

ARTICLE V.

THE NARRATIVE OF THE CREATION IN GENESIS.

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[Concluded from p. 130.]

We have endeavored to state the results of the most recent investigations in regard to the Mosaic cosmogony. There are two explanations, recently offered, which have been only incidentally alluded to, and which are of importance enough to be stated by themselves. They are those of Dr. J. Pye Smith, and of Prof. Arnold Guyot. We will state them in closing.

The view of Dr. Smith is presented in his *Geology and Scripture*, Sect. VII. Part 2. As this is within the reach of all, a brief statement will suffice.

Dr. Smith supposes the first verse describes the creation of all things. An immense interval, of which no account is preserved, succeeds, before the scenes described in the second verse. During this interval the earth passed through the various changes which geology indicates. There were successive creations and destructions of plants and animals, the remains of which appear in the rocks.

From the second verse onwards we have an account of what took place in a portion of the world destined for the first habitation of man. The narrative of the six days do not refer to the whole globe, but only to that portion in which man was to be placed. This region was a part of Asia, lying between the Caucasian ridge, the Caspian sea, and Tartary, on the north; the Persian and Indian seas, on the south; and the high mountain ridges which run at considerable distance on the eastern and western flank. This section of the earth was first, by atmospheric and geological causes of previous operation, under the will of the Almighty, brought into a condition of superficial ruin, or some kind of general disorder. Here, in six literal days, took place all that is recorded by Moses. Out of the chaos order was introduced; light made to appear, by the clearing up of the atmosphere, so that the sun's rays could penetrate; plants and animals were produced by immediate creation, in the succession here narrated; and, last of all, man was made.

Whatever may be thought of this interpretation, no one can help admiring the clearness with which it is presented, and the great learning with which it is sustained. Perhaps its boldness and complete opposition to preconceived notions may prevent us from estimating it justly. It certainly clears up most of the difficulties in the Mosaic narrative. But it gives rise to almost as many, in turn. It seems liable to the very objection which is urged, and which Dr. Smith, as well as most others, deem conclusive, against the supposition that the *whole* earth passed through the successive processes of creation in six literal days. We are not satisfied with the statement, that the omnipotence of God *could* have made everything in the whole earth, as we find it, in six literal days. For the changes in this small portion of the earth, and for the suddenly successive creations, Dr. Smith is obliged, of course, to call in special Divine power. "The Divine power acted through the laws of gravity and molecular attraction; and, *when requisite* in an *immediate, extraordinary, or miraculous manner.*" Having refused this *machina Dei* to those who used it to make the whole earth, as it is, in six literal days, it is hardly allowable to suggest another theory of which this very machinery constitutes an essential portion. Strange as this theory seems, however, at the first announcement, and liable to many objections, unless we think there is an easier solution of the difficulties in this chapter, we may be ready to adopt it. After limiting "the earth" to that region in which Adam was placed, it may perhaps be said that this interpretation follows the literal text of Scripture more closely than most interpretations.

The view of Prof. Arnold Guyot was presented in a course of six lectures "On the Concordance of the Mosaic Account of the Creation with that given by Modern Science," delivered at the Spingler Institute, New York, March, 1852. They have not been printed by the author, but were reported in the *Evening Post*. The importance of this view, and the fact that few have access to the lectures, as they do not exist in a form suitable for preservation and reference, authorize us to give a very full abstract. Prof. Guyot has kindly revised the sheets, to secure accuracy of statement.

The Bible is received by Prof. Guyot as a Divine revelation, and this narrative of Moses as inspired to the fullest extent. "We do not desire to prove the truth of the Bible by geological

arguments; it stands far above them; it has no need of support from us, for it has been written by the hand of God himself. What we have to do is, to understand it; to receive the interpretation of its words."¹ He assigns a direct influence of God upon the author of this narrative, making him the medium of a revelation which he himself may not have fully understood. "The scientific details were no doubt unknown to Moses, as the details of the life and work of the Saviour were unknown to the great prophets who announced his coming centuries before his appearance."²

Receiving this as God's account of his own work, Prof. Guyot finds in it a representation of the creation of the universe. The first verse describes the creation of all things; the second represents matter in its chaotic state. Then come what may be called the great days of creation, or cosmogonic days, the six working days of the Creator, ending with a day of rest. These six days are subdivided into two series of three days each. In the first three days, the creation of inorganic matter takes place; in the second three, the creation of organic beings, ending with man. The last day in each series is subdivided again, containing two works, while the others contain but one. Prof. Guyot understands the days of Moses as long and indefinite periods. The works of each day form great steps in the development, or rather in the successive creation, of the universe and of the globe. Moses himself speaks of four kinds of days: (1) The creation of light, which was called day, as a state of matter, without reference to any duration of time; (2) The periods of creation are called "days;" (3) The season of twenty-four hours, constituted a day, by the appearance of the sun, and the rotation of the earth; and (4) The whole week of creation is called *day* in the fourth verse of the second chapter. These periods are of unequal length, the first being, perhaps, the longest; and, as we rise in the scale of organization, they are shortened.

The introduction to the work of the six days is comprised in the first and second verses, in which we have the creation of the matter of the universe, and its original state. — It was "without form and void." We know of no condition of matter *without form*, except the gaseous. *Void* is also what we express in common language by an absence of visible matter, which is nothing

¹ Lecture I.² Lecture IV.

more nor less than a gaseous atmosphere. "Without form and void," therefore, taken simply according to the words, are perfectly explained by this gaseous state.—"And darkness was upon the face of the deep." The deep does not necessarily mean water; it signifies that which possesses depth, which was nothing more than this vast body of gaseous matter in a state of expansion. The "waters" of creation were different from the ocean mentioned on the third day. The Hebrew word may as well be applied to the fluid atmosphere as to a liquid. "Darkness was upon the face of the deep," because as yet there was no physical or chemical life.—"And the Spirit of God moved upon the face of the waters." This gaseous matter did not become animated spontaneously. We know enough of matter to affirm that it has no power of creation; that it has not itself the principle of life. The creation was the will of God. The Spirit of God, the Divine Logos spoken of by John, brooded *over* the whole creation; not *in*, as the modern pantheists would have it, but *upon*, the face of the waters, thus indicating the action of this Spirit of God then and in the time to come.

Such are the statements of Moses. And science does not tell another story. Science teaches that the original form of matter is the gaseous. There is no body in nature that cannot be reduced to this state. It is the simplest and most homogeneous of all forms of matter. Herschel and Arago, among astronomers; Ampère, among physicists; Becquerel and Thenard, among chemists; Cuvier and Humboldt, among geologists, all have arrived at the same conclusion, that the gaseous state of matter must have been that of the commencement of the universe.

First day. The work of this day was the production of light. "And God said let there be light, and there was light." This was not a creation, but a manifestation at the command of God. We know that this was mere inorganic matter that was acted upon; and we know that the cause of light lies in the chemical action of matter, that this action produces electricity, which is light. The combination of the chemical parts according to their affinities causes light and heat. This nebulous light, therefore, seems to be the first step in the development of our universe. And this proposition is proved by the present condition of a portion of the heavens. We sometimes see nebulous matter forming in different shapes in the heavens—floating like clouds of light. And this shows to us what must have been the first state

of this mass of gaseous matter. The consequence of the gaseous concentration of the molecules of matter by gravitation, followed by their chemical combination, was the production of nebulae, which was the state of things as described by Moses, when he says: "God divided the light from the darkness." Before this, everything was dark. But here the first light appears in the form of nebulae, which is divided from the surrounding darkness. — "God called the light day, and the darkness he called night. And the evening and the morning were the first day." Why evening and morning? Here the evening means the darkness which always comes before the light, or morning, which is the dawn of a new day of creation. This is the first result of this development, and thus you see why the evening is before the morning. The evening of any great development is a crisis; the crisis of a new revolution in the previous order of things.

Second day. The work of this day is the creation of the firmament. "And God said, let there be a firmament in the midst of the waters, and let it divide the waters from the waters." The meaning of firmament is explained afterward: "And God called the firmament *heaven*." "The waters" have been already explained as designating the mass of gaseous matter. The vast primary nebula of the first day is separated into an immense number of nebulae, and these into stars. This is the process of "dividing the waters from the waters." The nebulae which are detached to constitute the celestial bodies, are designated by "the waters above the firmament;" and that which is detached to constitute the earth, is called "the waters under the firmament." The great phenomenon indicated by this verse is, the individualism of the primary nebula, or of the secondary nebulae, into an infinite number of globes, each a world in itself. This is, indeed, the second step which ought to be developed, according to the sublime law we observe in nature, that the process of individualization in the various organs of the same body, or in the various individuals of one and the same society, is the second process of their growth. Moses in these few words gives a whole history of astronomy. If we investigate our solar system, as explained by the theory of La Place, we shall find a great concordance in the two accounts. La Place remarks that the whole of the solar system, the movements of the planets, their revolutions round the sun, their rotations on their axes,

tious rashly to expose himself to general ridicule by presenting anything of a frivolous or trivial nature. The class united with the teacher in repelling and discouraging anything of that kind, and order and decorum was at all times maintained by the teacher with the greatest ease. The lessons given are of moderate length, so that they can be thoroughly learned by an industrious student within the time prescribed, the rule being, a little well, rather than much superficially. Besides the ordinary lessons, tasks are given, from time to time, of written translations, exercises in writing Latin and Greek, criticisms, essays, etc., which in some schools that we visited, were subjected to the same course of open and general criticism as the ordinary recitations. Every recitation and exercise, therefore, instead of being a dull recital on the part of the student, and correction on the part of the teacher, is a strenuous and vigorous mental exercise on the part of all concerned.

In this connection we will add, that the pupils are not permitted to advance from one grade to another in the gymnasium, and finally to the university, without the most satisfactory proof that they have thoroughly mastered the studies of the previous part of the course.

We will now suppose that the pupil has passed with honor through the gymnasium, and has advanced to the university. The foundation has now been laid of a store of useful knowledge, but, more than that, the pupil has now become conscious of his mental power, and of his particular mental bias. His intellectual faculties have been trained to their appropriate vigorous exercise. His mental habits are formed. He has learned how to study, how to accumulate knowledge, and to make use of that knowledge when acquired. The course of proceeding is then changed, and is adapted to this new condition of his mind; and in daily lectures from men of the highest intellectual capacity, attainments and eloquence, a full stream of knowledge is poured into the receptacle thus prepared. Copious notes are taken of these lectures in the manner often described in books of travel and by letter-writers. These notes, after the lecture is concluded, are either copied off in a fair hand, or are compared with the notes of fellow-students, and corrected and completed. They are carefully studied, the books cited and recommended by the professor are examined, and read, and the subject of the lecture is carefully investigated, and discussed in the weekly reunions of the

little knots and clubs so frequent among the students of the German universities, and in their casual and daily meetings at their meals, or in each other's rooms, and in conversation with literary or scientific friends, and, in some instances, with the professors at their houses.

Besides the lectures, there is, on Saturday mornings, what is called the Seminar, that is, meetings of those students of approved qualifications, who choose to attend, for the purpose of improvement in some particular branch of learning or science, in each of which one of the professors presides. At these meetings, some student, previously appointed, brings forward an essay upon some subject connected with some topic of the lectures which are in the course of delivery by the professor who presides, or an exegesis of some passage in a classic author. One or two others, also previously appointed, present criticisms on the same, and the morning is then spent in discussing, by the whole number present, with the usual freedom, zeal and good humor, the points in dispute. The exercises of this nature which we attended were presided over by Professors Böckh and Lachmann, and were conducted in the Latin language.

8. A longer time is allowed for completing a course of liberal education than with us. The whole course, from the time of entering the gymnasium until that of passing the final examination and taking the first degree at the university, is extended, for medical students, to at least twelve years, and, for all others, to at least eleven years, consequently there is not that temptation, which too much prevails with us, where too many branches of learning are crowded into a comparatively narrow space of time, of passing over too much ground within the period allotted for the course, and that superficially.

We think that the question proposed is now in a good measure answered, and that it will be found by those who personally examine into this matter, that the causes of the success to which reference has been made, may be reduced to the above-stated general principles.

There is a pleasure connected by the Author of our being with the consciousness of the possession of power, of whatever nature, whether moral, intellectual or physical, and with its appropriate exercise. If students, therefore, be made to feel a vivid consciousness of their mental power, and are judiciously and kindly

Thus the dense atmosphere of the globe would be surrounded by a photosphere of electrical light. And we have exactly the state of the sun, as described by the astronomers. We can conceive that such a state of things is compatible with the existence of land and sea, and even of plants, which were favored in their growth by the warm, moist atmosphere. We should not be astonished at not finding the remains of the plants of the third day. It is obvious that the crust first enwrapping the globe when it cooled down, is unknown to us. The oldest formations we find, the granite and gneiss, can be more easily explained by supposing they are the product of a decomposition of the old crust and a re-crystallization under water. If the first strata of the earth's crust contained fossils of any description, they have been destroyed by the metamorphoses of that first formation. But we must say that the appearance of plants at that period is in accordance with one of the most beautiful laws established by geological researches: the appearance of plants in the order of their relative perfection. The plants are lower than the animals. They must appear first, as the lower animals before those of a higher organization; and those again before man. Vegetation is the natural, intermediate link between inorganic matter and animals.

But why does the narrative of Moses place the creation of plants in the inorganic period? With the first work of the third day the globe as a planet is finished, it is true. But it is a great law of nature that an epoch does not terminate without containing in itself the germ, and, so to speak, the prophecy of the epoch to come. The plants of the third day herald the coming of the organic epoch of living beings. They are the prophetic types of that epoch of life, and the connecting link between the inorganic and organic periods. As such they are mentioned as the concluding work of the former period, but as a *separate* work of the third day.

Fourth day. After what has been said, the work of this day is clear. It is, the organization of the solar system in its present condition, the succession of days and nights and of seasons; that is, of the climates and physical conditions necessary to the existence of living beings. The text does not speak of the *creation* of the sun and moon and stars; they were made to act upon the earth as they now do. This is the moment when the globe, having attained its present form and size, has its speed of

rotation and revolution definitely settled. The violent action of the chemical forces gradually ceases. The combinations are completed. The electrical light, which is the result of those combinations, diminishes by degrees. And the luminous atmosphere which had previously encircled the globe disappears. Then only, after this atmosphere disappeared, the light of the sun and other heavenly bodies becomes visible on the earth. The earth having lost its own light depends on that of the sun. The succession of days and nights begins. Before, nothing of the kind could exist. The distribution of light and heat, and the great climacteric zones are established. Thus all the physical conditions necessary to organic life, which is to follow, are in existence, and the globe is prepared for their appearance. This fourth day, which is, as it were, a reminiscence of the inorganic period, begins, nevertheless, the organic period, and forms another connection between these two principal stages of the globe. The physical revolutions of the globe are hereafter secondary facts. The terrible cataclysms, of which geology speaks, as sinking whole continents in the bottom of the sea, or raising them from it, are but feeble movements compared with the great mass of the globe. The interest in the history of creation now lies in the progress of life. To make out this history we must find the documents in the soil we tread upon. "This terrestrial crust, the stony mantle which enwraps the globe, preserves in its folds the archives of the creation of the organized world." "The mass of the interior of the globe is of no importance. For life, like delicate and brilliant flowers borne upon an immense trunk, is entirely concentrated in this exterior pellicle." We must, then, take a general view of its structure.

Geology informs us that the terrestrial crust, down to the lowest depth man has penetrated, is composed of layers placed upon each other, different in mineralogical character and structure. These layers follow each other in a certain order, which is the same over the whole globe. They are separated from each other abruptly. The ancient deposits are generally the thickest; they are more uniformly spread over the surface of the globe, more continuous and more alike. It is remarkable that in the ancient formations there is an abundance of silicious rocks, which are connected with the abundance of vegetation. In the middle and recent formations, there is an increasing abundance of the calcareous rocks, which are connected with the progress of ani-

mal life. The conglomerates and sandstones, which are the *debris* of preëxisting rocks, are more abundant in the ancient formations, and become rarer till the diluvian epoch, where the sandstones reappear, but not yet consolidated. The limestone, in epochs of repose, become more and more frequent. These characters have an important bearing on the phases of organic life at these different epochs. Most of the layers we have enumerated, having been deposited at the bottom of oceans, would naturally be found in a horizontal position, But they are more or less inclined, showing that there were great movements of the earth's crust after their formation. To these movements is due the inequality of the earth's surface, which plays so important a part in the whole economy of nature. And, finally, it is most important to note, that most of the stratified layers enclose the remains of organized beings, plants and animals, in endless numbers. Every revolution which changed the mineralogical nature of the strata, seems, also, to have caused the death of all beings living at that epoch, and thus made a new creation necessary. Each of these layers is the leaf of a wonderful volume, where we read the history of the extinct generations of beings which lived during the long epochs preceding the coming of man. Each epoch presents a special character. We behold a series of successive developments which lead us from the lowest forms of animals to man, the monarch of the present world. We will not examine each of these strata which contain organized beings peculiar to themselves. But, taking as a guide the central fact of the development of life, we may, with Agassiz, divide the whole of the period into four great organic epochs, each characterized by the class of animals which predominate. At the base we will place a fifth, at which life does not yet exist. There are then :

I. The Primitive, or inorganic age; no land, or scarcely any land, appears. The Oceanic epoch.

II. The Paleozoic, or reign of the invertebrate animals and fishes. The ocean still reigns supreme; a few islands appear. The Insular epoch.

III. The Secondary, or reign of the reptiles. Land increases and surrounds large mediterranean seas. The Maritime epoch.

IV. The Tertiary, or reign of the mammifers. Lands become connected. The Continental epoch.

V. The Modera, or present age, that of man.

In casting a glance over this history of the globe which geology presents, we find certain great laws manifested.

1. The facts prove that the globe was not created at once, but, like every other created being, underwent a gradual development. "In speaking of laws of development, I am doubtless understood. What is a law, but a *permanent act of the Divine will*? What is a development, but the existence or realization in time and space of this supreme will?"

2. In the order of time there is progress. The inferior being always precedes the superior; the imperfect, the perfect. Inorganic nature precedes organization. The watery element reigns before terrestrial; the aquatic and inferior animals before the terrestrial and superior. In the series of the vertebrated animals, we see fishes, reptiles, birds and mammifers appearing in the ages of the globe in the order of their perfection.

3. Created beings not only become more perfect, but more *diversified*. From the simplest embryonic forms we pass gradually to those which are more complicated. The number of types, also, is constantly increasing. They are more defined; more deeply separated. Moreover, all these various beings, living and fossil, are each of them integral parts of an admirable system, in which each type represents to the age a phase of development brought into actual existence, and also a tendency to another which is not developed.

4. Finally, "this intimate connection between all the members of the animal system at the different ages, is *not owing to the parental relation*. There is no direct descent from each other. Each epoch is entirely separated from the following by a great revolution. The new beings that appear are new beings, or new types. There are intermediate types, but *no intermediate individuals* which form a transition. The plant does not rise from the inorganic nature, nor the animal from the plant. The gigantic pachyderms which appear suddenly at the tertiary epoch, are not the offspring of the reptiles of the secondary age. The bond which unites them is of an immaterial nature; the admirable unity of which I have spoken is the plan of the Creator. We should then acknowledge a plan, admirable in conception, admirable in execution. There is a *Free Will, a Power which creates in succession*, at the appointed time when it is fitting; and not a single great whole which is developed by itself."

The accordance of these results of geology with the Mosaic

account is so evident that no further explanation is necessary. The creation of the animals and of man is contained in the last two days, and they make their appearance in exactly the same order.

Fifth day. The work of this day is the creation of the lower animals up to the birds, in the order indicated by geology. The water animals first, the amphibious and other reptiles, after; and then, the birds. This corresponds with the first geological ages up to the tertiary epoch.

Sixth day. The sixth day, which is the third of the organic period, contains two works, as was the case on the third day of the inorganic period: (1) The creation of the higher animals specially living on the dry land, or, the mammalia; and (2) The creation of man. It corresponds with the tertiary age. The great whales of the fifth day — a general name for all the large water animals — are the amphibious saurians of the secondary age. The creeping animals of the sixth day are, according to Gosenius, the smaller mammalia, rats, mice, etc. The greatest changes in the mineral creation, according to geology, took place between the cretaceous and tertiary epoch. And there Moses, also, places the beginning of a new day. For not only are the land animals a new set of beings, they are also the highest, and it is that family to which man, as an animal, belongs. The division of the sixth day into two works is not less remarkable. The creation of man is a fact of such vast importance that it could not be mentioned otherwise than separately. That being, made by the Creator in his own image, upon the creation of whom Moses put so much stress, to enforce, as it were, the idea of his dignity, could not be confounded with the animals. But why does he place this creation, not in a separate day, but with the mammalia in the sixth day? "Man is the crowning act of the Creator. He is the summary of all perfections scattered through the animal kingdom. He is the end and aim of the whole development of our planet. As such he belongs to this physical earth, of which he is the key-stone. But he is a being of an entirely new and superior order, and as such must be kept distinct. The appearance of the physical man is the prophecy and the promise of a future and more perfect age of development which begins with him: the moral age, that of the historical world. This second work of the sixth day is thus the link between the age of the physical creation and that of the moral development of mankind."

"Now begins the seventh day of rest, or the Sabbath of the earth, when the globe and its inhabitants are completed. God declared all his other works to be *good*; but on the sixth day everything he made was *very good*; that is, finished as God would have it for his purposes, for the education of man. Since the beginning of this day no new creation has taken place. The forces of nature are in that admirable equilibrium which we now behold, and which is necessary to our existence. No more mountains or continents are formed, no new species of plants or animals are created. Nature goes on steadily in its wonted path. All movement, all progress has passed into the realm of mankind, which is now accomplishing its task. The seventh day is, then, the present age of our globe; that age in which we live, and which was prepared for the development of mankind. The narrative of Moses seems to indicate this fact. For at the end of each of the six working days of creation we find an *evening*. But the morning of the seventh, which is mentioned at the close of the sixth, is not followed by any *evening*. The day is still open. When the evening shall come the last hour of humanity will strike."

"Such is the grand cosmogonic week described by Moses. To a sincere and unsophisticated mind it must be evident, if I am not mistaken, that these grand outlines are the same as those which modern science enables us to trace; however imperfect and unsettled the details furnished by scientific inquiries may appear on many points. Whatever changes we may expect to be introduced, by new discoveries, in our present view of the development of the universe and of the globe, the prominent traits of this vast picture will remain. And these only are traced out in this admirable account of Genesis. These outlines were sufficient for the moral purposes of the book; the scientific details are for us patiently to investigate. They were no doubt unknown to Moses, as the details of the life and of the work of the Saviour were unknown to the great prophets who announced his coming, and traced out with master hand his character and objects centuries before his appearance on earth. But the same Divine hand which lifted up before the eyes of Daniel and of Isaiah the veil which covered the tableau of the time to come, unveiled before the eyes of the author of Genesis the earliest ages of the creation. And Moses was the prophet of the past, as Daniel and Isaiah and many others were the prophets of the future."

Such is the theory of creation which this Christian philosopher finds in Genesis. It is not easy to pass from this "reasoning high" to criticism of details. But these periods are truly eloquent only so far as they convey the truth. The closing paragraph is not so much the disporting of the mind in exuberant joy at the completion of a great work, as it is an answer of anticipation to what will be the first and greatest objection on the part of most to the theory. The feeling of many will be, that Moses could have conceived no such scientific system, and therefore he could not have taught it. It is acknowledged by Prof. Guyot that Moses probably did not comprehend this system. But this does not invalidate the fact that it may be obscurely sketched out by him. Prof. Guyot takes the ground assumed in the beginning of this Article, and which is the only tenable position, that we are to receive this narrative as a revelation from God through Moses, and not as the view Moses conceived. The whole of this account is a pure and absolute revelation. Unless it be a dream of Moses, or a re-hashing of Egyptian myths, this is, from beginning to end, a Divine statement. The table of commandments was not more truly given by God than this narrative. We are not, therefore, to ask what Moses meant to convey. We want to know what God intended to teach. And if it be said, God could only intend to teach what those who first received the record were able to comprehend, we reply: the Bible was given to us as well as to them. This revelation was for our instruction, as well as for that of the Jews. They had no monopoly in it. The Bible is for mankind. While the Jews were not taught anything erroneous, it does not follow that the revelation could not contain more than they would comprehend. If we can find the prophecy of a suffering Messiah in the Bible, while possibly the writers of the prophecy, certainly the first readers of it, had no clear conception of such a meaning, we may find in Genesis the outlines of a system of creation which Moses and the Jews did not comprehend. Thus far it might be replied to the objection which may prevent some from even considering the evidence in favor of Prof. Guyot's interpretation.

This objection being removed, there are four points to be proved in order that this view may harmonize with the text.

(1) It must be proved that the days are periods of great length. The theory assumes this. This point has been sufficiently considered in this Article, and will be allowed by candid interpreters.

(2). It must be proved that we have, as far as the twentieth verse, an account of the creation of the universe, and not merely of this globe. Prof. Guyot understands the work of the first two days to be upon the matter of the universe; the third day, upon this globe; the fourth day, upon the solar system; and the fifth and sixth days, upon the earth exclusively. He must prove, therefore, that the second verse refers to the matter of the universe; and that the constitution of the firmament is the arrangement of the planets. There would be no hesitation in referring the second verse to the matter of the universe, but for the occurrence of the word *earth*. "And the *earth* was without form and void;" not the matter of the universe. It would seem to limit the chaos to the matter of this earth. But is this the meaning of the verse? The earth, specifically, was not made till the third day. What is called earth on the second day can, at most, only be the matter which was afterwards so designated. And then, it cannot mean the solid ground merely, but all, both land and water, which finally constituted the "earth." Therefore, Prof. Guyot might say, if earth means what was afterwards so called, it includes water as well as land; and then the "deep" and "the waters," may refer to the rest of the matter of the universe. But we doubt if *earth* in this verse has any special reference to our globe. We do not think the three words which are descriptive of the matter in chaos, the earth, and the deep, and the waters, refer to so many distinct things; but that, after the style of Hebrew parallelism, they all relate to the same thing. The construction, we think, is not, that there was the earth — our globe — which was formless; and that, distinct from this, there was a deep, on which darkness rested; and that, separate from both these, there were waters, on which the Spirit of God moved. Only one thought is expressed by all these words: that the heaven and the earth spoken of in the first verse were in a chaotic state. It is the *appearance* of the elements that is dwelt upon. The stress is on *formless* and *void*. The sense is something as follows: The universe — earth it may be called — was without form and void. Upon the face of it — this earth, or better, *deep* — there was darkness. And upon the face of it — earth, or deep, or more exactly, waters — the Spirit of God moved. We think the true meaning of the verse is that which Prof. Guyot asks for: that the matter of the whole universe was in a formless, dark and watery state. And this, he thinks, was a

gaseous mass in which, as yet, chemical action had not begun. As to his interpretation of the firmament, it is as consonant with the text as the old version, which makes the "waters above," clouds, and the "waters under," seas. This is closely connected with the third point.

(3) It must be made out, thirdly, that "the waters" and "the deep," in the second verse, describe, not masses of liquids, but of gases. A great part of the explanation rests upon this point. Will the text bear such a meaning? We must admit it to be possible. The use of the word *waters* does not prove the substance to be that which is now so called. The Hebrews had no chemical nomenclature. They did not distinguish vapors from liquids. They used the same words for all substances of this nature. מַיִם as well describes gases as liquids. On philological grounds, no objection can be taken to this interpretation. So far, the theory does not seem incompatible with the text of Genesis. It remains, however, to be shown, in the fourth place,

(4) That this, upon *scientific data*, is the true exposition of the creation of the universe. Upon this it does not belong to us to speak. Whether the nebular hypothesis, of which Prof. Guyot avails himself, be true, and whether the geological statements be accordant with the facts, we are not competent to give an opinion. We are happy to state, on the authority of a note from Prof. Guyot, that he "intends, when Providence will allow, to write a history of the universe and of the earth, according to the present state of science — the only way to give a full and satisfactory commentary of this chapter." We hope his engagements will allow him to enter upon this work at an early period.