

SYSTEMATIC THEOLOGY

PART II.

ANTHROPOLOGY

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HAVING considered the doctrines which concern the nature of God and his relation to the world, we come now to those which concern man; his origin, nature, primitive state, probation, and apostasy; which last subject includes the question as to the nature of sin; and the effects of Adam's first sin upon himself and upon his posterity. These subjects constitute the department of Anthropology.

CHAPTER I.

ORIGIN OF MAN.

§ 1. *Scriptural Doctrine.*

The Scriptural account of the origin of man is contained in Genesis i. 26, 27, "And God said, Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth. So God created man in his own image, in the image of God created He him; male and female created He them." And Gen. ii. 7, "And the LORD God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul."

Two things are included in this account; first that man's body was formed by the immediate intervention of God. It did not grow; nor was it produced by any process of development. Secondly, the soul was derived from God. He breathed into man "the breath of life," that is, that life which constituted him a man, a living creature bearing the image of God.

Many have inferred from this language that the soul is an emanation from the divine essence; *particula spiritus divini in corpore inclusa*. This idea was strenuously resisted by the Christian fathers, and rejected by the Church, as inconsistent with the nature of God. It assumes that the divine essence is capable of division; that his essence can be communicated without his attributes, and that it can be degraded as the souls of fallen men are degraded. (See Delitzsch's "Biblical Psychology" in T. and T. Clark's "Foreign Library," and Auberlen in Herzog's "Encyclopädie," article "Geist der Menschen.")

§ 2. *Anti-Scriptural Theories.*

Heathen Doctrine of Spontaneous Generation.

The Scriptural doctrine is opposed to the doctrine held by many of the ancients, that man is a spontaneous production of the earth. Many of them claimed to be γηγενεῖς, αὐτόχθενες, *terrigena*. The earth was assumed to be pregnant with the germs of all living organisms, which were quickened into life under favourable circumstances; or it was regarded as instinct with a productive life to which is to be referred the origin of all the plants and animals living on its surface. To this primitive doctrine of antiquity, modern philosophy and science, in some of their forms, have returned. Those who deny the existence of a personal God, distinct from the world, must of course deny the doctrine of a creation *ex nihilo* and consequently of the creation of man. The theological view as to the origin of man, says Strauss, "rejects the standpoint of natural philosophy and of science in general. These do not admit of the immediate intervention of divine causation. God created man, not as such, or, 'quatenus infinitus est, sed quatenus per elementa nascentis telluris explicatur.' This is the view which the Greek and Roman philosophers, in a very crude form indeed, presented, and against which the fathers of the Christian Church earnestly contended, but which is now the unanimous judgment of natural science as well as of philosophy."¹ To the objection that the earth no longer spontaneously produces men and irrational animals, it is answered that many things happened formerly that do not happen in the present state of the world. To the still more obvious objection that an infant man must have perished without a mother's care, it is answered that the infant floated in the ocean of its birth, enveloped in a covering, until it reached the development of a child two years old; or it is said that philosophy can only establish the general fact as to the way in which the human race originated, but cannot be required to explain all the details.

Modern Doctrine of Spontaneous Generation.

¹ *Dogmatik*, vol. i. p. 680.

Although Strauss greatly exaggerates when he says that men of science in our day are unanimous in supporting the doctrine of spontaneous generation, it is undoubtedly true that a large class of naturalists, especially on the continent of Europe, are in favour of that doctrine. Professor Huxley, in his discourse on the “Physical Basis of Life,” lends to it the whole weight of his authority. He does not indeed expressly teach that dead matter becomes active without being subject to the influence of previous living matter; but his whole paper is designed to show that life is the result of the peculiar arrangement of the molecules of matter. His doctrine is that “the matter of life is composed of ordinary matter, differing from it only in the manner in which its atoms are aggregated.”² “If the properties of water,” he says, “may be properly said to result from the nature and disposition of its component molecules, I can find no intelligible ground for refusing to say that the properties of protoplasm result from the nature and disposition of its molecules.”³ In his address before the British Association, he says that if he could look back far enough into the past he should expect to see “the evolution of living protoplasm from not living matter.” And although that address is devoted to showing that spontaneous generation, or Abiogenesis, as it is called, has never been proved, he says, “I must carefully guard myself against the supposition that I intend to suggest that no such thing as Abiogenesis has ever taken place in the past or ever will take place in the future. With organic chemistry, molecular physics, and physiology yet in their infancy, and every day making prodigious strides, I think it would be the height of presumption for any man to say that the conditions under which matter assumes the properties we call ‘vital,’ may not some day be artificially brought together.”⁴ All this supposes that life is the product of physical causes; that all that is requisite for its production is “to bring together” the necessary conditions.

Mr. Mivart, while opposing Mr. Darwin’s theory, not only maintains that the doctrine of evolution is “far from any necessary opposition to the most orthodox theology,” but adds that “the same may be said of spontaneous generation.”⁵ As chemists have succeeded in producing urea, which is an animal product, he thinks it not unreasonable that they may produce a fish.

But while there is a class of naturalists who maintain the doctrine of spontaneous generation, the great body even of those who are the most advanced admit that *omne vivum ex vivo*, so far as science yet knows, is an established law of nature. To demonstrate this is the object of Professor Huxley’s important address just referred to, delivered before the British Association in September, 1870. Two hundred years ago, he tells us, it was commonly taken for granted that the insects which made their appearance in decaying animal and vegetable substances were spontaneously produced. Redi, however, an Italian naturalist, about the middle of the seventeenth century, proved that if such decaying matter were protected by a piece of gauze admitting the air but excluding flies, no such insects made their appearance. “Thus, the hypothesis that living matter always arises by the agency of preëxisting living matter, took definite shape; and had henceforward a right to be considered and a claim to be refuted, in each particular case, before the production of living matter in any other way could be admitted by careful reasoners.”⁶ This conclusion has been more and more

² *Lay Sermons and Addresses*, London, 1870, p. 144.

³ *Ibid.* p. 151.

⁴ *Athenæum*, September 17, 1870, p. 376.

⁵ *Genesis of Species*, by St. George Mivart, F. R. S. p. 266.

⁶ *Athenæum*, September 17, 1870, p. 374.

definitely settled by all the investigations and experiments which have been prosecuted from that day to this. It has been proved that even the infusorial animalcules, which the most powerful microscopes are necessary to detect, never make their appearance when all preëxisting living germs have been carefully excluded. These experiments, prosecuted on the very verge of nonentity, having for their subject-matter things so minute as to render it doubtful whether they were anything or nothing, and still more uncertain whether they were living or dead, are reviewed in chronological order by Professor Huxley, and the conclusion to which they lead fully established.⁷ This is confirmed by daily experience. Meat, vegetables, and fruits are preserved to the extent of hundreds of tons every year. "The matters to be preserved are well boiled in a tin case provided with a small hole, and this hole is soldered up when all the air in the case has been replaced by steam. By this method they may be kept for years, without putrefying, fermenting, or getting mouldy. Now this is not because oxygen is excluded, inasmuch as it is now proved that free oxygen is not necessary for either fermentation or putrefaction. It is not because the tins are exhausted of air, for Vibriones and Bacteria live, as Pasteur has shown, without air or free oxygen. It is not because the boiled meats or vegetables are not putrescible or fermentable, as those who have had the misfortune to be in a ship supplied with unskilfully closed tins well know. What is it, therefore, but the exclusion of germs? I think the Abiogenists are bound to answer this question before they ask us to consider new experiments of precisely the same order."⁸

But admitting that life is always derived from life, the question still remains, Whether one kind of life may not give rise to life of a different kind? It was long supposed that parasites derived their life from the plant or animal in which they live. And what is more to the point, it is a matter of familiar experience "that mere pressure on the skin will give rise to a corn" which seems to have a life of its own; and that tumours are often developed in the body which acquire, as in the case of cancer, the power of multiplication and reproduction. In the case of vaccination, also, a minute particle of matter is introduced under the skin. The result is a vesicle distended with vaccine matter "in quantity a hundred or a thousand-fold that which was originally inserted." Whence did it come? Professor Huxley tells us that it has been proved that "the active element in the vaccine lymph is non-diffusible, and consists of minute particles not exceeding 1/20000 of an inch in diameter, which are made visible in the lymph by the microscope. Similar experiments have proved that two of the most destructive of epizootic diseases, sheep-pox and glanders, are also dependent for their existence and their propagation upon extremely small living solid particles, to which the title of *microzymes* is applied." The question, he says, arises whether these particles are the result of *Homogenesis*, or of *Xenogenesis*, *i.e.*, Are they produced by preëxisting living particles of the same kind? or, Are they a modification of the tissues of the bodies in which they are found? The decision of this question has proved to be a matter of vast practical importance. Some years since diseases attacked the grape-vine and the silk-worm in France, which threatened to destroy two of the most productive branches of industry in that country. The direct loss to France from the silk-worm disease alone, in the course of seventeen years, is estimated at two hundred and fifty millions of dollars. It was discovered that these diseases of the vine and worm, which were both infectious and contagious,

⁷ What Charlton Bastian, who contested the conclusions of Professor Huxley, took to be living organisms, turned out to be nothing but minute follicles of glass.

⁸ Huxley's *Address*, as reported in the *London Athenæum*, September 17, 1870, p. 376.

were due to living organisms, by which they were propagated and extended. It became a matter of the last importance to determine whether these living particles propagated themselves, or whether they were produced by the morbid action of the plant or animal. M. Pasteur the eminent naturalist, sent by the French government to investigate the matter, after laborious research decided that they were independent organisms propagating themselves and multiplying with astonishing rapidity. “Guided by that theory, he has devised a method of extirpating the disease, which has proved to be completely successful wherever it has been properly carried out.”⁹

Professor Huxley closes his address by saying that he had invited his audience to follow him “in an attempt to trace the path which has been followed by a scientific idea, in its slow progress from the position of a probable hypothesis to that of an established law of nature.” Biogenesis, then, according to Huxley, is an established law of nature.¹⁰

Professor Tyndall deals with this subject in his lecture delivered in September, 1870, on “The Scientific Uses of the Imagination.” He says that the question concerning the origin of life is, Whether it is due to a creative fiat, ‘Let life be!’ or to a process of evolution. Was it potentially in matter from the beginning? or, Was it inserted at a later period? However the convictions here or there may be influenced, he says, “the process must be slow which commends the hypothesis of natural evolution to the public mind. For what are the core and essence of this hypothesis? Strip it naked, and you stand face to face with the notion that not alone the more ignoble forms of animalcular or animal life, not alone the nobler forms of the horse and lion, not alone the exquisite and wonderful mechanism of the human body, but that the human mind itself — emotion, intellect, will, and all their phenomena — were once latent in a fiery cloud. Surely the mere statement of such a notion is more than a refutation. I do not think that any holder of the evolution hypothesis would say that I overstate it or overstrain it in any way. I merely strip it of all vagueness, and bring before you, unclothed and unvarnished, the notions by which it must stand or fall. Surely these notions represent an absurdity too monstrous to be entertained by any sane mind.”¹¹ Professor Tyndall, however, as well as Professor Huxley, is on both sides of this question. Materialism, with its doctrine of spontaneous generation, is thus monstrous and absurd, only on the assumption that matter is matter. If you only spiritualize matter until it becomes mind, the absurdity disappears. And so do materialism, and spontaneous generation, and the whole array of scientific doctrines. If matter becomes mind, mind is God, and God is everything. Thus the monster Pantheism swallows

⁹ *London Athenæum*, September 17, 1870, p. 378. In view of the facts stated in the text Professor Huxley asks, “How can we over-estimate the value of that knowledge of the nature of epidemic and epizootic diseases, and consequently, of the means of checking or eradicating them, the dawn of which has assuredly commenced? Looking back no further than ten years, it is possible to select three (1863, 1864, and 1869) in which the total number of deaths from scarlet fever alone amounted to ninety thousand. That is the return of killed, the maimed and disabled being left out of sight. . . . The facts which I have placed before you must leave the least sanguine without a doubt that the nature and causes of this scourge will one day be as well understood as those of the Pébrine (the silk-worm disease) and that the long-suffered massacre of our innocents will come to an end.”

¹⁰ In quoting Professor Huxley as an authority on both sides of the question of spontaneous generation, no injustice is done that distinguished naturalist. He wishes to believe that doctrine. His principles lead to that conclusion. But, as a question of scientific fact, he is constrained to admit that all the evidence is against it. He, therefore, does not believe it, although he thinks it may be true. Hence Mr. Mivart says that Professor Huxley and Tyndall, while they dissent from Dr. Bastian’s conclusions in favour of spontaneous generation, nevertheless, “agree with him in principle, though they limit the evolution of the organic world from the inorganic to a very remote period of the world’s history.” *Genesis of Species*, p. 266, note.

¹¹ *Athenæum*, September 24, 1870, p. 409.

up science and its votaries. We do not forget that the naturalist, after spending his life in studying matter, comes to the conclusion that “matter is nothing,” that the “Supreme Intelligence” *is* the universe.¹² Thus it is that those who overstep the limits of human knowledge, or reject the control of primary truths, fall into the abyss of outer darkness.

The way Professor Tyndall puts the matter is this:¹³ “These evolution notions are absurd, monstrous, and fit only for the intellectual gibbet in relation to the ideas concerning matter which were drilled into us when young. Spirit and matter have ever been presented to us in the rudest contrast; the one as all-noble, the other as all-vile.” If instead of these perverted ideas of material and spirit, we come “to regard them as equally worthy and equally wonderful; to consider them, in fact, as two opposite faces of the same great mystery,” as different elements, of “what our mightiest spiritual teacher would call the Eternal Fact of the Universe,” then the case would be different. It would no longer be absurd, as Professor Tyndall seems to think, for mind to become matter or matter mind, or for the phenomena of the one to be produced by the forces of the other. The real distinction, in fact, between them would be done away. “Without this total revolution,” he says, “of the notions now prevalent, the evolution hypothesis must stand condemned; but in many profoundly thoughtful minds such a revolution has already occurred.” We have, then, the judgment of Professor Tyndall, one of the highest authorities in the scientific world, that if matter be what all the world believes it to be, materialism, spontaneous generation, and evolution, or development, are absurdities “too monstrous to be entertained by any sane mind.”

We can cite his high authority as to another point. Suppose we give up everything; admit that there is no real distinction between matter and mind; that all the phenomena of the universe, vital and mental included, may be referred to physical causes; that a free or spontaneous act is an absurdity; that there can be no intervention of a controlling mind or will in the affairs of men, no personal existence of man after death, — suppose we thus give up our morals and religion, all that ennobles man and dignifies his existence, what do we gain? According to Professor Tyndall, nothing.¹⁴ “The evolution hypothesis,” he tells us, “does not solve — it does not profess to solve — the ultimate mystery of this universe. It leaves that mystery untouched. At bottom, it does nothing more than ‘transpose the conception of life’s origin to an indefinitely distant past.’ Even granting the nebula and its potential life, the question, ‘Whence came they?’ would still remain to baffle

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Contributions to the Theory of Natural Selection, pp. 363-368. Mr. Wallace thinks that “the highest fact of science, the noblest truth of philosophy,” may be found expressed in his following words of an American poetess: —

“God of the Granite and the Rose!
Soul of the Sparrow and the Bee!
The mighty tide of Being flows
Through countless channels, Lord from thee
It leaps to life in grass and flowers,
Through every grade of being runs,
While from Creation’s radiant towers
Its glory flames in Stars and Suns.”

¹³ *Athenæum*, September 24, 1870, p. 409.

¹⁴ *The London Athenæum*, September 24, 1870, pp. 407-409.

and bewilder us.” If we must admit the agency of will, “caprice,” as Professor Tyndall calls it, billions of ages in the past, why should it be unphilosophical to admit it now?

It is very evident, therefore, that the admission of the primary truths of the reason — truths which, in point of fact, all men do admit — truths which concern even our sense perceptions, and involve the objective existence of the material world, necessitates the admission of mind, of God, of providence, and of immortality. Professor Tyndall being judge, materialism, spontaneous generation, the evolution of life, thought, feeling, and conscience out of matter, are absurdities “too monstrous to be entertained by any sane mind, unless matter be spiritualized into mind, — and then everything is God, and God is everything.

Theories of Development.

Lamarck.

Lamarck, a distinguished French naturalist, was the first of modern scientific men who adopted the theory that all vegetables and animals living on the earth, including man, are developed from certain original, simple germs. This doctrine was expounded in his “*Zoölogie Philosophique*,” published in 1809. Lamarck admitted the existence of God, to whom he referred the existence of the matter of which the universe is composed. But God having created matter with its properties, does nothing more. Life, organisms, and mind are all the product of unintelligent matter and its forces. All living matter is composed of *cellular tissue*, consisting of the aggregation of minute cells. These cells are not living in themselves, but are quickened into life by some ethereal fluid pervading space, such as heat and electricity. Life, therefore, according to this theory, originates in spontaneous generation.

Life, living cells or tissues, having thus originated, all the diversified forms of the vegetable and animal kingdoms have been produced by the operation of natural causes; the higher, even the highest, being formed from the lowest by a long-continued process of development.

The principles of Lamarck’s theory “are involved in the three following propositions: —

“1. That any considerable and permanent change in the circumstances in which a race of animals is placed, superinduces in them a real change in their wants and requirements.

“2. That this change in their wants necessitates new actions on their part to satisfy those Wants, and that finally new habits are thus engendered.

“3. that these new actions and habits necessitate a greater and more frequent use of particular organs already existing, which thus become strengthened and improved; or the development of new organs when new wants require them; or the neglect of the use of old organs, which may thus gradually decrease and finally disappear.”¹⁵

Vestiges of Creation.

¹⁵ William Hopkins, *F. R. S. Fraser’s Magazine*, June 1860, 151.

Some thirty years since a work appeared anonymously, entitled “The Vestiges of Creation,” in which the theory of Lamarck in essential features was reproduced. The writer agreed with his predecessor in admitting an original creation of matter; in referring the origin of life to physical causes; and in deriving all the general species and varieties of plants and animals by a process of natural development from a common source. These writers differ in the way in which they carry out their common views and as to the grounds which they urge in their support.

The author of the “Vestiges of Creation” assumes the truth of the nebular hypothesis, and argues from analogy that as the complicated and ordered systems of the heavenly bodies are the result of physical laws acting on the original matter pervading space, it is reasonable to infer that the different orders of plants and animals have arisen in the same way. He refers to the gradation observed in the vegetable and animal kingdoms; the simpler everywhere preceding the more complex, and the unity of plan being preserved throughout. He lays great stress also on the foetal development of the higher orders of animals. The human foetus, for example, assuming in succession the peculiarities of structure of the reptile, of the fish, of the bird, and of man. This is supposed to prove that man is only a more perfectly developed reptile; and that the orders of animals differ simply as to the stage they occupy in this unfolding series of life. As the same larva of the bee can be developed into a queen, a drone, or a worker, so the same living cell can be developed into a reptile, a fish, a bird, or a man. There are, however, the author admits, interruptions in the scale; species suddenly appearing without due preparation. This he illustrates by a reference to the calculating machine, which for a million of times will produce numbers in regular series, and then for once produce a number of a different order; thus the law of species that like shall beget like may hold good for an indefinite period, and then suddenly a new species be begotten. These theories and their authors have fallen into utter disrepute among scientific men, and have no other than a slight historical interest.

Darwin.

The new theory on this subject proposed by Mr. Charles Darwin, has, for the time being, a stronger hold on the public mind. He stands in the first rank of naturalists, and is on all sides respected not only for his knowledge and his skill in observation and description, but for his frankness and fairness. His theory, however, is substantially the same with those already mentioned, inasmuch as he also accounts for the origin of all the varieties of plants and animals by the gradual operation of natural causes. In his work on the “Origin of Species” he says: “I believe that animals are descended from at most only four or five progenitors; and plants from an equal or lesser number.” On the same page,¹⁶ however, he goes much further, and says: “Analogy would lead me one step further, namely, to the belief that all animals and plants are descended from some one prototype;” and he adds that “all the organic beings, which have ever lived on this earth, may be descended from some one primordial form.”¹⁷ The point of most importance in which Darwin differs from his predecessors is, that he starts with life, they with dead matter. They undertake to account for the origin of life by physical causes; whereas he assumes the existence of living cells or germs. He

¹⁶ *The Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, by Charles Darwin, M. A., F. R. S., etc., fifth edition (tenth thousand). London, 1869, p. 572.

¹⁷ *Ibid.* p. 573.

does not go into the question of their origin. He assumes them to exist; which would seem of necessity to involve the assumption of a Creator. The second important point of difference between the theories in question is, that those before mentioned account for the diversity of species by the inward power of development, a *vis a tergo* as it were, *i.e.*, a struggle after improvement; whereas Darwin refers the origin of species mainly to the laws of nature operating *ab extra*, killing off the weak or less perfect, and preserving the stronger or more perfect. The third point of difference, so far as the author of the “Vestiges of Creation” is concerned, is that the latter supposes new species to be formed suddenly; whereas Darwin holds that they arise by a slow process of very minute changes. They all agree, however, in the main point that all the infinite diversities and marvellous organisms of plants and animals, from the lowest to the highest, are due to the operation of unintelligent physical causes.

The Darwinian theory, therefore, includes the following principles: —

First, that like begets like; or the law of heredity, according to which throughout the vegetable and animal world, the offspring is like the parent.

Second, the law of variation; that is, that while in all that is essential the offspring is like the parent, it always differs more or less from its progenitor. These variations are sometimes deteriorations, sometimes indifferent, sometimes improvements; that is, such as enable the plant or animal more advantageously to exercise its functions.

Third, that as plants and animals increase in a geometrical ratio, they tend to outrun enormously the means of support, and this of necessity gives rise to a continued and universal struggle for life.

Fourth, in this struggle the fittest survive; that is, those individuals which have an accidental variation of structure which renders them superior to their fellows in the struggle for existence, survive, and transmit that peculiarity to their offspring. This is “natural selection;” *i.e.*, nature, without intelligence or purpose, selects the individuals best adapted to continue and to improve the race. It is by the operation of these few principles that in the course of countless ages all the diversified forms of vegetables and animals have been produced.

“It is interesting,” says Darwin, “to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us. These laws, taken in the largest sense, being Growth with Reproduction; Inheritance which is almost implied by reproduction; Variability from the indirect and direct action of the conditions of life, and from use and disuse; a Ratio of Increase so high as to lead to a Struggle for Life, and as a consequence to Natural Selection, entailing Divergence of Character and the Extinction of less improved forms. Thus, from the war of nature, from famine and death, the most exalted object which we are capable of conceiving, namely, the production of the higher animals, directly follows.”¹⁸

¹⁸ *Origins of Species*, p. 579.

Remarks on the Darwinian Theory.

First, it shocks the common sense of unsophisticated men to be told that the whale and the humming-bird, man and the mosquito, are derived from the same source. Not that the whale was developed out of the humming-bird, or man out of the musquito, but that both are derived by a slow process of variations continued through countless millions of years. Such is the theory with its scientific feathers plucked off. No wonder that at its first promulgation it was received by the scientific world, not only with surprise, but also with indignation.¹⁹ The theory has, indeed, survived this attack. Its essential harmony with the spirit of the age, the real learning of its author and advocates, have secured for it an influence which is widespread, and, for the time, imposing.

A second remark is that the theory in question cannot be true, because it is founded on the assumption of an impossibility. It assumes that matter does the work of mind. This is an impossibility and an absurdity in the judgment of all men except materialists; and materialists are, ever have been, and ever must be, a mere handful among men, whether educated or uneducated. The doctrine of Darwin is, that a primordial germ, with no inherent intelligence, develops, under purely natural influences, into all the infinite variety of vegetable and animal organisms, with all their complicated relations to each other and to the world around them. He not only asserts that all this is due to natural causes; and, moreover, that the lower impulses of vegetable life pass, by insensible gradations, into the instinct of animals and the higher intelligence of man, but he argues against the intervention of mind anywhere in the process. God, says Lamarck, created matter; God, says Darwin, created the unintelligent living cell; both say that, after that first step, all else follows by natural law, without purpose and without design. No man can believe this, who cannot also believe that all the works of art, literature, and science in the world are the products of carbonic acid, water, and ammonia.

The Atheistic Character of the Theory.

Thirdly, the system is thoroughly atheistic, and therefore cannot possibly stand. God has revealed his existence and his government of the world so clearly and so authoritatively, that any philosophical or scientific speculations inconsistent with those truths are like cobwebs in the track of a tornado. They offer no sensible resistance. The mere naturalist, the man devoted so exclusively to the study of nature as to believe in nothing but natural causes, is not able to understand the strength with which moral and religious convictions take hold of the minds of men. These convictions, however,

¹⁹ See *Proceedings of the Literary and Philosophical Society of Liverpool during the Fiftieth Session*, 1860-61. This volume contains a paper on Darwin's theory by the president of the society, the Rev. H. H. Higgins, in which he says that he considered the paper of M. Agassiz, inserted in the *Annals and Magazine of Natural History*, against Darwin, "to be quite unworthy of so distinguished a naturalist" (p.42). On a subsequent page he gives a selection from Agassiz's disparaging remarks. The same volume contains a paper from Dr. Collingwood in defence of Agassiz and his criticism. In the review of the argument he says he will pass over Agassiz's "caustic remarks upon the confusion of ideas implied on the general terms, *variability of species*," and also "his categorical contradictions of many of Darwin's fundamental statements; but never was a theory more solely beset than is that of Darwin by the repeated assaults of such a giant in palæontology as Agassiz. Statement after statement, by which the whole theory hangs together, is assailed and impugned, — stone after stone of the Darwinian structure trembles before the battering-ram of the champion of species. Out of twelve such reiterated attacks, ten of which are purely palæontological, and stand unchallenged only one has called for remarks, and that one, perhaps, the least important" (p.87). Agassiz is not a theologian; he opposes the theory as a scientific man and on scientific grounds.

are the strongest, the most ennobling, and the most dangerous for any class of men to disregard or ignore.

In saying that this system is atheistic, it is not said that Mr. Darwin is an atheist. He expressly acknowledges the existence of God; and seems to feel the necessity of his existence to account for the origin of life. Nor is it meant that every one who adopts the theory does it in an atheistic sense. It has already been remarked that there is a theistic and an atheistic form of the nebular hypothesis as to the origin of the universe; so there may be a theistic interpretation of the Darwinian theory. Men who, as the Duke of Argyle, carry the reign of law into everything, affirming that even creation is by law, may hold, as he does, that God uses everywhere and constantly physical laws, to produce not only the ordinary operations of nature, but to give rise to things specifically new, and therefore to new species in the vegetable and animal worlds. Such species would thus be as truly due to the purpose and power of God as though they had been created by a word. Natural laws are said to be to God what the chisel and the brush are to the artist. Then God is as much the author of species as tile sculptor or painter is the author of the product of his skill. This is a theistic doctrine. That, however, is not Darwin's doctrine. His theory is that hundreds or thousands of millions of years ago God called a living germ, or living germs, into existence, and that since that time God has no more to do with the universe than if He did not exist. This is atheism to all intents and purposes, because it leaves the soul as entirely without God, without a Father, Helper, or Ruler, as the doctrine of Epicurus or of Comte. Darwin, moreover, obliterates all the evidences of the being of God in the world. He refers to physical causes what all theists believe to be due to the operations of the Divine mind. There is no more effectual way of getting rid of a truth than by rejecting the proofs on which it rests. Professor Huxley says that when he first read Darwin's book he regarded it as the death-blow of teleology, *i.e.*, of the doctrine of design and purpose in nature.²⁰ Büchner, to whom the atheistical character of a book is a recommendation, says that Darwin's "theory is the most thoroughly naturalistic that can be imagined, and far more atheistic than that of his despised (*verrufenen*) predecessor Lamarck, who admitted at least a general law of progress and development; whereas, according to Darwin, the whole development is due to the gradual summation of innumerable minute and accidental natural operations."²¹

Mr. Darwin argues against any divine intervention in the course of nature, and especially in the production of species. He says that the time is coming when the doctrine of special creation, that is, the doctrine that God made the plants and animals each after its kind, will be regarded as "a curious illustration of the blindness of preconceived opinion. These authors," he adds, "seem no

²⁰ *Criticisms on "The Origin of Species;" in his Lay Sermons and Addresses*, p. 330. "The teleological argument," he says, "runs thus: An organ or organism is precisely fitted to perform a function or purpose; therefore it was specially constructed to perform that function. In Paley's famous illustration, the adaptation of all the parts of the watch to the function, or purpose, of showing the time, is held to be evidence that the watch was specially contrived to that end; on the ground that the only cause we know, competent to produce such an effect as a watch which shall keep time, is a contriving intelligence adapting the means directly to that ends." Suppose, however, he goes on to say, it could be shown that the watch was the product of a structure which kept time poorly; and that of a structure which was no watch at all, and that of a mere revolving barrel, then "the force of Paley's argument would be gone;" and it would be "demonstrated that an apparatus thoroughly well adapted to a particular purpose might be the result of a method of trial and error worked by unintelligent agents, as well as of the direct application of the means appropriate to that end, by an intelligent agent." This is precisely what he understands Darwin to have accomplished.

²¹ *Sechs Vorlesungen über die Darwin'sche Theorie*, etc., by Ludwig Büchner, Zweite Auflage, Leipzig, 1868, p. 125.