NEW PUBLICATIONS

DARWINISM AND EVOLUTION.

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Darwinism is not a dogma, but a theory of natural selection, which is based on the principles of the struggle for existence and the survival of the fittest. It is a theory that has been developed over a period of time, and it has been tested and refined through many years of research.

Darwin's theory of evolution is based on the idea that species are not fixed, but are subject to change over time. This change is caused by natural selection, which is the process by which the characteristics of a species become more or less common depending on their ability to survive and reproduce.

Darwin's theory of evolution is supported by evidence from a wide variety of sources, including paleontology, genetics, and molecular biology. It is a theory that has been tested and refined through many years of research, and it continues to be a valuable tool for understanding the history of life on Earth.

However, Darwin's theory of evolution is not without its critics. Some people have argued that it is not a scientific theory, but rather a religious belief. Others have argued that it is too complex to be understood, or that it is too simplistic to be useful.

Despite these criticisms, Darwin's theory of evolution remains one of the most important and influential ideas in the history of science. It has helped us to understand the history of life on Earth, and it continues to be a valuable tool for understanding the world around us.
recognize the fact of such a succession of organic forms as constitutes an evolution. Viewing these phenomena apart from any theory as to their cause, they exhibit a scene of harmonies and correlations which indicate a coordinating intelligence as vast as time and space. The unity of the system of facts demonstrates a unity in the directive intelligence. It is a spectacle of the manifested power, intelligence, goodness, and eternity of a Personal Existence. The more firmly we establish the fact of evolution in the history of organic forms, the more conclusively do we establish the existence of these divine attributes.

But, continues the author, suppose the old doctrine of specific creations to become untenable, and the doctrine of a succession of organic beings to have taken its place. Suppose it should hereafter be proved that man is descended from a monkey, an ascidian, or a monad. The same facts of correlation and co-adjustment would remain, from which reason impels us to deduce intelligence. The development of organic types through the operation of secondary causes is no more incompatible with religion, Dr. Winchell maintains, than the ordinary phenomena of birth and growth in the human race. Is it less credible, he asks, that man as a species should have been evolved by secondary causes from an ape, than that by secondary causes man as an individual should be evolved from a new-born babe or a primitive ovum? "It is no more derogatory to man's dignity to have been at some former period an ape than to have been that red lump of mere flesh which we call a human infant." If the means by which the babe has developed into a man do not exclude the Deity from the process, no reason can be assigned why the Deity should be excluded from a similar process in leading man up from the monkey. It does not exclude divine agency from the work of organic advancement to assume that it has been effected through physical processes. The Creator no

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The views maintained by Chancellor Winchell may be taken as exponents of the convictions of many scientific men of the day, while those of Professor Hodge may perhaps be regarded, to a certain extent, as representing the interests of theology. Not that either writer is exclusively devoted to the conceptions of his own special department of study. Dr. Hodge takes a generous and enlightened view of the aims and character of physical science. Dr. Winchell is keenly alive to the interests of religion. It may be assumed that they are each equally inspired by the love of truth, a passion for knowledge, and the hope of human progress. Their differences of opinion may be accounted for by differences of original mental structure, the peculiarity of their respective pursuits, and the confirmed habits of many years. It is not to be expected that the consummate theologian and the consummate man of science should be united in the same individual; but each may combine the elements of theology and the elements of science in a well-balanced and harmonious personality. The two important works of which we have given an imperfect account, may be therefore considered in some sense as the complements of each other. They may be read to advantage in connection; and by examining the opposite sides of the shield; both the gold and the silver in its construction may be recognized and appreciated. Still it must not be forgotten that whether in religion or science, the attainment of truth results from conflict of opinion, and that at earnest warfare, if conducted with legitimate weapons, is better than a long and barren
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The simultaneous publication of these volumes by writers of eminent authority in their respective branches of learning may be regarded as an evidence of the deep hold that the questions to which they are devoted have taken of the minds of thinking men, and will be welcomed as a valuable contribution to the understanding of the subject by those who have little opportunity for profound personal research. The author of the first work at the head of this article is the celebrated Princeton professor, who has devoted a long life to the pursuit of the severest studies, a ripe and thorough scholar, with great logical acumen and skill, whose wide attainments have not impaired the strength of his convictions, who has never been tempted by novelties of speculation to swerve from the strictness of the ancestral faith which he has done so much to illustrate and sustain, and who by general consent would be placed, in point of learning, acuteness of thought, lucidity of expression, and power of argument among the most accomplished masters in American theology. The second writer whom we have named, the chancellor of Syracuse university in this State, is a much younger man, less addicted to theology than to natural science, not known to so large a public, but held in the highest esteem in scientific and literary circles, the author of several works of excellent fame in his favorite department of study, with a freshness and earnestness of thought which gives promise of future achievements of high
which gives promise of being of some import, and with a mental courage that does not shrink from the sacrifice of custom and tradition for loyalty to truth. A brief comparison of the ideas of two such men on a pregnant subject of inquiry cannot fail to be instructive to the student, and may be of some interest to our readers.

I. According to Professor Hodge, Mr. Darwin does not undertake to set forth a philosophical system. He never speculates on the origin of the universe, on the nature of matter, or of force. He is simply a naturalist, skillful in his descriptions, and of singular candor in regard to the difficulties of his doctrine. His sole problem is to account for the varieties of animal and vegetable life on the earth. In the solution of this problem, he assumes the existence of matter, the efficiency of physical causes, and the existence of life in the form of one or more primordial germs. He does not adopt the theory of spontaneous generation, but accounts for the existence of matter and of life by the agency of the Creator. All living organisms, through all the stages of the history of the globe, have descended from the primordial germs. Growth, organization, and reproduction are the functions of physical life. Hence the primordial germ began to grow and exercise its natural functions as soon as it began to live. The descent of animals and plants from the primordial animalcule is explained by the law of heredity, or the fact that the offspring are like the parent; by the law of variation, or the fact, that while the offspring resemble their immediate progenitor, they also vary within narrow limits from their parent and from each other; by the law of over production, or the fact that all plants and animals tend to over-run the means of support, thus causing a struggle for life, in which only a few of the myriads born can possibly survive; and, finally, by the law of natural selection, or the survival of the fittest, that is, if any individual of a given species of plant or animal has a slight deviation from the rule of type or breed, it may in the
from the normal type, favorable to its success in the
struggle for life, it will survive. This variation is,
by the law of heredity, transmitted to its offspring,
and by them again to theirs. The favored ones gain
the ascendancy, the less favored perish, and thus
the modification becomes established in the species.
In Mr. Darwin’s view, there is no limit to the
changes which may be produced by these simple
laws in the course of ages. Years are of no account
in this process. As astronomers take the diameter
of the earth’s orbit as the unit of space, Darwi-
sians must take a geological cycle as their unit of
duration. The descent of the human race is ex-
plained on the same principles. “He who de-
ounces these views (as irreligious),” says Mr. Dar-
win, as quoted by Dr. Hodge, “is bound to explain
why it is more irreligious to explain the origin of
man as a distinct species by descent from some
lower form through the laws of variation and na-
tural selection, than to explain the birth of the in-
dividual through the laws of ordinary reproduc-

But in order to get at the heart of Mr. Darwin’s
theory, Professor Hodge affirms, we must advert
to his use of the word “natural,” in the two senses,
as antithetical to the word artificial, and as anti-
thetical to the supernatural. Natural selection is a
selection made by natural laws, working without
intention and design. Hence it is opposed not only
to artificial selection, which is made by man to ac-
complish a given purpose, but also to supernatural
selection, which means either a selection originally
intended by a power higher than nature, or which is
carried out by such power. In using the expression
natural selection, Mr. Darwin intends to exclude de-
sign, or final causes. All the changes in plants or
animals, including man, descended from the primor-
dial germ, have been brought about by unintelligent
causes. Natural selection is the operation of natural
laws, analogous to the action of gravitation and of
chemical affinities. It is denied that it is a process
Darwinism, then, under the analysis of Dr. Hodge, includes three distinct elements. First, evolution, or the assumption that all organic forms have been evolved from one or more primordial living germs. Second, that this evolution has been effected by natural selection, or the survival of the fittest. Third, that this natural selection is without design, being conducted by unintelligent physical causes. The last named element is the most important, and the only distinctive element of the theory. Neither the first nor the second of these elements constitutes Darwinism, nor do the two combined. A man, therefore, may be an evolutionist without being a Darwinian. Nor is the theory of natural selection the vital principle of Mr. Darwin’s theory unless the word natural be taken in a sense antithetical to supernatural. The essence of his doctrine is the rejection of final causes. It is this feature of his system which brings it into conflict with theology. The denial of design in Nature is virtually the denial of God. Hence Mr. Darwin’s theory is virtually atheistic, as he denies all design in Nature.

In connection with Professor Hodge’s conclusion that Mr. Darwin’s theory is atheism, we must take his statement, first, that Darwin himself is not an atheist, and, second, that atheism is impossible by the constitution of the human mind. The first admission furnishes a method of reconciling the alleged discoveries of science with the interests of religion. No true friend of science or of religion would wish to increase the hostility between the two parties. If Darwin accepts the existence of the Creator as the origin of the universe, it would seem that he accepted the foundation of religion, which is not set aside by his denial of supernatural interference in the development of the universe. In the opinion of many thinkers, the original religious morality is sufficient to support the
original divine causality is sufficient to account for the phenomena of Nature, without the necessity of a special divine agency in the successive steps of the progress of Nature. The laws of electricity being given by the divine fiat, the lightning strikes according to natural conditions, without being directly wielded by the divine hand. The religious advocates of Mr. Darwin’s theory would maintain that he never denies the divine origin of the laws of heredity, of variation, of over production, of natural selection, but only denies that their development is due to continuous creative acts. The admission of the divine existence would seem to involve the divine agency in the establishment of the laws of Nature. But this apparently is not atheism; or if it be so, it is atheism born of its characteristic feature, the denial of a Supreme Being and of Creative Power in the universe. A remarkable conclusion, moreover, may be drawn from these statements of Dr. Hodge. If Dar-
win's doctrine is atheism and Darwin himself is a
theist, it follows that Darwin either does not believe
in his own doctrine, or does not understand it.

The force of Professor Hodge's reasoning that
Darwinism is atheism is still further embarrassed
by his assertion that atheism is impossible. The
belief in God, he affirms, is grounded in human
nature, and cannot be wrested from the human soul.
"The man who is trying to be an atheist is trying to
free himself from the laws of his being. He might
as well try to free himself from liability to hunger
or thirst." If then neither Mr. Darwin is an
atheist, nor his disciples are atheists, nor can any
man be an atheist, the elaborate proof of the atheism
of his doctrine would appear to be superfluous,
since neither its author, nor its receivers, nor any
human being accepts its consequences, and it
remains an abstract barren system, in a religious
point of view, with no power to damage, and with
no interest beyond the sphere of science. It is, how-
ever, well both for the cause of religion and the
cause of science that any apparent antagonism
between the two should be pointed out, and the
question fully and fairly discussed on its own
merits. Indeed it seems to be the natural
condition of scientific progress that every new discov-
er should be subjected to the ordeal of theological
criticism. This has been the case with astronomy,
with geology, with chronology, with ethnology, and
the new speculations in natural science must now
take their turn. The true friends of science should
accordingly welcome every criticism that tends to
elucidate its relation with religion. They should
especially rejoice when the subject falls into such
competent hands as those of the author of the
present volume. His style is a model of lucid sim-
plcity; his manner is free from passion and effem-
nate excitement; his arguments are set out with
the skill of an experienced controversialist, and
their force is not impaired by any greater infusion
whole.
their force is not impaired by any intimation of theological bitterness than may serve as a wholesome tonic to the reader.

II. In the preface to his volume, Chancellor Winchell avows himself a believer in the theory of evolution, regarding it as the law of universal intelligence under which complex results are brought into existence. This law is a fact which proclaims intelligence more clearly than any possible array of isolated phenomena. The results of evolution could not have been obtained under any law but the supreme law of free intelligence. The cause of evolution, therefore, is a mode or volition of the incomprehensible Mind. Evolution is the law of sequence in the succession of phenomena. The type of the process is the development of the embryo within the egg. But it is also exemplified in all progress in the development of life upon the earth, and in the growth of society, government, and cultivation. It is not a force, but a plan in accordance with which force acts. The popular assumption that evolution is a device for explaining the phenomena of the Universe by forces whose origin is not traced to the Divine Mind, is therefore atheistic in its tendency, is believed by the author to be unfounded, and a considerable portion of his book is devoted to the exposure of the fallacy. He cherishes a profound conviction that the being and providence of a personal God are to no extent imperiled by the admission of any form of evolution which does not expressly make unintelligence its starting point. He endeavors to demonstrate that no form of the evolution theory now current in the scientific world is incompatible with a devout recognition of the Divine existence.

In addition to the elaborate arguments which the author brings in support of this position, he produces a variety of historical testimony of an interesting character showing the rudiments of the evo-
evolution theory among religious thinkers in different ages. St. Augustine, he informs us, held the opinion that God created by conferring on the material world the power to evolve organization. St. Thomas Aquinas quotes with approval the saying of St. Augustine that in the first institution of nature we do not look for miracles, but for the laws of nature, and that the various species of animals and plants were only created derivatively. Buchanan, speaking of physical evolution, affirms that if it were established it would not follow by necessary consequence “that the peculiar evidence of theism would be thereby destroyed or even diminished.” Dr. McCosh declares that “there is nothing irreligious in the idea of development, properly understood.” “Similar views,” says Dr. Winchell, “are entertained by many orthodox theologians of the present day.”

Nor is it to be supposed, he adds, that the advocates of these theories are generally willing to exclude themselves from the fold of believers in God. “It is better to be content with ignorance of a man’s religious belief than to assign him a creed which he has not avowed. Whatever be the views of such writers as Vogt, and Büchner, and Haeckel, Mr. Darwin sincerely believes that his theory ought not to ‘shock the religious feelings of any one,’ and he speaks of life as ‘having been originally breathed by the Creator into a few forms or only one.’ Mr. Wallace traces all natural phenomena to will, and says: ‘The whole universe is not merely dependent on, but actually is, the will of higher intelligences, or of one Supreme Intelligence.’ Professor Asa Gray declares ‘that the philosophy of efficient cause, and even the whole arguments from design would stand, upon the admission of such a theory of derivation (as Darwin’s), precisely where they stand without it.’” In concluding his volume, Dr. Winchell expresses the opinion that should the doctrines of evolution, even in their extreme phases become established as a part of the scientific creed, there will be
no proof of the absence of immediate divine agency from any of the operations of life. In any developments of scientific truth, Christian theism has nothing to fear, but much to gain.

Dr. Winchell is by no means blind to the scientific difficulties which attend the doctrine of evolution, both as interpreted by Mr. Darwin, and as held by its earlier advocates. He makes no attempt to gloss over their force, to evade their application, or to disguise their consequences, but submits them to a rigid analysis, discussing them at all points with freedom, with singular candor, and with great logical effect. He attaches less importance, as we have seen, to the objections that have been made on religious grounds. We are compelled, he argues, to recognize the fact of such a succession of organic forms as constitutes an evolution. Viewing these phenomena apart from any theory as to their cause, they exhibit a scene of harmonies and correlations which indicate a coordinating intelligence as vast as time and space. The unity of the system of facts demonstrates a unity in the directive intelligence. It is a spectacle of the manifested power, intelligence, goodness, and eternity of a Personal Existence. The more firmly we establish the fact of evolution in the history of organic forms, the more conclusively do we establish the existence of these divine attributes.

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