or 4,000 years from the flood. It is common to study this point

from the history of many languages with which we have a small acquaintance, but I will argue it from languages of a historical character. So far as historical languages are concerned, there cannot be a doubt that their development is exceedingly slow. Take the case of the Greek language. The Homeric poems date unquestionably from a thousand years before Christ, and possibly they are still older. Now these Homeric poems present the Greek language in an exceedingly perfect form, not so perfect as in the days of Pericles, but still very perfect; and the Greek race must have been then a very intellectual race. We can trace the history of the development of the language from then until now; it forms one continuous history. I find that from my knowledge of ancient Greek I can generally make out a great deal of the contents of a modern Greek newspaper, though, of course, I cannot read it perfectly; but it seems that the modern Greek or Romaic more generally resembles the ancient Greek than any other of the modern languages of Europe resemble their prototypes. In the 2,800 years which have passed since the Homeric poems were composed we can trace the Greek language in all its stages, and see very distinctly the rate of progress at which it has developed from the days of Homer until it reached its highest perfection; and then its retrogression from its highest perfection throughout the Middle Ages and down to the present time. It is evident that the development of languages is a matter of very slow growth; but that is not the whole of our evidence. Let us note the development of the modern European languages out of the Latin. They have had very slow progress, although there have been more disturbing influences at work upon them than were brought to bear upon the Greek language in the interval between modern Romaic and ancient Greek. French, Spanish, and Italian are fundamentally Latin. Their whole ground-work is Latin, although they suffered changes and alterations from the irruption of the Northern barbarians in the Roman Empire, and from the contact with Eastern races in Spain, modifying those languages to a much greater extent than has been the case with the Greek tongue, which has been developed naturally; yet the development we trace is very slow and gradual. We must now ascend one step higher. The Greek and Latin languages and the languages of modern Europe are all related, and flow out of a language which was pre-historic to the present Sanskrit, which is a cognate language to the Greek, and they were each respectively developed from a language pre-existing to either of them. When these languages entered Europe they must have come by a migration from some portion of Asia, where that prior language was then spoken, and it becomes a very interesting question as to the relationship which Greek bears to the Latin. The earliest Latin, although undoubtedly a cognate language, with Greek, and flowing from a race which must have migrated into Europe, is yet more widely different from Greek in character than the various modern languages of Europe are from their original, and I think we may fairly argue that it would have taken a considerable period of time to develop the Latin and Greek in the various complicated forms which they possess in historical times. But to the whole of those long periods of development of these languages we

must add the time required for the development of the great bulk of modern languages which flow from the same source. By following the Greek language we get carried back to a much earlier period, when the language which preceded both the Greek and the Sanskrit flourished, and that earlier language must have been considerably developed before the people who used it came from Asia, and formed the Greek, Latin, Spanish, German, and the whole batch of modern languages. There must unquestionably have been a considerable period of time for the growth of the Greek language before the period of the Homeric poems, and there must have been a considerable time required for the development of the language out of which Greek and Sanskrit originated before those languages came to be formed. And then the question arises in what relation did that earlier language, which was not monosyllabic, stand to the monosyllabic languages? Altogether I think there is good reason to show that the development of language must have taken a very considerable time.

Rev. S. WAINWRIGHT.—I am very much interested in the topic which Mr. Row has spoken upon, but, no doubt owing to my dulness, I do not quite understand that Mr. Row has given us any opinion as to the relationship of the monosyllabic languages—the Chinese, for instance, with the Semitic and inflexional languages mentioned in Dr. McCausland's paper. That relationship has much to do with the considerations as to the period of time necessitated—

Mr. Row.—I admitted that point.

Mr. WAINWRIGHT.—Then I will quit that part of the subject. I take the whole paper to be an attempt to defend a theory that Dr. McCausland has already maintained with much ability, but which I submit must have a great deal more of substantial evidence in its favour before it can make its way in the world. If you will allow me to say it, with all due deference, I most fully concur in an expression which fell from Dr. Thornton at the opening of this session. He told us that this Society must beware of being theological, but keep to science, and not get into theological disquisitions. Now I endorse that most fully; and though in the discussions of these matters we are at liberty to introduce the Scriptures if we please, we should introduce them as the Scriptures, and as nothing else. Unless the Scriptures are introduced as an authority from which there is no appeal, we had better keep them out altogether, otherwise we only complicate matters; but as we do not come here to discuss the Scriptures, nor to decide other questions by the standard of the Scriptures, we should discuss scientific questions by scientific standards, and not appeal to the Scriptures at all, or else take care that our appeal is fully borne out by the Scriptures. I think that canon of reference is violated in this essay over and over again. For instance, there is a quiet assumption by Dr. McCausland that his doctrine of the plurality of race—

“is in accordance with the great doctrines of the atonement, redemption, and justification by and through the second Adam, and with all that has been written by the prophets and apostles of things that were, and are, and are to be.”

I cannot go beyond the first word without differing from him. We are told that God has made of one blood all nations on the face of the earth ; but I fail to comprehend how that can be so, unless they have had one common ancestor. I only cite this as my reason for differing from the quasi-scientific doctrine set forth in this paper. It fails to present itself in the character here claimed for it, of being in perfect accordance with the great doctrine of the atonement. I know what is said as to the necessity for keeping clear of scientific topics when maintaining the authenticity of the Bible. We are told that the Bible is infallible, but yet it was not given to teach us science. I am always puzzled by that. How do we know that the Bible was not given to teach us science? I maintain that whatever is given there is profitable for man ; and that the very men who say that are unable to draw the line between the scientific and the moral and spiritual statements in the Bible, when they attempted to do it, and even when in some event they succeeded to their own satisfaction, if not to mine, they always found that the most essential particulars to the maintenance, and growth, and perfection of the moral and spiritual life are wrapped up in the scientific truth of the Bible—that, in fact, the scientific truth is the outwork, and the spiritual truth is the citadel, and you can only surprise the citadel by forcing the outwork first. As in Adam all die, even so in Christ be sure all must live ; but if this theory of Dr. McCausland's is true, all did not die in Adam ; and where is then your revelation as to regeneration? As a matter of fact, Holy Scripture has declared that God has made all men of one blood ; and that as Adam died, so all men died. If you do not believe that, you have no authority whatever for believing in the universal resurrection of the human species. I find that Dr. McCausland supports his theory by questions. It is exceedingly easy to support a theory in that way. Every man can ask questions which it may not always be easy to answer, and no doubt there are many difficulties in this subject. But I differ from him in the inference that there are no answers which are so far satisfactory as to warrant us in holding the tenability of our faith in the Scriptures. Then I find it stated by Dr. McCausland that when the *Essays and Reviews* appeared, and Mr. Goodwin assailed the Mosaic Cosmogony—

“the equally mischievous article of Mr. Rorison was put forward by the clergy of the Church of England as the best answer that could be given to it.”

But I beg to recall to Dr. McCausland's notice a book of much finish and ability, which contains the best answer to Mr. Goodwin, and which denounces Mr. Rorison's essay as mischievous ; I refer to Mr. Birks's essay “On the Bible and Modern Thought.” Dr. McCausland further says:—

“It follows that if the Scripture chronology is to be maintained, the doctrine of the unity of race must be given up. We prefer to retain the Scripture chronology, and adopt the alternative of the plurality of races.”

But the Scripture shuts you out from the adoption of such an alternative. I think it is far more consistent to say, “We will take the alternative if there

be one, but we will not accept an illusory alternative. We will not be compelled to adopt that which afterwards vanishes from us." Then Dr. McCausland asks :—

"How are we to account for these black Negroes, yellow Mongols, and red Egyptians, proved by the ancient monuments of Egypt to have been in existence in large and distinct communities about the time of Exodus (1500 B.C.), unless we are prepared to admit that they had other progenitors than the Caucasian Adam?"

In answer to that, I would simply say that we do not know two things : we do not know the rate of progress of change in the past periods referred to, with respect to which Dr. McCausland is speculating ; and we do not know the force of the power then in operation to produce those great changes. Nothing could be a more simple and pertinent illustration than such an instance as this : suppose a negro comes here and meets another man whose age he does not know, and whom he has not seen for a year. He says, "I see you have grown an inch since I last saw you ; and as you are now six feet high, you must be, at the rate of an inch a year, seventy-two years old." (Laughter.) It is easy for us to imagine that a negro would make a ludicrous blunder like that ; though, if the negro were here, he might say, "Why do you attribute such gross blundering to me ?" But we have heard the same sort of thing to-night. We have heard it said that the negro is a being of an inferior race ; but the negro himself would tell us that he was made of the original colour, and that we are pale-faced because we have been born under a watery climate, where the colour has been washed out. (Laughter.) It is a fact admitted by Sir Charles Lyell himself,—who must be deemed one of the greatest and most eminent of those who hold the theory of gradual change and of immense periods of time to bring about all the existing phenomena of nature—it is a fact admitted by Sir Charles Lyell himself, who would estimate the ages which have passed by what has taken place on the Scandinavian coasts in the last ten or fifteen centuries, that no period of ages would have been sufficient to scoop out the bed and valley of the Thames. At this very moment it is admitted that when you give these people all the periods they require, they have not got quite enough, but must have something more : there is some flaw in their argument which requires further buttresses and props.

Rev. L. B. WHITE.—There is one point which Dr. McCausland seems to me not to have attempted to make out. Supposing the theory of the paper to be true, that the Caucasian race—the race which comes from Adam—is one made after God's image, and that the other races have not been made after God's image, it is very difficult to understand in what relation those two classes, supposed to be co-existent, stand to one another. I confess I cannot understand how the author can think his theory is agreeable to the teaching and doctrines of Scripture, or to the command to preach the gospel to every creature, which goes upon the foundation that all men were made in the image of God, but have fallen through the sin of Adam. The author also lays it down as quite indisputable that it is impossible to suppose

that the inferior races like the negroes and others could have been made in God's image, though the Caucasian race may have been. Now, I hardly know in what the author considers the fact of a man being made in the image of God consists, or what, in his opinion, it means. I do not suppose it means the mere outward perfection of the human body—that one race was made more beautiful than another; though, if mere bodily perfection was meant, it might be that only the Caucasian race would have been made in the image of God. But I think Dr. McCausland's theory is shown to be fallacious in this, that if you give these men, whatever race they may belong to, the remedy which is provided by God in the Gospel for the raising of man from his fallen state, you will find that whatever their race—whether Negro, Caucasian, Mongol, or any other—they will all be brought up to the same level in all the nobler parts of human nature; and in that I conceive lies the image of God. You will find no difference whatever in the rest, from the Caucasian race under similar circumstances. Separate them from their present influences, and place them in circumstances where they would be likely to fall back into barbarism, which is easy, and they whose superiority is so much vaunted will soon fall below even some of the degraded and despised races. I remember reading, some time ago, an account of the frightful enormities committed in some of the border states of America, in a savage warfare between the Indians and white men who were living almost in the wilderness; and the description given of the acts of some of the white men was so revolting that you could only feel that any one who could so act must have been degraded to our very lowest idea of savage life. At the same time I read a letter from one of the missionaries of the Church Missionary Society in North-west America, a man who was originally a red Indian, but who was taken when a boy in his wild state, and brought under civilizing influences and under the elevating power of the Gospel. I read a letter from him written after he was grown up and settled as a missionary. He described the great affliction through which he had passed in the death of a beloved child, and I would defy any Englishman or any one to have written more beautifully or in a way which would better assure us that the writer was in every respect a perfect equal with the highest forms of humanity. Taking the two cases together, you have in one a man originally civilized, who has been degraded almost to the condition of a brute; and you have in the other a man, originally a savage, who has been elevated, and who is in the highest sense a man in God's own image. And that is also true of other races. Take the records of missionary societies, and read the accounts, not made up by missionaries, but the writings of men themselves who have been savage and who have received the Gospel—such men as negroes and others; and it will, I think, be evident that any theory which says one race is less in the image of God than another will not hold water for an instant—

The CHAIRMAN.—And these changes which you speak of are not produced by successive generations, but in one generation.

Mr. WHITE.—With regard to the question of language, I do not think

Mr. Row gave sufficient weight to the great effect of literature in the matter. If we go back to the Latin languages, we find that in the few years following the great break-up of the Roman empire these languages changed with an almost inconceivable rapidity compared with what they have done since——

Mr. Row.—I think not.

Mr. WHITE.—Take the Italian language as an example. The Italian of Dante, 500 years ago, is the same as the Italian of to-day ; but if you go back for 500 years before that, you will find a great difference. Languages change according to circumstances. Take a book 500 years old in our own language, and you will find it very troublesome reading ; you cannot get on without a glossary. But if you take up a copy of Dante you will read it as easily as you read the Italian of the present day. These things must be taken into account in drawing conclusions as to the immense time which is necessary for the alteration of languages. (Hear, hear.)

Colonel HORSLEY.—Although I am only a stranger and a visitor, and not a member of the Institute, I shall have great pleasure, if I may be allowed, in bearing my testimony to what has fallen from the last speaker in reference to the changes which take place in aboriginal tribes. I have been in India for thirty years, and I have noticed the great changes which take place even in the countenances of those natives who have been educated in our stations. In a short period, even in one generation, there is such a change that you cannot fail to notice it. I have noticed in the schools of the Church Missionary Society how surprisingly low-caste children have been altered by education and the reception of the Gospel. And the same results are to be found even in the hill countries, where the people are the outcasts of society ; but where they have been brought under the influences of civilization by Mr. Baker, missionary in Travancore, they are now showing what education and the Gospel will do for them.

Mr. REDDIE.—The testimony which has been borne by Colonel Horsley is very valuable, and it is entirely borne out by the testimony of Mr. Pritchard, who lived for many years in the Feejee Islands. He says in his memoir, published by the Anthropological Society, that even in the outward appearance of the natives there is a marked change in the lifetime of the individual through the teaching of Christianity. The people become like different beings ; so there is even a kind of truth in saying that the outward beauty of form has some connection with the inward beauty of the spirit, of which, probably, it is in some way a manifestation. The question of rapidity with which these changes go on, whether with regard to physique or to language, requires to be more carefully dealt with than Mr. Row seems inclined for. I do not agree with Mr. Row ; and I give him fair warning that in his paper he must put his arguments on the development of languages well together, or we shall be prepared to do battle with him. If Mr. Row comes forward with an argument on the development of languages, we shall expect him to give us the reasons for that supposed great length of time which that development has required, and not allow him to fall back upon that line of argument which Mr. Wainwright has humorously illustrated by the supposititious case

of the negro who measured a man's age by his inches. It should be borne in mind that in the youth of a language, as well as in the youth of a people, developments are always more rapid in every respect ; and that after a due amount of "shaking down," if I may use such a vulgarism, changes become slower. In early ages, when there was no writing, or when writing was carried on upon stones or tablets, or by means of other modes of a difficult kind compared with the facilities now afforded to us by printing, a tribe dis-severed from its original stock would degenerate very fast, and the changes in its language would become most marked in a very short time. The people would soon forget their original speech in its purity ; and even a peculiarity of tongue or lip in an individual might be reproduced in a whole family, just as in Roxburghshire you have a whole class of people with a particular "burr." Then, with reference to the customs of a people, all those extraordinary customs of savage races, when they were scattered and dispersed over the world, would doubtless tend to give unity to particular tribes among themselves, but would create a great diversity between them and other peoples. With regard to the paper itself, Mr. Wainwright has so ably brought before you the principles we have always maintained, that I find I have less to say than I otherwise should have had. I am of opinion that we should either let the Scriptures alone, or if we bring them forward, we should do so without forcing new interpretations upon them ; and I must say that I am in favour of the first course. What we have got to do here is to investigate various theories of science, and to give especial attention to such as are said to be contrary to Scripture ; and we are bound to examine them not in a way which would satisfy us merely, as believers in Scripture (for that would only do good to ourselves), but upon scientific principles, with reasons and counter-proofs, so as to satisfy those persons who may have been persuaded that what we confute was a true science that contradicts the truth of Scripture. We have already met the arguments of some persons on this particular subject ; we have discussed the unity of the human race before ; and I find no answer in this paper of Dr. McCausland's to any of those hitches in the argument on the other side which I myself brought before the Institute during our first brief session in 1866. It is of no use for any one to bring forward a detached theory and leave out of consideration all the strong points of his opponent's case ; and I think Dr. McCausland's paper is weak in the extreme, if for no other reason, upon that ground. A great part of the arguments that have been brought forward with reference to these inferior races is always based on the assumption that the particular savage you deal with has always been a savage in a low and degraded state, and has not fallen from a higher state ; and a great deal of the argument about language proceeds on a similar assumption, as if language began in a very low and imperfect condition, and marched upwards as it marched onwards. When Mr. Row explains how that is——

Mr. Row.—I am not going to. (Laughter.)

Mr. REDDIE.—Well, I deny that there is any proof that we could have risen if we had sprung from a low origin ; and in the same way I think Mr.

Row's argument as to the time it would take to make Sanscrit and Greek perfect languages out of barbarous ones wants a rational beginning——

Mr. Row.—I cannot see how my argument wants a beginning, because I assume the original form of Sanscrit, which belongs to it, and which also belongs to the twin language, Greek.

Mr. REDDIE.—Yes, but they are both perfect languages, and your argument wants a beginning to prove their lower origin——

Mr. Row.—I apprehend we have proof that they have both of them originated out of a previous language.

Mr. REDDIE.—But even if they have, unless they originated out of a language in a low condition, and were raised up from that, my argument clearly stands good. Whatever periods of time were required for the modification of languages, you must have a rational beginning, and tell us whether they began in a low or in a high condition, just as we must know the same with regard to the origin of savages. Now, with regard to savage races there is no instance of a savage race having civilized itself; but we have constant instances, even under our own eyes, around us, of civilized people degenerating and growing degraded. The *onus probandi*, therefore, lies on the other side. Give me *one* instance of a savage race that has civilized itself, and then I will admit that we *may* have risen from a low condition, although we have still greater proof that civilization is the older of the two conditions of man; and that subject has not been exhausted. While referring to *Essays and Reviews*, I do not think it is fair of Dr. McCausland to say that a reply put forward under the editorship of the Bishop of Oxford was put forward “by the clergy of the Church of England.” Half a dozen men were asked to write a book, and the Bishop of Oxford edited it; but he never previously even read it, and I think that was rather unfortunate for his own credit. Mr. Rorison was one of the gentlemen who contributed to that volume, and he had a notion that the verses of Genesis which narrate the six days' creation were like stanzas of poetry, and that, in point of fact, the six days' account was a sort of poetical mode of division, like stanzas in common poetry; and I consider that view objectionable. It was no reply at all to Mr. Goodwin. But the clergy were not responsible for that. Mr. Rorison himself was the responsible person, and I suppose the Bishop of Oxford avoided reading the papers, in order that he might not be responsible for what they contained; but I do not think that a satisfactory way of conducting polemical discussions. Then Dr. McCausland, appealing to the succession of sedimentary strata in the earth's crust, asks us what geology says as to the progress of life or the progress of time. Well, we agree to a certain extent that there was the creation of fishes of the sea before the land animals; but the question arises, How long did it take to accomplish the whole of creation? I have yet seen nothing to shake my faith in the six days' creation. It is satisfactory to find that the geologists do hold that the oldest animals they have discovered are of an aquatic character, but that explains nothing,—and I say this, although their view would rather confirm my own, for the fact is that the reason the lower grades of animal life are found in the bottom of the ocean is that it is those which

you get in the sedimentary strata, merely because that is where they lived. Dr. McCausland says,—

“Well-established truths of this nature ought not to be discredited.”

I agree with him that no well-established truth should be discredited ; but the question is, What is a well-established truth ? There is an assumption here that Dr. McCausland's own views are true, and that we must not discredit what he has arrived at. But we are bound to examine these things, and not to take them for granted. In the next page he says that as regards physical science the Scriptures teach us nothing ; but he himself seems to think they do teach us something as to the creation of man ; and if that is not part of physical science I do not know what is. Then I must protest against his saying this :—

“The first chapter of Genesis puts an end to the doctrine that Caucasian man, the great civilizer of himself and others, is the result of a process of elevation from the savage to civilized man.”

I will not accept that argument, although the conclusion agrees with my own opinion, because I think it would damage this Institute if we put it forward that we argued merely from the teaching of the first chapter of Genesis. I am only sorry I have not yet been able to redeem a pledge I made to Sir John Lubbock in the Ethnological Society to take the strong points in his paper on the savage origin of man and answer them, or else confess that he has made out his case. There are one or two occasions where Dr. McCausland uses this language :—“*We* prefer to retain the Scripture chronology,” and so on. Those passages should have been expressed in the first person singular : the author of a paper can only speak for himself. When Dr. McCausland speaks of the Scripture chronology as that of 6,000 years, that is by no means granted ; and 8,000 years is about as near as 6,000, according to some chronological interpretations. I know some people who would not think much of the extra 2,000 years which that gives you ; but I am certain that the arguments as to man's deterioration and the alteration of languages will be considerably affected if you have another 2,000 years to deal with. (Hear, hear).—

Mr. Row.—It seems to me that you think you must not take the method of advancing from an imperfect language and go upwards to the highest point, but you assume an original perfect language and come downwards.

Mr. REDDIE.—Yes ; because we have the old perfect Sanscrit and Greek—both of them extremely artificial. *You* have to account for these languages being found in their oldest condition in this perfect form. You have already had explained by Mr. White the rapid change which may take place in a language in 500 years. And Mr. White might have spoken not merely of the Italian language, but of the Italian people ; for the Italians of to-day are no more like the “noble Romans” of Julius Cæsar's day, than they were like the barbarians that invaded them. So you have the same phenomenon in the people that you have in the language.

The CHAIRMAN.—It now becomes my duty to sum up, as it were, the

discussion, and I must say I think Dr. McCausland's paper is one of the most unsatisfactory we have had here. In the first place it is most unscientific; one cannot make out clearly from the paper itself what particular theory Dr. McCausland wishes to put forward. I do not find his own theory logically stated as a theory; it is supported by no arguments whatever, and there is no array of facts to deal with. It is with such vague assertions that I conceive this Society has particularly to deal. Let me take up the first principles he starts with with regard to geology. He considers that certain geological questions are so far decided now that any attempt to controvert them is somewhat similar to a profanation of Holy Scripture. He says,—

“Such loosenings of the foundations of acquired knowledge are as treasonable to the cause of scientific truth, as the denial of the divine origin of the Mosaic record is to the cause of Scripture inspiration.”

But I find these very subjects are now matters of dispute among geologists themselves, and considered to be fit and proper subjects for discussion by those who are striving to advance the progress of geology as a science. Geology is one of our most important sciences, and it is in the most imperfect and incomplete state—too imperfect and incomplete to tell us all that may be known concerning the history of the earth. Geology is imperfect because it gives us a very imperfect acquaintance with what may be determined from the present surface of the earth or the scratchings that man is able to make on its surface. We know very little indeed of the geology of the earth's surface. Then we are told that we ought to compare the records of the past with what we find existing on the earth now. But how little do we know of the fauna of the sea. More than ninety-nine hundredths of the fossils in our museums are fossils which belong to marine strata; but what do we know of the fauna of the sea at present? We are in a state of great ignorance with regard to all deep-sea fauna, and we are only able therefore to open our eyes to the great imperfection of science. Sir Charles Lyell himself admits, in his most recent writings, that the progress of geology as a science has been kept back by men's attachment to scientific hypotheses—mere hasty generalizations of certain meagre facts upon which men put a certain interpretation; and the interpretation they put on those facts has caused them to be blind when other facts were brought before them, which other facts they have refused to admit. All those facts that Sir Charles Lyell brings forward are for particular purposes and to support a particular theory or view of his own. He brings forward a series of facts to show you that the progress of recent geology has gone to prove that there is not that distinction which was supposed to exist between the fauna of different strata—that there is a greater degree of interfusing and interpenetration than was supposed between those species. The species supposed to be of modern origin are found in far more ancient strata than was believed, and that is the kind of progress that geology is making. Just recently a discovery has been made which brings down the whole of the first part of Dr. McCausland's paper. Dr. Carpenter has been out with

Professor Thomson deep-sea dredging in the Atlantic, to obtain some knowledge of fauna existing in deep-sea bottoms. We are only beginning to learn that we know very little about the chalk formation, and we have Professor Huxley himself admitting that the animals which form the great mass of the chalk formation are animals still existing in the seas. We are carried back to the cretaceous strata, and there was a suspicion that if we could get a better dredging apparatus we should obtain still more surprising results. They used to let down a quill to the bottom in the deep sea and allow it to penetrate the mud and bring up a small quantity of ooze, and a few quill-fulls were all they could obtain to give them a knowledge of the fauna of the Atlantic! Now they have gone back with a better dredging apparatus: it will not take up a very large animal, but it is better than the quill. Now what was the result of the very first dip? I believe the result has not been made public yet, but I was told to-day upon good authority that it will form the principal part of the opening address of the President of the Royal Society. I asked a good geologist if he could give me information as to what had been found, and I learnt that there had been one species discovered which is identical, not only with one of those found in the cretaceous deposit, but deep down in the lias. One fact like that brings down a host of geological theories, and I protest against the progress of science being stopped by any such dictum as that of Dr. McCausland. I protest against such language being used, as being both illogical and contrary to an unbiassed search after truth. I cannot help believing that the looseness, vagueness, and want of logical accuracy, which appear here with regard to the science of geology, can also be applied to the whole of the rest of the paper. I understand the principle attempted to be made out is the plurality of the races of man in place of man's single origin, and the only reason Dr. McCausland brings forward in favour of his own theory is that if we admit his theory we get rid of all difficulties with regard to Scripture chronology. But if we do adopt it, I do not see that it lessens the chronological difficulty one bit, or makes it one atom easier. There is no hint here of the difficulties with regard to the chronology of the Old Testament, and the great discrepancies between the chronology of the ancient versions—the chronologies of the Septuagint, of the Hebrew, and of the Syriac. The difficulties we have to deal with in the chronology are more of the nature of critical difficulties, and they must be met critically. If you meet those difficulties, you may be able to give all the time he requires to Mr. Row or to Bunsen in his vaguest and wildest conjectures, but I cannot see how the plurality or unity of race is to affect that chronology in the least degree—

Mr. Row.—It does not affect my argument about the time required for the development of languages at all.

The CHAIRMAN.—One would have thought Dr. McCausland would have given us definite and distinct reasons for his belief in the plurality rather than in the unity of race. He leads us to imply that there are the strongest scientific difficulties in the way of admitting the unity of race. He says,—

“The authenticity of the Bible ought not to be permitted to rest on the untenable proposition that Africa became peopled with negro descendants of Caucasian Adam in the brief space of time that elapsed between the dispersion and the exodus ; nor on the assumption that when the Israelite encountered the negro in Egypt in the days of Joseph, or when the sons of Japhet, carrying out their destiny of multiplying and replenishing the earth, encountered the aboriginal savage in Europe, or, at a later period, in America and Australia, they came face to face with members of their own family, whose forefathers had emigrated to those regions at an early period, and had forgotten their lineage, discarded their language, and had become transformed, not only in features and complexion, but in moral capacity and anatomical configuration.”

That is the only sentence in which there is any semblance of an argument for the plurality of race, and all it amounts to is this, that in various races there is a difference between them and the Caucasian race in moral capacity and anatomical configuration. Professor Huxley told us in the *Fortnightly Review*, though he spoke contemptuously of the “Adamite” theory, that he had no difficulty, as an anatomist and physiologist, in admitting the unity of race. All the difficulties in his mind were difficulties attaching to the plurality rather than to the unity of race, and there were no arguments which would stand in the way of admitting the unity of race. When we have such admissions from those who are not favourable to anything like a Scriptural view of the subject—when they are obliged to confess that there are no good scientific reasons which can be urged against the unity of the human race, I think those who would impugn that doctrine, and who attempt to establish their opposing theory upon Scripture, are bound to do two things. They are bound to give us good scientific reasons for their theory ; and if they say their theory is consistent with Scripture, they are bound to give us good Scriptural reasons also.

Mr. REDDIE.—I forgot to make one remark I had intended when I spoke before. It is with regard to what Mr. Poyer said as to Noah and Ham. I agreed with his general remarks ; but he spoke of Noah in a way which I do not like. Mr. Poyer spoke of Noah's having “disgraced himself.” Now I think the context is rather in favour of his having taken the wine for the first time, not knowing its effect ; and no disgrace would attach to him for having thus once drunk wine and been thereby overcome, although, of course, I think there was nothing to excuse the gracelessness of Ham.

Mr. POYER.—I certainly did not intend to impute anything disgraceful in the conduct of Noah ; my object was rather to show the disgraceful conduct of the son, by way of accounting for the degeneracy of the lower types.

The CHAIRMAN.—I have just had pointed out to me that in the very first page of the last number of the *Anthropological Review* there is an answer to Dr. McCausland. The passage runs thus :—

“In the opinion of most of the anthropologists of the present day, it is as yet premature to pronounce, or even to form an absolute decision, upon the question whether man's origin was unique in its occurrence, or accomplished at several points of time or place.”

The meeting then adjourned.