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I.

THE FUTURE OF HUMANITY ON EARTH.

TE would be a bold thinker who should undertake to fore-H tell the fortunes and the state of an American Republic five or ten centuries hence :---who should attempt not only to describe the type or types of government which may then exist here, but also to delineate the personal characteristics of the men and women of that distant era, the social life of the period, the grade of development and of civilization which our humanity will then have attained on this broad and elect continent. How much bolder would he be who, in full view of the present medley of antagonistic elements, religious, political, social, in European society and life, should propose to tell us what Europe will have become, after the agitations and the mutations of the next thousand years! Bolder still would he be deemed who should attempt to prognosticate the future at that distant period, not of any single nation or continent, but of all the continents and all the races of mankind : who should assume to say what this world, in its controlling elements and tendencies, its prevailing spirit and principles and life, will be at the end of five or ten more centuries of activity and of growth. But would not he be boldest of alldaring beyond all comparison-who should venture to prophesy concerning the career and development of our humanity, not for any such given period however prolonged, but down to the last century and the last hour of recorded time: unfolding before our vision that ultimate issue in which the whole of human life on earth shall be consummated, in the decisive day BENHAM. American edition. 12mo, pp. xvi, 395. New York: Macmillan & Co. 1880.

In its structure this is a rare book. It is first the hand of the noble husband and father, the loved and honored Primate of all England, that sketches for us the characters of his wife and son. With perfect simplicity and naturalness, with thorough, tender, and deeply chastened manliness, he traces the most Christian and womanly life of the "help meet for him," with whose companionship he had been blessed for thirty-five years. His home as Master of Rugby, Dean of Carlisle, Bishop of London, and Archbishop of Canterbury, was, from the beginning of his married life, one of the conspicuous homes of England. Yet while true to every responsibility growing out of such influential and exalted station, it never lost its character as a genuine and healthful home for all its inmates, in which all that is excellent in nature and precious in grace was prized and cherished, and in unusual degree exemplified. Enriched with honors and with wide and lofty opportunities, it was refined by unusual chastenings. A deeply interesting and touching part of the volume is Mrs. Tait's own account of the extraordinary trial that came upon them when in five weeks five little daughters were swept away by a flood of scarlet fever. Grace sufficient was given to the stricken parents, even for those awful days. Faith triumphed then, and the subsequent life of the household showed in many ways how real, and strong, and manifold were the ties that bound it to heaven. The symmetrical and earnest character of the only son, gave bright promise of wide and solid usefulness-a promise blighted by his early death.

The work of the editor of this volume is very delicately and modestly done, exhibiting always and only its proper subjects. The sketch is an instructive exhibition of the way in which, and the extent to which, piety may pervade and glorify home life, and flow out in quiet, constant, inventive beneficence. This most attractive volume, the American edition of which is gracefully introduced by Bishop Huntington, cannot fail to become a favorite in many homes of all communions.

C. A. A.

III.—SYSTEMATIC THEOLOGY.

NATURAL SCIENCE AND RELIGION. Two Lectures delivered to the Theological School of Yale College by Asa GRAY. Lecture I. "Scientific Beliefs." Lecture II. "The Relations of Scientific to Religious Belief." New York: Charles Scribner's Sons. 1880.

In the present unsettled state of opinion and feeling on "the relations of scientific and religious belief," Professor Asa Gray is one of the few men whose views are of general interest. He is a skilled naturalist, a thorough evolutionist of the Darwinian variety, and at the same time a thoroughly loyal theist and Christian. He, as few others, is able to see somewhat on both sides of the question, and sympathize with the views and feelings of parties who are for the most part blindly assaulting each other across an apparently impassable gulf. We have no sympathy with those who maintain that scientific theories of evolution are necessarily atheistic. No man has proved this, and the presumptuous assertion of it has availed only to compromise its authors and the cause they have unwisely maintained. On the other hand, however, we do thoroughly sympathize with the words of caution with which President Porter concludes his article on the "Newest Atheism," in the May number of the Princeton Review, wherein he exhorts his friends, the theistic and Christian Evolutionists, who accept evolution as "a working hypothesis," to consider whether they do not therein "commit themselves to the merciless grasp of a logic from which it may not be easy to escape."

The Christian Theist has no motive to dissent from the scientific principle of the uninterrupted *Continuity of Causation* throughout the universe. Every event, without a possible exception, has, doubtless, its causes and its effects, and the entire universe is a coherent system of causes and effects in which absolute discontinuities are unthinkable. Hence theologians agree with all scientists that every event which can possibly have existed has had its place in this system of causes, and is, therefore, always capable of a rational explanation by a competently informed intelligence, *i. e.*, it will be found referable to adequate causes, each acting according to the law of its kind, *e. g.*, the law of a physical force, or the law of a free rational will.

Nor has the Theist any objection to the scientific principle of the absolutely universal law of the Uniformity of Nature when that law is truly expounded. In the sense that the course of nature presents successively recurring series of absolutely similar events, there never has been any uniformity in nature. There never were two days nor two years, nor two leaves, nor two living things in all respects alike in succession, because the astronomical and the terrestrial conditions under which they are produced are continually changing. This no evolutionist will deny. The "law of the uniformity of nature," as Dr. Gray argues, is simply, that the same causes acting under the same conditions always produce the same effects. But if the conditions vary, or if new con-causes are added to those previously at work, of course the effects vary. In the absolute creation ex nihilo nature received its law and its "uniformities" were inaugurated. But in no subsequent miracle was the *law* of uniformity violated. A miracle is simply the introduction at a single point into the system of natural causes, of a new supernatural con-cause designed so to work together with the already working natural causes that the *resultant* should be to intelligent, moral agents a sign of God's presence, or power, or authority. Neither does any act of mediate creation violate this law of uniformities. When God first quickened protoplasm with life it involved an interruption of no established uniformity. Introducing a new force among those pre-existing, He provided that as of old, causes under new and everchanging conditions should produce new and everchanging effects.

Nor is there anything incongruous with Christian Theism in the more comprehensive and ultimate teleology which modern science tends to introduce. The old teleologists, we confess, confined their view too much to special organs and their intrinsic ends, overlooking the fact that they were produced by cosmical forces operating according to general laws which could have their ultimate end only in the end of the universe itself. The prevailing scientific view of the absolute unity of the universe and of the subordination of the parts to the whole, is in its essence one with that held by Augustinian theologians for ages.* The universe is an intellectual system. God has formed one coherent plan, comprehending in all their relations whatsoever comes to pass. The whole is a continuous system, every part being at once end and means and subordinate to the end of the whole. Hence the history of the universe in all its provinces is an ideal evolution, a providential unfolding of a general plan, in which general designs and methods converge in all directions to the ultimate end of the whole. The special convergence of parts to a special end can be understood, of course, by one who is unable to discern the relations of the part to the general plan. Yet, if one confines his attention to the special ends of parts, he loses sight of the higher adaptation of those general laws and forms and methods which determine the parts and explain their relation to the whole. While, on the other hand, they who, rejecting the aid of revelation, seek only to discover the relation of the parts to the absolute whole, necessarily end in agnosticism. For if the lesser and more obvious indication of purpose is ignored, the higher and ultimate must be out of our reach.

^{*} Bib. Sac., Jan., 1880.

Darwin illustrates the difference between the old teleology and his view of the method of nature by the contrast between a special and a general providence. But these are not alternative views. They are logically inseparable. The universe is the product of intelligence, and therefore a coherent whole. A general providence involves a special intention of every part, designating it to its place in the system to the promotion of the general end. And an intelligent destination of every part to its special end involves the co-ordination of every part to the general end.

Nor, finally, has Christian theism any essential objection to the doctrine of the descent of species from species, as of individuals from individuals, if it be, indeed, capable of proof, the case of man, because of the specific assertions of Scripture, being excepted. Very evidently it is not beyond the power of the Creator, nor incongruous with what appear to be His methods on the whole, for Him to engraft, by a direct act of His will, new and higher powers upon an organism produced by natural processes originated in a previous creation. This comes precisely under the definition of "mediate creation," as to which philosophers, theologians, and scientists have all alike consented.

But that which Philosophy and Religion alike reject is the essential logic of this theory of evolution, the very essence of which involves the bringing, by natural process, of the living out of the non-living; the conscious from the unconscious; the rational from the irrational; the living soul, the spontaneous will, the voice of conscience from the mechanism of organs, which, in their turn, had their origin in the mechanism of molecules. The cause which produces the series of offspring is in the constitution of the original germ. "Natural Selection" merely removes the "unfit" out of the way, and thus leaves the "fittest" grouped in genera and species. Hence the theory necessarily implies that the soul of man, with its wonderful essential attributes, was virtually present in the primeval germ, and has been transmitted down through all the intermediate stages; or otherwise, that life comes from death, consciousness from unconsciousness; and reason, will, and conscience from mechanical force. This is Evolution. The word means it. The leading advocates argue it. The system necessarily implies it. This is Herbert Spencer's formula for the evolution of all being: progress "from an indefinite incoherent homogeneity (chaos) to a definite coherent heterogeneity (cosmos)." Against this reason and religion will always protest.

That cannot be evolved out of a cause which was not originally in it. But soul and reason, and will and conscience were not in the primeval tadpole. Therefore, where-soever they subsequently appear, they must have been implanted by God from without. But this is not "evolution," and should not be called so.

Professor Gray claims to be a thorough Evolutionist of the Darwinian variety, and yet a no less thorough theist and Christian. And although he says nothing to clear away the essential logical incongruousness of evolution and theistic philosophy, he, nevertheless, lays down principles which should be signalized as of great value to the theistic interest in the pending controversy.

I. He affirms (pp. 58 and 59) that the proofs which biological hypotheses appeal to "are largely probabilities, some of a higher and some of a lower order, and much that is accepted for the time is taken on trial on *prima facie* evidence." The facts accumulated by scientists are of final authority, but the immense mass of inferences thence deduced must take rank with the "beliefs" of the day, and submit to the fate which the passage of time allots to all more or less speculative systems.

II. According to Darwin the causes of all existing living beings are the few original germs, and their inherent powers of reproduction under the laws of heredity and variation. Natural selection merely sweeps away the unfit, and leaves the survivors grouped in distinct species. Darwin holds that this tendency to vary acts indifferently in all directions, and, hence, that the resulting forms which survive are accidents determined solely by the chance bearings of the everchanging conditions of

climate, etc., etc. Professor Gray, on the other hand, says (pp. 50, 51) : "The facts, so far as I can judge, do not support the assumption of every-sided and indifferent variation."

If, then, the variation is specially directed from within, it must be either (I) that they are predetermined by the constitution of the original germs implanted at creation, or (2) they must be providentially led along certain designed lines of special usefulness, which is the opinion of Professor Gray. Of which Darwin says ("Variations, etc.," Vol. II., pp. 515 and 516) : "No shadow of reason can be assigned for the belief that variations . . . were intentionally and specifically guided. However much we may wish it, we can hardly follow Professor Asa Gray in his belief that variations have been led along certain beneficial lines, as a stream is led along useful lines of irrigation."

III. (pp. 95, 96). "It is also urged that giving particular direction to a special act would involve an addition to the *plenum* of force in the universe, and, therefore, contradict the recently acquired scientific principle of the conservation of energy. It is not at all certain that all direction given to force expends force; it is certain that, under collocations, a minute use of force (as pulling a hair-trigger) may bring about immense results; and, finally, increments of force by Divine action, in time, of the kind in question, if such there be, would never in the least be known to science."

IV. There are no valid scientific objections to the miracles of the Bible. "But" (p. 108) "the very reasons on which scientific men reject miracles for the carrying on of nature, may operate in favor of miracles to attest the incoming of the supernatural for moral ends. At least they have nothing to declare against them."

V. (pp. 73, 76). "But is it (Darwinianism) a sufficient and a complete hypothesis? Does it furnish scientific explanation of the rise of living forms from low to high, from simple to complex; from protoplasm to simple plant and animal, from fish to flesh, from lower animal to higher animal, and from brute to man?... I answer, 'not at all.'" "While I see how variations of a given organ or structure can be led on to great modification, I cannot conceive how non-existent organs come thus to be, how wholly new parts are initiated, how anything is led on which is not there to be taken hold on." "Specially theistic evolution (p. 81) judges that these general causes (heredity, variation, natural selection) cannot account for the whole work, and that the unknown causes are of a more special character and higher order. *I* think it does not declare that these are not secondary causes."

This is our point of breaking with Professor Gray. The "secondary causes" acting can only be the "secondary causes" existing. But at the beginning of the series these "secondary causes" did not contain, severally or collectively, either consciousness, or reason, or will, or conscience. Where did these come from? Are they the product of the combination of simpler elements? If so, can molecular mechanics produce life? Can bare vitality originate reason, or will, or the moral sense? If a thing can not be "led on which is not there to be led on," how can that be evolved out of a cause, which is not first involved in it? The cause can not so far transcend itself in kind and in degree. When these transcendental endowments take their place in the network of being, God must himself create and place them. He must add them to the sum of being previously created. And this is *not* "evolution." A. A. H.

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