

The Spread of Evolutionary Thought.

To those especially who were early interested in evolution as a world-conception, there is much satisfaction in the knowledge that the doctrine is now generally accepted by independent thinkers. Two generations ago there were but few comparatively who had any belief or serious interest in the theory. The mass of people, with their secular teachers and theological guides, were satisfied with the old a priori hypothesis of special, miraculous creation. The man who, here and there, dissented from this doctrine, either affirmed belief in the eternity of worlds, including species, or in the absence of data, declined to express or to form an opinion on the subject. When the development theory, as it was then called—the word evolution having been later substituted for it by Herbert Spencer—was mentioned, people generally thought of it as a fantastic notion and treated it with ridicule. A serious defence of it was regarded as an indication of an unbalanced mind and of low moral tastes and ideals.

For a long time it was not feared by special creationists, for apparently there was no likelihood that it would ever commend itself to reasonable minds. Later, as the theory gained adherents, it excited religious opposition which was often very bitter; even the high character and eminent services of Charles Darwin were "no safeguard against the attacks instinct with malignity and spiced with shameless impertinence."

For sometime after the publication of Robert Chambers' "Vestiges of Creation," the theory was without standing among recognized teachers of science. Professor Huxley, who did not declare in favor of evolution till after 1858, says:

"Within the ranks of the biologists at that time (1851-8) I met nobody except Dr. Grant of the University College, who had a word to say for evolution, and his advocacy was not calculated to advance the cause. Outside these ranks, the only person known to me whose knowledge and capacity compelled respect and who was at the same time a thorough-going evolutionist, was Mr. Herbert Spencer, whose acquaintance I made, I think, in 1852, and then entered into the bonds of a friendship which, I am happy to think, has known no interruption."

Notwithstanding the fact that the publication of the "Origin of Species," with its promulgation of the principle of Natural Selection, gave a wonderful impulse to evolutionary thought, the theory of evolution had long had its supporters and teachers, though they were few in numbers and lacked data for

improving the theory scientifically, which Darwin and subsequent writers supplied. In his "Metamorphosis of Plants," published in 1790, Goethe derives all vegetable forms in the world from one, and all the different organs of the plant by development from one organ, the leaf. In his lines, "Proteus Delphis," he says:

"Through myriad forms of being wending
To be a man in time thou'lt rise."

In "Zoonomia, or the Laws of Organic Life," in 1795, and later in the poem, "Temple of Nature," Erasmus Darwin advocated with great boldness and eloquence, but not, of course, with scientific precision, the natural origin and development of life. Geoffrey St. Hilaire and Lamarck, among naturalists, later identified their names with the defense of this view. Emerson, whose intellectual hospitality made him receptive to truth which was in advance of his time, was early interested in evolution, and in a lecture given on "The Relation of Man to the Globe," in 1833, he said:

"The most surprising, I may say the most sublime fact is that man is no upstart in the creation, but has been prophesied in Nature for a thousand, thousand ages before he appeared; that from times incalculably remote there has been a progressive preparation for him, an effort to produce him; the meaner creatures containing the elements of his structure and pointing at it from every side. . . . His limbs are only a more exquisite organization—say rather the finish—of the rudimental forms that have been already sweeping the sea and creeping in the mud; the brother of his hand is even now cleaving the Arctic sea in the fin of the whale, and innumerable ages since was pawing the marsh in the flipper of the Saurian."

More familiar to the general reader today in connection with evolution is the oft-quoted poem where Emerson says:

"And striving to be man, the worm
Mounts through all the spires of form."

Less definitely evolution is taught in the early poems of Tennyson, thus in "The Two Voices," which appeared in 1842:

"Or if through lower lives I came
Though all experience past became
Consolidate in mind and frame."

Herbert Spencer, more than forty years ago, wrote in defense an exposition of evolution; laying the foundations of that system of universal evolution to the working out of which he has given his life.

All these writings were read and they had their influence of course, but so general and thoroughly established was the old conception of creation by miracle, and of the fixity of species, that the few who, imbued with the idea of the unity of

Nature and the reign of law, gave expression to evolutionary thought, seemed to produce but little impression, though probably their influence was deeper and more far-reaching than it at that time appeared to be. Literature generally ignored the theory. The secular press, when the subject came to its notice, made fun of it, reflecting in this respect the popular feeling. Since it was opposed to current theological beliefs, they who ventured to advocate it were supposed to be "unbelievers." The theory was associated in the common mind with atheism. The "Vestiges of Creation" was sold in New York and Boston among "infidel" publications like the "Age of Reason" and "Volney's Ruins."

The Spiritualists made the development theory a part of their philosophy. It was given prominence, though treated discursively, in "Nature, Divine Revelations," by Davis, the "Poughkeepsie Seer," and with larger knowledge of facts and with more definiteness of statement in a work which appeared later, entitled "The Arcana of Nature," by Hudson Tuttle. Some time in the fifties William Denton, a Spiritualist and a man of considerable scientific attainments, defended the natural origin of man by development in a public debate at Chagrin Falls, O., with James A. Garfield, afterwards president of the United States, then a Campbellite preacher.

In 1859 appeared the "epoch-making book," the "Origin of Species." Supported by Hooker, Huxley and other strong men of science, it gave to evolutionary thought an impulse as remarkable as any in the history of the human mind, and from that time evolution has gained ground steadily and rapidly; it has revolutionized zoology, compelled the revision of theological creeds, permeated literature, and so completely established itself among thinkers of every class that its influence is seen in all intellectual circles and in all departments of thought. There is no subject which is not now studied in the light of evolution. Its principles are freely applied to religion as well as to language, government, art, etc. One rarely meets now a well-informed man who was not intellectually rigid before modern scientific thought had made any considerable progress among common readers, in whose mind the conception of evolution has not replaced that of special creation. Although held by many with qualifications modifying and suiting it to their religious beliefs, which are not entirely acceptable to "thorough-going evolutionists," the essential thought, that not creative fiat, but continuity and growth, not miracle, but law, has prevailed always and everywhere, has come to be a strong conviction with thinkers generally.

It now dominates in the world of thought.

Of course there are still many who without much, if any, real thought on the subject, still assent to the old view. This element represents the extreme conservatism which is the last to break away from traditional ideas and methods, and the last to surrender to the progressive thought and spirit of the age. But the orthodox churches, in whose pulpits the old view has been so stubbornly defended, have not escaped the influence of evolution. Religious beliefs, and the way of looking at things, have been and are there, as elsewhere, undergoing a marked change. Among the orthodox clergy the word evolution is indeed no longer an offensive word. The sermons preached and the books written by representatives of the old faith, show that evolution has modified their interpretation of natural facts as well as of the scripture, and also their general modes of thought and their attitude in relation to other religions than their own. The revision of creeds is but one of the more superficial indications of the work of evolution in the churches.

In 1871 the writer gave a course of lectures in Eugene City, Ore., among other places in that state and other states on the Pacific coast, on Evolution and its relation to current theological beliefs. The opposition of the churches was aroused and there was preaching against evolution in that city for a long time. On returning there in 1873, arrangements were made by which President T. F. Campbell, of Monmouth College, was to oppose evolution in a joint debate. The discussion occurred, was continued several evenings, and it attracted large audiences. President Campbell took the ground that evolution could not be true because it was a degrading conception and in conflict with the Word of God. The general feeling was strong against evolution and the arguments for it may at that time have puzzled more people than they convinced. But what no speaker could accomplish, was there brought about, as it has been in thousands of places, by a process of growth. On returning to the city in 1888, the third time, the writer found that the State University had been established there, and that evolution was taught in that institution, the works of Professor LeConte being used as text books. There was no longer hostility to the conception among the leading minds. These facts serve to illustrate the rapidity with which the transition from the old to the new thought has been going on in all the more enlightened communities.

Such radical changes in so short a space of time are remarkable. They would not have been possible in any previous period owing to the absence of the mental conditions, products of evolution, which have been important factors in this transition. The conception of evolution itself has been slowly evolved, as well as the state of mind which has made its acceptance possible.

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