

## ARTICLE II.

THE BEARING OF MODERN SCIENTIFIC THEORIES ON  
THE FUNDAMENTAL TRUTHS OF RELIGION.<sup>1</sup>

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GENTLEMEN of the Delphic and Pythonian Societies; though I visit your University for the first time, it is not with the heart of a stranger. Our American colleges are, in mutual sympathy and helpfulness, a close confederation; and as a member of one academic body I deem myself a citizen of every other. Moreover, I must the more earnestly crave a friendly reception here, on the ground on which the people of Tyre and Sidon desired peace with Herod, "because their country was nourished by the king's country." Among the books which I always keep at hand for daily consultation is the voluminous Commentary on the New Testament which comes from your Professor of Greek,<sup>2</sup>—a work derived, indeed, from a German original, but so completely overlaid and incrustated with a dense deposit of Genesee scholarship as hardly to permit us to say that it is *alter et idem*, so much more and better has it become in its American guise. Nor can I forget that, as an editor, I have repeatedly fed my public with supplies furnished by your venerable Professor of Chemistry,<sup>3</sup> who at the same time, by his genial correspondence, has taught me to love him as he is loved by you all.

I give you joy on the progress, prosperity, and fair fame of your University — infant in years alone; mature in its capacity of service to the cause of learning and piety.

I would especially congratulate you on the foremost place

<sup>1</sup> An Address delivered before the Literary Societies of Rochester University, July, 1863.

<sup>2</sup> Rev. Dr. Kendrick's edition of Olshausen.

<sup>3</sup> Rev. Chester Dewey, LL.D.

which this institution has already attained among our colleges, as to affluent and extended means for the cultivation of that department of natural science which comprehends the genesis, types, and primeval history of all the rest. This department seems likely to be the Armageddon — the final battle-field — in the conflict with infidelity; and if so, it will be honored as the field of triumph for him, of whom the divine prophecy has gone forth, “He must reign.” The danger is not that of the mere rejection of Christianity, but of the repudiation of a personal God in the name of science, and the setting up in his stead of the vague, formless conception of Pantheism, whose terms are mere euphemisms by which the fool who says in his heart, “There is no God,” seeks to say the same thing a little more decently with his lips.

As appropriate to an occasion like the present, and as made timely by certain specific tendencies of the cosmological sciences at the present moment, I have chosen for my subject Pantheism, or rather, Theism, and my endeavor will be to show you that the great doctrines of Christian theism are wholly untouched alike by the discoveries and the hypotheses, the data and the postulates, of modern science.

It is difficult to define Pantheism, except by what it denies. But its one distinctive and intelligible characteristic, in all its forms, is the denial of the Divine personality, so that what it calls *God* has no moral attributes, stands in no assignable relation to human beings, exercises no discretionary providence, and is not the conscious recipient of prayer or praise. In the philosophy of this school, God is an organizing and energizing principle in nature, — an automatic force, working by inherent and necessary laws, itself unintelligent, and attaining self-consciousness only in the human soul, which is a part of God, detached and intelligent during its life in the body, and at death reabsorbed into unintelligent nature, and so losing its separate consciousness.

There is one aspect under which Pantheism has appeared, in which we look upon it with profound reverence. We

find numerous traces of it in the Greek philosophy, both on its native soil and in Rome; and it had its full development and exposition in the great poem of Lucretius: and, as thus enunciated, it marked an important stage in the progress of human thought. It was the protest of earnest, serious minds against the absurd and foul mythology of the popular faith. It was the *nisus* of man's better nature toward monotheism, arrested at that point by the essential limitations of man's unaided powers; and it has left its multiform record in confirmation of the words of him in whom the Divine became manifest in human form, "No man cometh unto the Father but by me," — words which are still further verified by the uniform tendency, during the Christian ages, of minds that reject Christianity to fall back into the haze and mist of Pantheism.

The Pantheistic tendency has been made determinate, in our own time, among the votaries of physical science, by the theories that are gaining ascendancy with regard to the formation of the visible universe and the races of organized beings, — theories which, whether true or false, are all not only consistent with the being of a personal Creator, but absurd on any other supposition; yet which, in disturbing the traditional cosmogony, have unsettled the theological beliefs with which it had been too closely identified. Among these theories first came Laplace's nebular hypothesis, which, long regarded as a mere chimera born from the brain of an atheistic dreamer, is now received by not a few of the most reverent and devout astronomers. This was shortly followed by the aeons of geology, making the period of human history infinitesimally short compared with the myriads of centuries that have left their memorials in the strata of the earth's crust. Then we had a literal revival of Lucretianism in the development-theory of the *Vestiges of the Natural History of Creation*, which, though repudiated at the time by scientific men, to such an extent that the author in his *Sequel* appealed from them to the unlearned, still left its traces in the speculations of naturalists, and prepared the way for the

form in which it now reappears in Darwin's hypothesis, according to which all animated beings — man included — have sprung, by natural selection, from a very few primitive types, perhaps from one; and man may say, in a sense which never entered into the thought of Job, to the worm: "Thou art my mother and my sister." Next we have fossil man in pre-Adamite ages, — races of which tradition holds no vestige, clustering in villages which for uncounted thousands of years have been buried or submerged. Embracing and transcending all these is the Positive Philosophy of Comte, which refers all phenomena of human thought, feeling, and action, the rise and fall of empires and races, the entire march of history, to the same self-enacting, self-executing law by which clustering atoms were vitalized and lower forms of life developed into higher.

It forms no part of my present plan to assail or defend all or either of these theories; but I wish to show you that they have no validity whatever against the great truths of natural religion as confirmed by the Christian revelation.

I ought to meet at the outset an argument derived from our own subjective experience, real or suppositious, against the divine personality. It is alleged that our own personality is inseparable from and contingent upon our bodily organism, and that an immaterial personality, being opposed to our experience, is inconceivable, and therefore incapable of being believed. But does not this statement reverse the order of thought? Do we not conceive of our own personality as the prime fact, and of our organism considered in its capacities and uses as the contingent and resultant fact? My consciousness tells me, not that my brain, limbs, and organs constitute *me*, make me the person that I am, but that I own them, make them subservient to my uses, give them by my oneness a unity which else were not theirs, exercise by means of them functions which are not their prerogative, but mine, — which I can imagine myself as exercising through a very different organism, or without any organism at all. What my organism does for me is to

interpose between me and the surrounding world walls which shut out a great deal of which I might otherwise be cognizant, leaving only these loopholes of the senses, through which sights and sounds enter. But I can distinctly conceive of these walls being thrown down, this organism perishing, and my not only surviving the dissolution, but being by means of it emancipated, enriched, enlarged, exalted. The bodily organism, then, does not constitute, but only limits and confines, the human personality, which to our own consciousness is immaterial, and thus, so far from being a hinderance, is a guide, a help, a type for our conception of the immaterial personality of the Infinite Being.

In considering the bearing of recent scientific theories on the primal truths of religion, I would first speak of their relation to miracles. Precious far beyond the worth of miracles as attestations of a divine messenger or message is their use in demonstrating the divine personality. So long as the ordinary course of nature is uninterrupted, the tendency of the human mind is to identify God with nature, and nature with self-ordained and self-executing law. But miracle detaches, in our thought, God from nature; presents him as supreme over all physical forces; lays bare to human sight the arm of Omnipotence. Miracle implies a personal volition, under whose mandate the laws that seem to bind all nature in their adamant chains become fluent and ductile. A single perfectly authenticated miracle is a more complete refutation of Pantheism than the strongest array of abstract reasoning.

But does not the admission of the theories under discussion exclude the possibility of miracle? By no means. Were Laplace's, Darwin's, and Lyell's theories not mere hypotheses, but as firmly established as is the law of gravitation, they no more disprove the miracles or the resurrection of Christ than they disprove the death of Julius Caesar or the Punic wars. These theories rest on history, *natural history*, — a most significant term, denoting, not universal observation and experience, but the narratives, the stories, the *history*

of an army of scientific explorers in all parts of the world. These narratives rest for their validity solely on human testimony. But human testimony is no more impaired in authenticity by distance in time than by distance in space. The evangelists are as trustworthy witnesses to the events that occurred, in a remote age, within the range of their personal knowledge, as modern geologists are to the results of excavations made in remote regions under their inspection. The only difference is in favor of the former: for the geologist bears his testimony, not to his own cost and loss, but to his own fame and glory; while the evangelists bore their testimony at the hazard of their lives,—a risk which precludes the possibility of falsehood. We know the general uniformity of nature, which modern scientific theories postulate, only through human testimony, and that same testimony certifies us that the uniformity has at specific epochs been disturbed, that the paralytic has been restored by a word, that the living have walked on the sea, that the dead have risen from the bier and the sepulchre. Wise men who have devoted a life of acute and learned research to the inquiry, are as sure that these marvellous events took place in Judea eighteen centuries ago, as geologists are of the existence of the fossil remains of extinct animals in the earth's crust.

Now no physical theory, however plausible or however firmly established, can negative the historical facts of the New Testament, or disprove the divine personality which they demonstrate. I will not, till I am forced by irresistible evidence, relax my hold, as to my physical descent, on the ancient, hallowed ancestral tree that bears on its trunk the inscription, "Which was the son of Adam, which was the son of God," and trace my pedigree to the lower orders of creation. Yet, if legitimate science shall thus humble me, I will contentedly take my place among these meaner kindred, and will call the lowest and most loathsome of them my brother. But all the while the miracles of Jesus assure me that on the spirit-side the gospel genealogy is the

true one, — that I am still allied to the angels and the child of God. Of this faith I cannot be bereaved, till I am convinced that all history is false, all testimony delusive, all the laws of evidence baseless. And should I be driven to that extremity of pyrrhonism, I will then turn upon the theorists, and deny their facts, which lie open to every doubt and cavil that can be urged against the facts of the New Testament. The development theories, or theory (for they all resolve themselves into one), may be true; but, if there be historical truth, the Christian miracles are also true, and they make the development, not the process of automatic nature, but the chosen method of the Almighty Providence, — a method intrinsically no less worthy of the divine wisdom and love than the separate creation of each specific type.

Similar considerations apply to the divine element in the scriptures, Hebrew and Christian. Take, for instance, the Pentateuch, — of late the target specially selected for the shafts of infidelity. The theology and ethics of these books, compared with the age and culture which gave them birth, are as truly a miracle as was the resurrection of Lazarus. I care nothing about the question of authorship, though there are in behalf of their authorship, in great part at least, by Moses strong considerations which I have not yet seen invalidated. The books are their own evidence, not indeed that Moses wrote them, but that whoever wrote them had a wisdom, an insight, a foresight, of which the source does not exist in this world. This divine element in their authorship is a fact which must be taken in connection with the facts which so strongly agitate the world of science. The latter cannot negative the former. Still less can mere theories, even if they furnish the best possible exposition for the physical facts on which they are based, obliterate the superhuman characteristics of that primeval record. Let the lovers of the Bible wait without fear. It may be that these theories will join the long procession of hypotheses that have culminated and then fallen into oblivion. It may be that they will obtain, on just grounds, an enduring foot-

hold in the realm of science ; and if so, instead of making the Bible or any portion of it obsolete, they will only — as has already been the case with the established astronomical and geological truths which at the outset appalled timid believers — attach a profounder depth of meaning to the declaration, “ In the beginning God created the heavens and the earth,” and a loftier rhythm to the glorious epic of the Mosaic cosmogony.

Leaving now the province of revealed religion, and meeting the theorists on their own ground, I would show you that these development theories, equally with that of specific creation, imply the divine personality.

Pantheism, even could it account for the development of the universe as it is, cannot account for the beginning to be. Self-executing laws must either be necessary and eternal, or else they must have been imposed upon the creation by a supreme Lawgiver. If there was no beginning of the universe, then the universe is eternal, and may be identical with God. But we know that there was a beginning. The shape of an oblate spheroid can have been given to the earth only by rotation on its axis in a semi-fluid state, and within measurable epochs there have been conditions of the earth's surface that imply a far less perfect consolidation than exists at the present moment, thus indicating a period when the process commenced, — an era of creation. Even the silent stars, not in poetry, but in figures that cannot lie, “repeat the story of their birth” ; for their movements are marked, not by the absolute uniformity which we should expect in an eternal system of nature, but by secular deflections and changes, which, though their periods are immense, yet necessarily point back to a beginning, and onward to a consummation of the present order of nature. The nebular theory, in its very terms, implies beginning, creation, literal creation out of nothing ; for nebulous bodies actually existing now, if the telescope does not deceive us, exhibit the alleged world-forming process as still going on under our very eyes. But if matter be uncreated and existent in a

past eternity, if the developments from it take place by innate and inherent laws, and if there be no sovereign will, independent of material forms and laws, then in the depths of a past eternity all possible developments must have taken place, and there could now be nowhere in the universe tokens of infancy, of nonage, of creative processes not yet completed.

Moreover, it is admitted on all hands, as the result of observations that have been in progress from Newton's time to the present day, that planetary and stellar motion takes place, not in a vacuum, but in a resisting and retarding medium. If this be so, the planetary orbits are not strictly circular or elliptical, but spiral, with a diameter decreasing, in an infinitesimal ratio indeed, yet in a ratio that could not have been maintained through a past eternity without the absorption of the planets into the sun. Thus, while, on the one hand, geology is multiplying by myriads the formerly reputed centuries of the earth's duration, astronomy, on the other hand, bears equally conclusive testimony to the creation in time of the worlds that now are, and the commencement of the present laws and system of the universe.

Nay, geology equally refutes the hypothesis of an unbeginning, eternal succession of generations. Through ages whose compass our arithmetic cannot count or span, through successive stages of creation of which the earlier types have no counterpart among the present tribes of being, it carries us back to an era when no foot of beast trod the reeking earth, no fin ploughed the turbid chaos, no wing floated in the murky expanse swept by humid wind-torrents; when no plant had either soil for its root or sunlight to feed its growth; when, to employ terms which the Pentateuch might seem to have appropriated from the results of our latest and ripest science: "The earth was without form and void, and darkness was upon the face of the deep."

Yet unbeginning existence there must be; for though a past eternity baffles our power of conception, any other

hypothesis is simply absurd. "Had there e'er been nought, nought still had been." The starting of either matter or mind into uncaused being is a theory which refutes itself by its mere statement. But if there was a beginning of material being, then there must be an unbeginning Creator. And in that Parent Mind must have dwelt all life, all properties of beings,—the thoughts that were crystallized into worlds and suns and systems,—the wealth of beauty that has gladdened unnumbered races and generations,—the varied attributes whose inspiration has kindled the vital flame, lighted the lamp of reason, inbreathed the soul of love, and furnished all orders of existence, from the archangel to the worm, with powers and faculties appropriate to their life-work; for from the Creator can have proceeded nought that was not first in him, nought but the effluence of his spirit, the outgiving of his attributes.

I have spoken of the beginning of all things. Let us now consider the bearing of general laws on the question of the divine personality. These laws are, to a certain extent, admitted alike by the Pantheist and the Christian theist. Whether they are universal in their operation, or whether they reach only so far as human calculation or expectation can extend, is a question which in this world we probably shall never be able to answer. It is at least a possible theory, that what we call general laws are simply wonted methods of the divine administration within that region of proximate causes which is the sole sphere of human foresight and action,—methods designed to sustain in man that confidence in external nature without which there could be neither industry, enterprise, nor hope in human affairs; and that beyond this sphere the remoter orders of causes have no law but the discretionary Providence of him who is infinite in wisdom. This theory is indeed open to grave doubt; but it cannot be disproved, and to many believers in revelation it seems to be sustained by the infallible authority of holy writ.

But we will leave this debatable ground, and assume that

the ordinary course of nature is governed by general laws, without variableness or exception. These laws either are or are not uniform in all space and time. We cannot demonstrate their uniformity. In space, we cannot yet comprehend in our generalizations such phenomena as the different rates of velocity in the diurnal rotation of the planets, the varying interstellar distances, the single and binary stars, and many anomalous appearances in the field of telescopic vision. In time, there is among physicists a permanent controversy between the uniformitarians and the catastrophists, — the former maintaining that the changes on the earth's surface are all to be attributed to the causes now in operation; the latter referring them to violent catastrophes, each marking the introduction of a new order of physical causes. If the laws of nature are not uniform in all space, and have not been uniform in all time, then supreme mind, sovereign will alone can have created the difference; for it is inconceivable that the automatic tendencies of nature can have obeyed different impulses at different periods, or in different portions of the universe.

Suppose, on the other hand, that the laws of nature are uniform. Law implies a lawgiver. The two ideas are inseparable. An orderly creation, formed and sustained spontaneously, is as absurd a conception as is the spontaneous building of a house or printing of a book. Correlation, harmony, development of form from form and life from life, — the Darwinian theory, equally with the most orthodox hypothesis of the creation, — implies mind, is inconceivable without mind. The tendency of an uncontrolled universe must be to catastrophe and chaos, if indeed by any chance it could ever have emerged from chaos.

Especially does the latest phasis of physical philosophy render this tendency inevitable. We used to consider electricity, caloric, magnetism, and the like, as each a separate force with its own conditions and limits, and, consequently, each a check upon all the rest. We are now taught to recognize but one force in nature, and to regard light and

heat, the galvanic current and the effluence from the storm-cloud, the medium of instantaneous communication between distant continents; and that which conveys sensation to the brain and volition to the limbs, all as mutually convertible forms of one and the same force. There can be among them no system of mutual check and balance. When one of these forms of force exceeds its wonted limits, so far from being repressed by the others, it tends, as is fully ascertained, to convert them to its own similitude, to sweep them into its own vortex. Thus the spontaneous result of every partial excess would be increased and still increasing derangement, so that heat, electricity, or magnetism, once overleaping its normal bounds, would reign ascendant over a devastated universe. This result can be arrested only by him who can say to every else untamable power of nature: "Thus far shalt thou go, and no further."

I pass to another ground of argument. Pantheism infers the spontaneousness of natural phenomena from the unity of the universe; from its harmonious working, like that of a machine operated by internal forces, without those breaks and variations that would imply a discretionary will; from the mutual fitness of part to part, as of one body in which each member bears a fixed and unchangeable relation to every other. But the mutual adaptation of the various parts of the universe may be regarded in two entirely different aspects. One of these aspects is well expressed in that Pantheistic couplet of Pope:—

"All are but parts of one stupendous whole,  
Whose body nature is, and God the soul."

If this be true; if all are parts of a symmetrical whole, fitted each to all the others, as every bolt, screw, rod, and pivot of a steam-engine is to every other; or if some parts are the natural and necessary products of others, as cloth is the product of the combined action of the spindle, loom, and dyeing-vat upon wool,—it might be contended with some show of reason that the whole and all its parts are the result of inherent and self-executing laws; and if we could

only conceive of the beginning to be without an intelligent Creator, the Pantheistic hypothesis would account for things as they are.

But this view is not conformed to the facts of nature. The harmony, the mutual adaptation pervading the universe is not that of the parts of a machine, nor yet that of a machine and its products. There are numerous wholes, numerous microcosms, either entirely independent of one another, or acting on one another generally, not specifically; and these separate wholes and all the parts of each are mutually adapted to one another, as any number of clocks of different workmanship might keep time together, or as musical instruments of every variety of material, compass, and tone might be played in harmony, — an adaptation, not of the joint-and-socket order, but (if I may use the term) of independent parallelism. Now adaptations of this order can be traced only to a designing mind, to a supreme intelligence, adapting the parts one to another, each to all, all to each.

Let me give one or two instances to illustrate my meaning. The eye is adapted to light, utilizes it, makes it a minister of health and joy to the dwellers in air, earth, and sea. But the eye is not the consequence of light. Light could not, even though acting on an interminable series of generations, bore the orifice in the forehead, round the pupil, expand the retina, secrete the several humors, develop the eyelid and its fringe. There is manifestly between light and the eye no more connection of cause and effect than between light and the opera-glass, or of part and part than between the eye and a printed book. Physically, light and the eye belong to entirely different systems, to different orders of causes. Yet their mutual adaptation is as close and perfect as if light were a conscious and beneficent artificer, and had created the eye as a recipient for its joy-giving ministries.

To take another instance, the graminivorous, ruminating animals and the food which sustains them are mutually adapted, by the peculiar and complicated organism of

the teeth, stomach, and entire digestive apparatus of the animals, and by the chemical ingredients and the specific nutritive properties of the grasses. But neither can have been the cause of the other. The grasses could not have given shape to the animal organism, nor could the animals, being what they are, have modified the products of the soil. They belong to different systems, with no mutually causative relations; and yet they are as perfectly adapted each to the other as the parts and parts, or the parts and products, of a machine.

It is by adaptations of this class — adaptations without causation — that “all are parts of one stupendous whole.” Such adaptations grow constantly upon our research. Science does little else than to discover and verify them, and thus to trace in every realm of the universe tokens of the Creator’s determined counsel and purpose. Now these adaptations imply a personal intelligence in their adjustment. I see not how the argument can be evaded. It has, to my own mind, all the clearness and constraining force of a mathematical demonstration. These multiform, yet perfectly accordant harmonies — myriads in number, with never a jarring note — cannot have been evolved by chance, by the fortuitous concourse of atoms, by automatic forces of nature, by law without a lawgiver, by a (so-called) God who awoke not to self-consciousness till the last, the master chord of the universal lyre was stretched and strung. They can have been struck only by a living, conscious, omniscient, almighty Author; and the ceaseless burden of their melody, the sound that goes out through all the earth, the anthem-note that vibrates through the universe is, “The Lord God Omnipotent reigneth.”

You may think it strange that, at a moment when all hearts are moved by alternate hope and fear for our beloved country, I should have chosen for this evening a subject of abstract thought, rather than one derived from the engrossing interests of our land and age. I reply, that had I chosen my theme with express reference to the present state of

our public affairs, I would have chosen that on which I have discoursed—the divine personality. It is because we, as a people, have not recognized it that we are now involved in this fratricidal war. But Atheism and its equivalents in science and in political life have one essential point of difference. Science claims for eternal law the sceptre which with impious hand she would snatch from the Eternal God; political tacticians ignore God by denying the supremacy of his law. We, as a people, have grown atheistical in our politics. We have scoffed at the assertion of a higher than human law. We have refused to believe that God rules among the nations. We have dared his retributive providence. We have vainly imagined that we could build our prosperity on concessions of the right and true, of justice and humanity. We have exalted expediency above principle, the voice of the majority above the will of God. We have claimed for inveterate wrong the prescription which is due only to the ordinances of Heaven. We have sown the wind, and not believed that we should reap the whirlwind.

But now the law which we would not honor by our obedience is vindicating itself in our division and desolation. It is the sword of the Righteous Judge before which our young men have fallen in the field. It is the retribution of violated law that has multiplied the widows and the childless in our land. We are now to learn what we would not learn while we dwelt in quietness,—that law is co-eternal and co-omnipotent with God, and that neither men nor nations can defy it with impunity. Happy will it be for us, if this heavy chastening bring us back to a living faith in Him who alone ruleth in the kingdoms of men.

Brethren, scholars, students and alumni of this university, you are to be, not only leaders in science and literature, but, by virtue of your superior culture, guides in opinion and action in the great concerns of the state. While in the laws of organized being you recognize the supreme will of him by whose pleasure they are and were ordained, see that you equally own his sole sovereignty as the harmony, hope, and joy of living souls.