

LECTURE XXIII.

CREATION.

SYLLABUS.

1. What is the usage and meaning of the word create in Scripture ?
Turretin, Loc. v, Qu. 1. Lexicons. Dick, Lect. 37.
2. How else have philosophers accounted for the existence of the universe, except by a creation out of nothing ?
Turretin, *ubi supra*. Dick, as above. Brucher's Hist. of Phil. British Encyclopædia, articles "Atomic Philosophy," and "Platonism."
3. Prove that God created the world out of nothing; first from Scripture, and second, from Reason and the objections to the eternity of the Universe and matter.
Turretin, Loc. v, Qu. 3. Dr. S. Clarke, Discourses of Being, &c., of God. Dick, as above. Hodge, Theology, Vol. i, pp. 558, &c. Thornwell, Lect. 9, pp. 206-7. Christlieb, Mod. Doubt and Chr. Belief, Lect. 3.
4. Can a creature receive the power of creating, by delegation from God ?
Turretin, Loc. v, Qu. 2.
5. What was each day's work of creation, in the Mosaic week ?
Genesis, ch. i. Turretin, Loc. v, Qu. 5, 6. On this and the previous questions, see Knapp's Chr. Theol., Art. v, § 45 to 50.
6. What are the theories of modern Geologists concerning the age of the earth ? Their grounds, and the several modes proposed for reconciling them with the Mosaic history ?
Hitchcock's Relig. and Geology. Univ. Lectures, Dr. Lewis Green. Hugh Miller, Testimony of the Rocks. Tayler Lewis' Symbol Days. David N. Lord on Geol. Sir Charles Lyell's System of Geol. Dr. Gerald Molloy. Wiseman's Lects., &c.

THE words rendered to create, cannot be considered, in their etymology and usage, very distinctive of the nature of the act. The authorities make אָרַץ

1. Terms defined.

mean "to cut or carve," primarily, (from the idea of splitting off parts, or separation) hence "to fashion," then to "create;" and thence the more derivative sense of producing or generating, regenerating the heart, &c. The verb יָשַׁע carries, according to the authorities, more of the sense of the Greek verb ποιεῖω—"to do or to make," and is used for fashioning, manufacturing, doing (as a function or business), acquiring property, &c. The verb יָצַר seems to me to carry more distinctively the idea of fashioning out of pre-existent materials, as a potter (יָצַר) out of clay, &c. And it will be observed that wherever it is applied to making man or animals in Gen., the material out of which, is mentioned or implied, as ii : 7. God fashioned man (יָצַר) out of the dust of the earth. The word usually employed from Greek in Septuagint and New Testament to express the idea of creating, as distinguished from begetting or generating is *κτίω*. This, authorities say, means primarily to "found," or "build," and hence, "to make," "create."

It will be clearly seen hence, that the nature of the creative

2. Creation was out of nothing. act is but faintly defined by the mere force of the words. Yet Scripture does not lack passages, which explicitly teach, that God produced the whole Universe out of nothing by His almighty power; i. e., that His first work of creation did not consist merely of fashioning materials already existent, but of bringing all substance, except His own, out of non-existence into existence. How impossible this seemed to the ancient mind appears from this fact, that the opposite was regarded as an axiom (*ex nihilo nihil fit*) and lay as such at the basis of every system of human device. So that it was from an accurate knowledge, that the author of Hebrews says (xi : 3,) that the true doctrine of creation was purely one of faith. And this is our most emphatic proof text. We may add to it Rom. iv : 17; perhaps I Cor. i : 28; 2 Cor. iv : 6; Acts xvii : 28; Col. i : 17. The same meaning may be fairly argued for the word אֶרֶץ, Gen. i : 1, from the fact that its sense there is absolutely unqualified or limited by any previous proposition, or reference to any material, and also from the second verse. The work of the first verse expressed by אֶרֶץ, left the earth a chaos.

Therefore it cannot contain the idea of fashioning, so that if you refuse to it the sense of an absolute production out of nothing, you seem to leave it no meaning whatever. This truth also appears very strongly, from the contrast which is so often run by Scripture between God's eternity and the temporal nature of the creation. See Ps. xc : 2; Matt. xxv : 34; 2 Tim. i : 9; Rev. i : 11; and especially Prov. viii : 23-26, "nor the highest part of the dust of the world." It is hard to see how it could be more strongly asserted, that not only was the organization, but the very material of the world as yet all non-existent.

How almighty power brings substance into existence from absolute non-entity, our minds may not be able to conceive. Like so many other questions of ontology, it is too impalpable for the grasp of our understandings. As we have seen, the mind neither sees nor conceives substance, not even material; but only its attributes; only, it is intuitively impelled to refer those attributes (of which alone it has perception, to some *substratum* as the substance in which they inhere. The entity itself being mysterious, it need not surprise us to find that its rise out of non-entity is so. It is objected that a creation out of nothing is a contradiction, because it makes nothing a material to act on, and thus, an existence. We reply that this is a mere play upon the meaning of a preposition; We do not mean that "nothing" is a material out of which existences are fashioned; but the term from which an existence absolutely begins. God created a world where nothing was before. Is it objected that, in all

This inscrutable, but not impossible.

our experiential knowledge of causation, the object to receive, is as necessary as the agent to emit, power? True; but our knowledge of power is not an experimental idea, but an intuitive, rational notion; and in the most ordinary effect which we witness, is as really inscrutable to our perception and imagination, as the causation of a totally new existence. The latter is beyond our finite powers; we are certainly incompetent to say that it is beyond the reach of infinite power. So, all the transcendental difficulties which Pantheists make against a creation *ex nihilo*, have this common vice: They are attempts to bring down to our conceptual forms of thought the relations of the infinite, which inevitably transcend them.

3. There are three other schemes which offer us an alternative to this of an absolute creation; that of the atomic philosophers, that of the Platonists, and that of the Pantheists.

The Atomic theory of the Universe, advanced by Democritus and Leucippus, adopted by Epicurus, and greatly opposed by Socrates and the Platonists, might be so stated, if freed from the mechanical technicalities of the Greeks, as to embrace as few absurdities as perhaps any possible anti-Christian system. That is, it has the merit of atheism, of making two or three gigantic falsehoods, assumed at the outset, supersede a whole train of minor absurdities. Grant, say the atomists, the eternal existence of matter, in the state of ultimate atoms, endued by the necessity of nature, with these three eternal attributes, motion, a perpetual appetency to aggregation, and diversity of ultimate form, and you have all that is necessary, to account for universal organization. Now, without dwelling on the metaphysical objection (whose soundness is questionable) that necessary existence is inconsistent with diversity of form, these obvious reasons show that the postulates are not only unproved (proof I have never seen attempted) but impossible. First: motion is not a necessary attribute of matter: but on the contrary, it is indifferent to a state of rest or motion, requiring power to cause it to pass out of either state into the opposite. Second: Intelligent contrivance could never be generated by mere necessary, mechanical aggregations of material atoms; but remains still an effect without a cause. Third: the materialistic account of human and other spirits, which this theory gives, is impossible.

The Pantheistic theory has been already refuted, as space would allow, in Lect. ii, which see. The Platonic Scheme. Platonic is certainly attended with fewest Refutation. absurdities, and best satisfied the demands of thinking minds not possessed of Revelation. Starting with the maxim *ex nihilo nihil fit*, it supposes two eternal substances, the sources of all that exists; the spiritual God, and chaotic matter; the spirits of demi-gods, and men

being emanations of the former, and the material universe having been fashioned out of the latter, in time, through the agency of the *Noûs* or *Δημιουργός*. The usual arguments against the eternity of the unorganized matter of the universe, have been weighed in the Second Lecture, and many of them found wanting, (which see). I now aim only to add to what is there said, such considerations as human reason seems able to advance solidly against this doctrine. You will remember that I there argued, 1st: From the testimony of the human race itself, and 2d, from the recency of population, history, traditions, arts, &c., on the earth, against the eternity of its organized state. To this we may add: 3d. If matter unorganized was eternal, it must have been self-existent, and hence, whatever attributes it had from eternity must have been absolutely necessary. Hence there was a necessary limitation on the power of God, in working with such a material; and it may be that He did not make what He would have preferred to make, but only did the best He could under the circumstances. (Indeed, the Platonist, knowing nothing of the doctrine of a fall in Adam, accounted for all the disorders and defects in the world, by the refractory nature of eternal matter. The creator excuses himself as a smith does, who, though thoroughly skillful, produces an imperfect edge-tool, because he had nothing but bad steel). But, if this is so, then: (a) God as Creator is not infinite; there are limitations upon His powers, as necessary and eternal as His own attributes. And these limits obstruct His providential action as they did His creative. Hence, He is no longer an object of religious trust, and perfect confidence. He is only an able artificer. (b) Then, also, God's knowledge of this self-existent matter, external to Himself, was experimentally gained; and the doctrine of His omniscience is fatally vitiated. 4th. The elementary properties of matter, which on this theory, must have been eternal and necessary, have an adaptation to God's purposes in creation, that displays intelligent contrivance, just as clearly as any organized thing can. But matter is unintelligent; this design must have had a cause. 5th. The production of spiritual substance out of nothing is, we presume, just as hard to account for as material substance. Hence, if an instance of the former is presented, the doctrine of the eternity of the Universe may as well be surrendered. But our souls each present such an instance. No particle of evidence exists from consciousness or recollection, that they pre-existed, and everything is against the notion that they are scintillations of God's substance. They began to exist: at least man has no knowledge whatever of any other origin: and by the rule: *De ignotis idem quasi de non existentibus*, any other origin is out of the debate. They were produced out of nothing. In conclusion, it may be said that, if the idea of the production of something out of nothing is found to be not

impossible, as we think, when we have supposed an Almighty Creator, we have cause enough to account for everything, and it is unnecessary to suppose another.

The question whether a creature can receive, if God choose, delegated power to create, has been agitated between the Orthodox and some of the Romanists, (who would fain introduce a plea for the making of a Saviour by the priest, in the pretended miracle of the mass) and the old Arians and Socinians, who would thus evade the argument for Christ's proper divinity, from the evident ascription to Him of works of creation. We believe not only that the noblest of finite creatures is incapable of exercising creative power proper, of his own motion; but of receiving it by delegation from God, so that the latter is one of those natural impossibles which it would argue imperfection in omnipotence to be capable of doing.

(a) God, in a multitude of places, claims creation as His characteristic work, by which His Godhead is manifested, and His superiority shown to all false gods and idols; Is. xlv; 7, 24; xl: 12, 13, 18, 28; Job ix: 8; Jer. x: 11, 12; Is. xxxvii: 16; Ps. xcvi: 5. Thus Creator comes to be one of God's names.

(b) To bring anything, however small, out of non-existence is so far above man's capabilities, that he cannot even conceive how it can be done. In order that a work may be conceivable or feasible for us, it must have subject and agent. Man has no faculty which can be directed upon non-entity, in any way, to bring anything out of it. Indeed, however small the thing thus produced out of nothing; there is an exertion of infinite power. The distance to be passed over between the two is a fathomless gulf to every finite mind.

(c.) To make one thing, however limited, might require infinite powers of understanding. For however simple, a number of the laws of nature would be involved in its structure; and the successful construction would demand a perfect acquaintance with those laws, at least, in their infinite particularity, and in all their possible combinations, and with the substance as well as attributes. Consider any of the constructions of man's shaping and joining materials God has given him, and this will be found true. The working of miracles by prophets, apostles, &c., offers no instance to the contrary, because it is really God who works the miracle, and the human agent only announces, and appeals to the interposition of divine power. See Acts iii: 12.

If we suppose that Gen. i: 1, describes a previous production in a time left indefinite, of the heavens and the matter of the earth, then the work of the first of the six days will be the production of light. It may seem unreasonable at the first glance, that light should be created, and should make three days before the sun, its great fountain at present, was formed. But all the researches of

4. No creature can be enabled to create.

5. The Creative Week.

modern optics go more and more to overthrow the belief that light is a substantive emanation from the sun. What it is, whether a substance, or an affection of other substance, is still unknown. Hence it cannot be held unreasonable, that it should have existed before the sun; nor that God should have regulated it in alternations of day and night. On the second day the atmosphere seems to have been created, (the expanse) or else disengaged from chaos, and assigned its place around the surface of the earth. This, by sustaining the clouds, separated the waters from the waters. The work of the third day was to separate the terrestrial waters from the dry ground, to assign each their bounds, and to stock the vegetable kingdom with its *genera* of trees and plants. The fourth day was occupied with the creation, or else the assignment to their present functions, of sun, moon and stars. And henceforth these became the chief depositories, or else propagators, of natural light. The fifth day witnessed the creation of all oviparous animals, including the three classes of fishes, reptiles and birds. The sixth day God created the terrestrial animals of the higher order, now known as mammalia, and man, His crowning work.

In our age, as you are aware, modern geologists teach, with great unanimity, that the state of the structures which compose the earth's crust shows it to be vastly more than 6,000 years old. To explain this supposed evidence to you, I may take for granted your acquaintance with the classes into which they distribute the rocks and soils that form the earth, so far as man has pierced it. Lowest in order, and earliest in age, are the *azoic* rocks, many of them crystalline in texture, and all devoid of fossils. Above them are rocks, by the older geologists termed secondary and tertiary, but now termed *palaeozoic*, *mesozoic*, and *cainozoic*. Above them are alluvia, the more recent of which contain remains of existing *genera*. Only the barest outline of their classification is necessary for our purpose. Now, the theory of the geologists is, that the materials of the stratified rocks were derived, by disintegration, from masses older than themselves; and that all this material has been re-arranged by natural processes of deposition, since the creation of our globe. And hence, that creation must have been thousands of ages before Adam. (a.) Because the crystalline rocks, which are supposed to have furnished the material for all the later, seemed to have resulted from a gradual cooling, and are very hard, disintegrating very slowly. (b.) The made-rocks and earths are very abundant, giving an average thickness of from six to ten miles. Hence a very great time was requisite to disintegrate so much hard material. (c.) The position of these made *strata* or layers, indicates long series of changes, since they were deposited, as upheavals, dislocations, depressions, subsequent re-dissolvings. (d.) They contain 30,000 species and more, of fossil remains

6. The view of modern geology explained.

of animal life, besides vegetable; of which, not only are whole *genera* now extinct, but were wholly extinct ages before another cluster of *genera* were first created; which are now extinct also. And the vast quantities of these fossils, as shells in some limestone, remains of vegetation in vast coal beds, &c., &c., point to a long time, for their gradual accumulation.

(f.) There are no human fossils found with these remains of earlier life, whence they were pre-Adamite.

Last. Since the last great geologic changes in the strata of the made rocks, changes have been produced in them by natural and gradual causes, which could not have been made in 6,000 years, as whole *deltas* of alluvial mud deposited, e. g.. Louisiana, deep channels dug out by rivers, as Niagara from Lake Ontario to the falls, water worn caves in the coast lines, and former coast lines of countries, e. g., Great Britain, which are rock-bound.

Modern divines, usually yield this as a demonstration: and offer one of two solutions to rescue Moses from the appearance of mistake. 1. Drs. Pye Smith, Chalmers, Hitchcock, Hodge, &c., suppose Gen. i: 1 and 2, 1st clause, to describe God's primeval, creative act; which may have been separated by thousands of ages from Adam's day; and in that vast interval, occurred all those successive changes, which geologists describe as pre-Adamite, and then lived and died all those extinct *genera* of animals and vegetables. The scene had been closed, perhaps ages before, by changes which left the earth's surface void, for...less and dark. But all this Moses passes over with only one word; because the objects of a religious revelation to man were not concerned with it. The second verse only describes how God took the earth in hand, at this stage, and in six days gave it the order, the *genera* of plants and animals, and last, the human race, which now possesses it.

The geological objections which Hugh Miller, its ablest Christian assailant, brings, may be all summed up in this: That the fossils show there was not such a clean cutting off of all the *genera* of plants and animals at the close of the pre-Adamite period, and re-stocking of the earth with the existing *genera*; because many of the existing co-exist with the prevalent *pleiocene genera*, in the tertiary rocks, and many of those again, with the older *genera*, in the palaeozoic rocks. This does not seem at all conclusive, because it may have suited God, at the close of the pre-Adamite period, to suffer the extinction of all, and then to create, along with the totally different new *genera*, some bearing so close a likeness to some extinct *genera*, as to be indistinguishable by their fossils.

The exegetical objections are chiefly these. 1. That the sun, moon and light were only created at the Adamic period. Without these there

Exegetical difficulties.

could have been neither vegetable nor animal life before. 2. We seem to learn from Gen. i: 31; iii: 17-19; Rom. v: 12; viii: 19-22, that all animal suffering and death came upon our earth as a punishment for man's sin; which our conceptions of the justice and benevolence of God seem to confirm. To the 1st the common answer is, that the chaotic condition into which the earth had fallen just before the Adamic period, had probably shut out all influences of the heavenly bodies; and that the making of sun, moon, &c., and ordaining them for lights, &c., probably only means their apparent creation, i. e., their re-introduction to the earth. To the 2d it is replied, that the proper application of the texts attributing all terrestrial disorder and suffering to man's fall, is only to the earth as cotemporary with man; and that we are too ignorant of God's plan, and of what sin of rational free agents may, or may not have occurred on the pre-Adamite earth, to dogmatize about it. These replies seem plausible, and may be tenable. This mode of reconciling geology to Moses, is certainly the least objectionable, and most respectable.

The second mode of reconciliation, now made most fashionable by H. Miller, Tayler Lewis, &c., sup-

The theory of six symbolic days.

poses that the word יום day, in the account

of creation, does not mean a natural day of 24 hours, but is symbolical of a vast period; during which God was, by natural laws, carrying on changes in the earth's surface and its inhabitants. And they regard the passage as an account of a sort of symbolic vision, in which God gave Moses a picture, in six *tableaux*, of these six vast series of geologic and creative changes: so that the language is, to use Dr. Kurtz' (of Dorpat,) fantastic idea, a sort of prophecy of the past, and is to be understood according to the laws of prophetic symbols. This they confirm by saying that Moses makes three days before he has any sun or moon to make them: that in Gen. ii: 4, the word is used for something other than a natural day; and that it is often used in Hebrew as a general and undefined term for season or period. Miller also argues, that geology reveals the same succession of fossils which Moses describes; first plants, then monstrous fishes and reptiles and birds, (all oviparous), then quadrupeds and mammalia, and last, man.

The following objections lie against this scheme. Geolo-

Objections.

gists are not agreed that the succession of fossils is that which its advocates assert.

Some of the weightiest authorities declare that plants (assigned by this scheme to the third day, and to the earliest production of organic things) are not the earliest fossils. Crustaceous, and even vertebrate animals precede the plants. Second. The narrative seems historical, and not symbolical; and hence the strong initial presumption is, that all its parts are to be taken in

their obvious sense. The advocates of the symbolic days (as Dr. G. Molloy) attach much importance to their claim that theirs is not an afterthought, suggested by geologic difficulties, but that the exposition was advanced by many of the 'Fathers'. After listening to their citations, we are constrained to reply that the vague suggestions of the different Fathers do not yield them any support, because they do not adopt their theory of explanation. Third. The sacred writer seems to shut us up to the literal interpretation, by describing the day as composed of its natural parts, "morning and evening." Is the attempt made to break the force of this, by reminding us, that the "evening and the morning" do not make up the whole of the civic day of twenty-four hours; and that the words are different from those just before, and commonly afterwards employed to denote the "day" and the "night," which together make up the natural day? We reply: it is true, morning and evening do not literally fill the twenty-four hours. But these epochs mark the beginnings of the two seasons, day and night, which do fill the twenty-four hours. And it is hard to see what a writer can mean, by naming evening and morning as making a first, or a second "day"; except that he meant us to understand that time which includes just one of each of these successive epochs:—one beginning of night, and one beginning of day. These gentlemen cannot construe the expression at all. The plain reader has no trouble with it. When we have had one evening and one morning, we know we have just one civic day; for the intervening hours have made just that time. Fourth. In Gen. ii: 2, 3; Exod. xx: 11, God's creating the world and its creatures in six days, and resting the seventh, is given as the ground of His sanctifying the Sabbath day. The latter is the natural day; why not the former? The evasions from this seem peculiarly weak. Fifth. It is freely admitted that the word day is often used in the Greek Scriptures as well as the Hebrew (as in our common speech) for an epoch, a season, a time. But yet, this use is confessedly derivative. The natural day is its literal and primary meaning. Now, it is apprehended that in construing any document, while we are ready to adopt, at the demand of the context, the derived or tropical meaning, we revert to the primary one, when no such demand exists in the context. Last. The attributing of the changes ascribed to each day by Moses, to the slow operation of natural causes, as Miller's theory does, tramples upon the proper scope of the passage, and the meaning of the word "create;" which teach us this very truth especially; that these things were not brought about by natural law at all, but by a supernatural divine exertion, directly opposed thereto. See Gen. ii: 5. If Moses does not here mean to teach us that in the time named by the six "days" (whatever it may be), God was employed in miraculously creating and not naturally "growing"

a world, I see not how language can be construed. This decisive difficulty is wholly separate from the questions about the much debated word, "day," in this passage.

APPENDIX.

Without presuming to teach technical geology (for which I profess no qualification; and which lies, as I conceive, wholly outside the functions of the Church teacher), I wish, in dismissing this subject, to give you some cautions and instructions touching its relations with our revealed science.

There must always be a legitimate reason for Church teachers adverting to this subject; because geology, as often asserted, is virtually a theory of *cosmogony*, and cosmogony is but the doctrine of creation, which is one of the modes by which God reveals Himself to man, and one of the prime articles of every revealed theology. Were not all the ancient cosmogonies but natural theologies? Not a few modern geologists resent the animadversions of theologians, as of an incompetent class, impertinent and ignorant. Now I very freely grant that it is a very naughty thing for a parson, or a geologist, to profess to know what he does not know. But all logic is but logic; and after the experts in a special science have explained their premises in their chosen way, it is simply absurd to forbid any other class of educated men to understand and judge their deductions. What else was the object of their publications? Or, do they intend to practice that simple dogmatism, which in us religious teachers, they would so spurn? Surely when geologists currently teach their systems to boys in colleges, it is too late for them to refuse the inspection of an educated class of men! When Mr. Hugh Miller undertook, by one night's lecture, to convince a crowd of London mechanics of his pet theory of the seven geologic ages, it is too late to refuse the criticism of theologians trained in philosophy?

I would beg you to notice how distinctly either of the current theories contradicts the standards of our Church. See Conf. of Faith, ch. iv, §1. Larger Cat., que. 15, 120. Our Confession is not inspired; and if untrue, it should be refuted. But if your minds are made up to adopt either of these theories, then it seems to me that common honesty requires of you two things; to advertise your Presbyteries, when you apply for license and ordination, of your disbelief of these articles; that they may judge whether they are essential to our system of doctrine; and second; to use your legitimate influences as soon as you become church rulers, to have these articles expunged from our standards as false.

1. This subject must concern Theologians.

2. Westminster Confession inconsistent with it

Let me urge upon you a wiser attitude and temper towards the new science, than many have shown, among the ministry. Some have shown a jealousy and uneasiness, unworthy of the stable dignity of the cause of inspiration. These apparent difficulties of geology are just such as science has often paraded against the Bible; but God's word has stood firm, and every true advance of science has only redounded to its honour. Christians, therefore, can afford to bear these seeming assaults with exceeding coolness. Other pretended theologians have been seen advancing, and then as easily retracting, novel schemes of exegesis, to suit new geologic hypotheses. The Bible has often had cause here to cry, "Save me from my friends." Scarcely has the theologian announced himself as sure of his discovery that this is the correct way to adjust Revelation to the prevalent hypotheses of the geologists, when these mutable gentlemen change their hypothesis. The obsequious divine exclaims: "Well, I was in error then; but now I have certainly the right exposition to reconcile Moses to the geologists." And again the fickle science changes its ground. What can be more degrading to the authority of Revelation! As remarked in a previous lecture, unless the Bible has its own ascertainable and certain law of exposition, it cannot be a rule of faith; our religion is but rationalism. I repeat, if any part of the Bible must wait to have its real meaning imposed upon it by another, and a human science, that part is at least meaningless and worthless to our souls. It must expound itself independently; making other sciences ancillary, and not dominant over it.

It should be freely conceded that it was not God's purpose, in giving the Bible, to foreshadow the scientific *rationale* of natural phenomena. Its object is theological. And the Bible is, in this respect, a strictly practical book. Hence, it properly speaks of those phenomena as they appear, and uses the popular phrases, "sun rises," "sun sets," "sun stood still," etc., just as any other than a pedantic astronomer would, when not expressly teaching astronomy. Hence, we admit, that the attempt made by Rome and the Reformers to array the Bible against the Copernican System was simply foolish. The Bible only professed to speak of the apparent phase of the facts; the theory of the astronomer professed to give the non-apparent, scientific mechanism of the facts. So far as geology does the analogous thing, we should have no quarrel with it. But how far does this concession go? When Moses seems to say that God created the world and its inhabitants out of nothing, are we at liberty to treat him as we do Joshua, when he speaks of the sun as standing still? I think not. First: Moses' reference to the facts of creation is not, like Joshua's reference to the

3. Deliberation enjoined.

4. Popular terms to be expected; in Bible, Reasons. But not applicable to cosmogony.

astronomical event, merely incidental to a narrative of human history, but is a statement of what is as much a theological doctrine as a natural fact, introduced by him for its own theological purpose. Second: Joshua's language is defended, as being true to the apparent phase of the event. But creation had no apparent phase; for the simple reason that it had no human spectators. There is no popular language about world-making, conformed to the seeming phenomenon, as we have about the moving and setting suns which we daily seem to behold; for none of us, of any generation, have witnessed the exterior appearances of world-making. Hence, I must believe that we are not authorized to class the declarations of Moses here, with those of these oft-cited passages.

It is an all-important point that, if debate arises between a geologic hypothesis and the fair and natural meaning of the Bible touching cosmogony, the geologist must bear the burden of proof.

5. Burden of proof rests on Geologists.

We are entitled to claim this, because the inspiration of the Scriptures is in prior possession of the field, in virtue of its own independent, historical, prophetic, internal and spiritual evidences, and of the immense and irreparable stake which every awakened soul has in its truth. Hence, the geologist does not dislodge the Bible, until he has constructed his own independent, and exclusive, and demonstrative evidence that his hypothesis must be the true one, and the only true one. Has the science ever done this? This logical obligation geologists perpetually forget. They perpetually substitute a "may be" for a "must be." As soon as they hit upon a hypothesis which, it appears, may satisfy the known facts, they leap to the conclusion that it is the obviously, the only true one. But now, our position is not approached until such a complete, and exclusive demonstration is made. We are under no obligation, in order to defend ourselves, to substantiate another hypothesis by geologic reasoning; our defence is complete, when we show by such argument that their hypothesis comes short of an exclusive and perfect demonstration. It requires, as yet, little knowledge to show this; when the leading geologists are still differing between themselves, touching the igneous, the aqueous, the gradual and the sudden systems; when effects are so hastily and confidently ascribed to one species of natural agency, which may, very possibly, have been effected by it, or by one of several other possible agencies; when we see the greatest names assuming as premises for important deductions, statements which are corrected by the practical observation of plain men; from the oversight of important questions as to the consistency and feasibility of their theories of cosmogony, with observed facts; and last, from the truth that the most truly scientific are most cautious in asserting any such scheme with confidence.

I have reserved the most vital point to the last. It is this:

6. Usual inference of cause from observed resemblances. The structures of nature around us cannot present by their traits of naturalness, a universally demonstrative proof of a natural, as against a supernatural origin, upon any sound, theistic theory. Because, supposing a Creator, originating any structures or creatures supernaturally, He must also have conferred on His first things traits of naturalness. Hence, should it be found that the Creator has uttered His testimony to the supernatural origin of any observed things, that testimony cuts across and supersedes all the arguments *a posteriori*, from natural analogies to a natural origin. Thus, many geologists, seeing that sedimentary action by water now produces some stratified rocks, claim that they are entitled, by the similarity of effects, to ascribe all stratified rocks to sedimentary action. This, they say, is but a fair application of the axiom, that "like causes produce like effects," which is the very corner-stone of all inductive science. But the real proposition they employ is the converse of this: that like effects imply like causes. Now, first: it is trite as true, that the proof of a proposition does not prove its converse. Second: the theist has expressly admitted another cause, namely, an infinite, personal Creator, confessedly competent to any effect He may choose to create. Hence, all theists are compelled to admit that the natural, *a posteriori* argument cannot universally hold, as to the origin of beings. Once admit a Creator, and that argument remains, in every case where the Creator's absence is not proved by some positive evidence other than physical, the invalid species of induction, which Bacon exploded under the name of *inductio enumerationis simplicis*. Nov. Organum, Lib. 1, § 105. "*Inductio enim, quæ procedit per enumerationem simplicem, res puerilis est, et precario concludit, et periculo exponitur ab instantia contradictoria,*" &c. In the case under discussion, any natural structure originated by the Creator, would be such a contradictory instance. Unless then the divine cause is excluded by some other than physical evidence, such induction can never be universally valid. Third: A wise God always has some "final cause," guiding His action. We may not be presumptuous in surmising, in every case, what His final cause was; but when His own subsequent action has disclosed it, we are on safe ground; we may assuredly conclude that the use to which He has actually put a given thing is the use for which He designed it. When, therefore, we see Him subjecting all structures to natural law, we know that those which He himself created, He designed to subject to such law. Then, He must have created them as natural as though their origin also had been from nature. Fourth: To the theist, this argument is especially clear as to living, organized creatures. Supposing a Creator, the first of each species must have received from the supernatural, creative hand, every trait of naturalness; else it could not have fulfilled

the end for which it was made; to be the parent of a species. What are the attributes connoted by the name of any species? Natural History answers: they are precisely those regularly transmitted by natural generation. Then, in order to be the parent of a natural species, the first thing, while supernatural in origin, must have been thoroughly natural in all essential traits. Fifth: If we deny this, we must assign a natural parent before the first-created parent of each species of generated organisms. Thus we should be involved in a multitude of infinite series, without cause external to themselves; a result which science herself has repudiated, as an impossible absurdity. Suppose then, that by some chance, a physicist should examine the very remains of one of those organisms which God creatively produced, as a bone of Adam's body; he would, of course, find in it the usual traits of naturalness. Yet he could not thence infer for this thing a natural origin; since, according to the supposed case, it was a first thing. Hence, it is concluded with mathematical rigidity, that when we grant an omnipotent Creator anywhere in the past, the argument from naturalness of traits to a natural origin ceases to be universally conclusive.

This case is exactly illustrated by what lawyers term "circumstantial evidence" in a court of justice. The science of law, charged with the solemn issues of life and death, has exactly defined the proper rules for this species of evidence. Before a man can be convicted upon circumstantial evidence, the prosecution must show that their hypothesis of his guilt not only may satisfy all the circumstances known, but that it is the only possible hypothesis. And the enlightened judge will rule, that the defence are entitled to test that fact even by their imaginations. If they can suppose or invent another hypothesis, unsupported by a single positive proof, that demonstrates the fact, that the hypothesis of guilt is not the only possible one, the accused must be discharged. But let us suppose that, just when the circumstantial evidence of guilt seemed complete, an eye-witness is adduced, who swears that he saw the crime perpetrated by another. Let us suppose that other agent was naturally competent to the act. Then the judge will rule, that the whole farther discussion must turn on the consistency and credibility of that witness. He will say to the accusers: that if they have any valid way to impugn the witness' competency, or credibility, they may do so; otherwise, in presence of his positive evidence, their circumstantial proof, in spite of all its ingenuity and plausibility, is utterly broken down. Now the *a posteriori* argument of the geologists is such a circumstantial proof. The Bible is the parole-witness; if its competency and trustworthiness stand, their case has collapsed before it.

Again: why should the Theistic philosopher desire to push

back the creative act of God to the remotest possible age, and reduce His agency to the least possible *minimum*, as is continually done in these speculations? What is gained by it? Instead of granting that God created a *κόσμος*, a world, some strive continually to show that He created only the rude germs of a world, ascribing as little as possible to God, and as much as possible to natural law. *Cui bono*; if you are not hankering after Atheism? Is a completed result any harder for infinite powers than a germinal one? What is natural law; and what its source? It originated in the creative power, and is maintained, energized, and regulated by the perpetual providence of God. Do you crave to push God away, as far as possible? It does not help you to say, natural law directed the formation of this mass of marble, instead of supernatural creation; for God is as near and as infinite in His common, natural, as in His first, supernatural working.

But if you must persist in recognizing nothing but natural forces, wherever you see a natural analogy, I will show you that it will land you, if you are consistent, no where short of absolute atheism. Suppose that nebular theory of the origin of the solar system were true, which the anti-Christian, La Place, is said to have suggested as possible, and which so many of our nominal Christians have adopted, without proof, as certain. An observer from some other system, fully imbued with the principles of modern science, comes to inspect, at the stage that he finds only a vast mass of incandescent vapor, rotating from west to east around an axis of motion. If he uses the confident logic of our geologists, he must reason thus: "Matter is naturally inert; *momentum* must come from impact; therefore, this rotary motion which I now behold, must be the result of some prior force, either mechanical, electrical, or some other. And again, I see only vapor. Vapor implies evaporation; and sensible heat suggests latent heat, rendered sensible either by electrical or chemical action, or compression. There must, therefore, have been a previous, different, and natural condition of this matter now volatilized, heated, and rotating. The geologists of the 19th century, therefore, will be mistaken in calling this the primitive condition of the system." Before each first, then, there must still be another first. This is, therefore, the eternity of Naturalism—it is Atheism.

This argument is usually dismissed by geologists with a sort of summary contempt, or with a grand out-against exclusion of cry of opposition. It does indeed cut deep into the seductive pride of their science, sweeping off at one blow that most fascinating region, the infinite past. It is urged, for instance, that my argument would subvert the foundations of all natural science. They exclaim, that to concede this would be to surrender the whole *organon*

Illustrated by Nebular Hypothesis.

Argument just, as against exclusion of Creator.

of scientific discovery. I answer, no. Within the domain of time, the known past of human history, where its testimony proves the absence of the supernatural, the analogical induction is perfectly valid. And there is the proper domain of natural science. In that field, their method of reasoning is a useful *organon*, and a legitimate; let them use it there, to the full, for the good of man. But in the unknown eternity of the past, prior to human history, it has no place; it is like the mariner's compass carried into the stellar spaces. That compass has a known attraction for the poles of this globe; and therefore on this globe, it is a valued guide. But away in the region of *Sirius*, where we know not whether the spheres have poles, or whether they are magnetic, it is naught. He who should follow it would be a madman.

Another objection, supposed to be very strong, is drawn from the fossil remains of life. The geologists say triumphantly, that however one might admit my view as to the mere *strata*, it would be preposterous when applied to the remains of plants and animals buried in these *strata*, evidently alive thousands of ages ago. They assert roundly that, in order to make any application of this argument, anywhere, I shall have to hold the preposterous assertion, that all the fossil remains of vegetable and animal life, which lived during the vast, pre-Adamite ages, are mere stones, never alive: or that, in other words, we must refuse the evidence of our own senses, and suppose the Creator imposed this cheat on them. This supposed consequence we expressly repudiate. And it is very easy to show that it does not follow. In attempting to fix the relative age and order of *strata* and fossils, geology reasons in a circle. Sir Chas. Lyell states that a stratigraphical order has been inferred from three classes of data. 1. The observed order of *strata* where actually found in juxtaposition. 2. The kinds of organic life contained in the different *strata*. 3. The material and structure of the *strata* themselves. Evidently such inferences are invalid, from two grounds. First: they have not proved that the *azoic* stratified rocks, a large class by their own showing, may not have had an immediate, supernatural origin: for I have evinced that their naturalness of structure alone is no proof against this. If then, these stratified rocks are really as old as the igneous, here is a huge chasm in their system. Second: They reason in a circle, in that they argue the relative oldness of certain fossils from the *strata* in which they are found; and then argue the oldness of the *strata* from the assumed age of the fossils. For instance: they conclude that the non-fossiliferous clay-slate is a very old stratified rock, because without fossils. Again, they have concluded that some given species of fossil life is very old, because found in a *stratum* very near that very old slate. Then they infer that some other *stratum* is very old,

Objection from Fossils answered.

because this fossil is found in it! Third: Concede once (I care not where in the unknown past) an almighty Creator of infinite understanding, (as you must, if you are not an atheist,) and then both power and motive for the production of these living structures at and after a supernatural creation, become infinitely possible. It would be an insane pride of mind, which should conclude that, because it could not comprehend the motive for the production, death, and entombment of all these creatures under such circumstances, therefore it cannot be reasonable for the Infinite Mind to see such a motive. So that my same formula applies here also. Once concede an Infinite Creator, and all inferences as to the necessarily natural origin of all the structures seen, are fatally sundered.

In fine, if that account of the origin of the universe, which theology gives us, is to be heeded at all, the following appears the most philosophical conception of a creation: That God, in producing a world which His purposes required to pass under the immediate domain of natural laws, would produce it with just the properties which those laws perpetuate and develope. And here appears a consideration which brings theology and cosmogony into unison. What was God's true end in the creation of a material world? Reason and Scripture answer: To furnish a stage for the existence and action of a moral and rational creature. The earth was made for man to inhabit. As the light would be but darkness, were there no eye to see, so the moral design of the world would be futile without a human mind to comprehend it, and praise its Maker. Now, such being God's end in creation, it seems much more reasonable to suppose that He would produce at once the world which He needed for His purpose, rather than spend hundreds of thousands of years in growing it.

Creation had a moral end.