

rate (see page 8); also, that societies and individuals subscribe for a number of copies, to be sent to scientific men, educators and libraries in their neighborhood. By this means Swedenborg's system will be brought to the attention of thoughtful men throughout the country. The more fully we receive the co-operation of the members of the New Church, in this regard, the more widely will our usefulness extend.

Many investigators of Swedenborg's philosophical system have received great benefits therefrom. This testimony has come from eminent men of science, philosophers and theologians outside of the organized New Church. Through the writings and teachings of these men a beneficial influence

has gone forth into the world. This influence we desire to extend as widely as possible by keeping the knowledge and thought of Swedenborg's system before the public view. In the New Church itself a large part of his scientific work is almost entirely unknown, because not available in public form, as may be seen in another article in this number. We believe that the time is at hand when a more full knowledge of these things is necessary to the welfare of the New Church itself. They are needed in the plane of natural science to give those principles which make a connection between nature and God, and show that all things are in a connected series, and are under the government of the Lord, even to the least particulars.

## Swedenborg's Philosophy.

Swedenborg as a writer on science and philosophy was widely and favorably known in the first half of the eighteenth century. When, however, from being a philosopher he became a theologian, the feeling and prejudice aroused by his teachings reacted upon his reputation as a philosopher, and soon his scientific and philosophical works were relegated to obscurity. In these works, however, we find the most remarkable series of investigations into the interior causes of things ever presented to the world. Sixty years before Laplace produced the Nebular Hypothesis, Swedenborg presented a similar theory, yet whilst similar in its general features, it is really opposite, because Laplace derives the origin of things from the circumference, but Swedenborg begins from the centre.

Many discoveries in the region of sciences, supposed to have been made in the present century, are found in the Writings of Swedenborg. The vibratory nature of light, heat, electricity and other forces are clearly presented in these works. He gives heat, light, and electricity as different vibratory motions of the ether. He has advanced one step further in his analysis of nature than even our modern scientific men, and teaches of an atmosphere still higher and purer than the ether, the vibratory motions of which produce magnetism and gravitation. In fact all force is merely the vibration of some substance acted upon by one or other of the three atmospheres.

In his investigation of nature, Swedenborg was actuated by an intense desire to find the inmost causes of things. He began by thoroughly studying the sciences of the physical world. At this period of his career he wrote on mechanical, mathematical, physical, chemical and astronomical subjects. The crowning work of this series was his "Principia Rerum Naturalium," usually

termed the Principia, in which he gives a philosophical explanation of the elementary world. In this work Swedenborg not only gives most profound views of the origin of the Universe, but also, in all his analysis and reasoning, he shows the connection of all things in a connected series of causes and effects from firsts to lasts. In this work we find his doctrine of the three atmospheres, the vibratory nature of heat, light, electricity, magnetism, etc. He gives the causes of the rotation of the planets, the declination and variation of the magnetic needle, the real nature of magnetism, not only worked out theoretically, but supported by many interesting experiments.

In all the course of his reasoning Swedenborg continually elevates the mind to the Infinite Divine Being, as the source and origin of all things, not by an arbitrary assertion of the fact, but by a series of ascents or steps through successive degrees of substances, the higher being purer, finer and more full of power and activity than the next lower, because nearer to the source of power; but nowhere does he depart from the idea of the substantial nature of the thing of which he is treating. The higher order of substances are real things, the vibration of which produces all motion and power manifested in the lower forms. With him the sun is the centre and origin of all material forms and forces, from which all things are produced by discrete degrees of purity from above down. In this he is opposed to the theory of Laplace which derives the origin of all things, all motions and forms from a diffused nebular mass of matter. The superior reasonableness of Swedenborg's position may be seen, when we consider that he derives the origin of things from a source of infinite power and wisdom, whereas Laplace derives their origin from a source which is lifeless and dead, possessing neither wisdom nor power.

After thoroughly investigating the lowest plane of nature, in which mechanical, physical and chemical laws hold sway; he entered upon the investigation of the phenomena, nature, and origin of life, and of the soul. In order to gain a right understanding of this subject, he began the investigation of the human body; and in the course of this study he wrote four great works, namely, *The Economy of the Animal Kingdom*; *The Animal Kingdom*; *The Generative Organs*, and *The Brain*; besides a number of smaller works.

In these works, Swedenborg thoroughly investigates the nature of the human body and the functions and uses of its organs and viscera. He unfolds the most interior and secret operations of the brain, the functions of its parts and ventricles. He assigns uses and functions to parts of the body that modern investigators do not even yet know the use of, and these conclusions he arrives at by a lucid reasoning process based on the form; position, and connection of the parts. Here again, as in inanimate nature he teaches that there are higher or more interior structures of the body than are acknowledged by physiologists; a purer blood; and an animal spirit, which is the interior life of the fibres and nerves. By this investigation Swedenborg gained a wonderful knowledge and understanding of the human system, so that in the realm of nature, both animate and inanimate, especially in its most perfect form in man, he possessed a broad foundation for still higher investigations which were to follow. He learned by these studies, that all things are connected by cause and effect. The lower derives its impulses and energies from a higher, not by arbitrary gift; but by the influx of the powers of higher substances into the lower substances.

On this foundation of facts, and on the understanding of their connection and nature both animate and inanimate, he now began to build a more exalted structure, entering upon the subjects of Psychology, and the relation of the Soul and Body, Ontology, and similar subjects.

It was at the close of this period of his work that his spiritual sight was opened, and he was intruded into the spiritual world as to his spirit. Previous to this time Swedenborg had investigated the realm of natural causes, especially directing his energies toward the investigation of the causes and origin of things. His method of work was to gather all the facts of observation, using the accumulated facts and experiments of the best observers; on these he based his rational deductions and conclusions. By a process of analytical reasoning he ascended through a successive chain of natural causes, until he came as it were to the door of the higher realm of spirit. At first being ignor-

ant of the existence of that world, which is the world of causes from which all natural things derive their first origin; he could not reason out nor discover these more interior origins of natural things; but could only ascribe, in a general way, their origin to God. Just here he found the limit placed to the investigations of reason unaided by revelation. It is precisely the same limitation which men of science and philosophers find at the present day.

Swedenborg's labors, to this time, were the labors of a man of science and a philosopher investigating from the side of nature into the origin of matter and of life, and their phenomena. He differed indeed from other scientific men in the method and means of investigation; since he ascended by degrees above sensual appearances, approaching nearer and nearer to the Divine through discrete degrees of substances, which are more and more pure in their ascent toward the infinite perfection of God. Whereas investigators usually look for causes to external conditions, and to things possessing less and less of power and perfection, and less of wisdom, until they reach that which has the least power and ability. This is regarded as the origin and creator of all things even to the highest.

At this period of Swedenborg's career the world of causes was opened to him. This was effected not by his superior intellectual ability forcing an entrance into that world; but by Revelation; as he claims, and as we believe. In this last period, his writings were of a theological nature; yet among these, we find some which give the very principles and facts which complete and supplement the facts and reasonings that he had previously given. Among other things he lays down the general principles needed in the explanation of natural phenomena and existences. He says in the *True Christian Religion*, 75:

“No one, however, can form a just idea concerning the creation of the universe, unless the understanding be brought into a state of perception by certain universal knowledges being premised, such as the following :

I. There are two worlds, a spiritual world for angels and spirits, and a natural world for men.

II. In each world there is a sun, and the sun of the spiritual world is pure love from Jehovah God, who is in the midst of it; and from that sun proceed heat and light, the heat thence proceeding being in its essence love, and the light thence proceeding being in its essence wisdom; and these two affect the will and understanding of man, the heat his will and the light his understanding; but the sun of the natural world is pure fire, and therefore the heat and light thence proceeding are dead,

and serve as clothing and aids to spiritual heat and light, by which they may pass to man.

III. And, further, those two things which proceed from the sun of the spiritual world, and thence all the things which exist there by means of them, are substantial, and are called spiritual; and the two similar things which proceed from the sun of the natural world, and thence all the things which exist here by means of them are material and are called natural.

IV. In each world there are three degrees, which are called degrees of height, and thence three regions according to which the angelic heavens are arranged, and according to which human minds also are arranged, which thus correspond to the three angelic heavens; and other things are arranged in like manner both here and there.

V. There is a correspondence between the things which are in the spiritual world and the things which are in the natural world.

VI. There is an order into which all and everything of both worlds were created.

VII. An idea concerning these things ought by all means to be first obtained; and unless this is done the human mind from mere ignorance concerning them easily falls into the idea of the creation of the universe by nature, and says only from the authority of the church that nature was created by God; but because it knows not how, if it inquires into it more interiorly, it falls headlong into naturalism which denies God.—T. C. R., 75.

A perfect philosophy must take into consideration all the conditions and causes. Swedenborg's system, as completed by the knowledges gained from the spiritual world, is the only one which brings all these things into harmonious relation-

ship and order, connecting all things, from highest to lowest, into a chain of causes and effects, from God Himself, through the spiritual into the natural world to the lowest things of nature.

If we investigate nature alone, and ascribe all effects therein to causes which are found on the material plane only, and deny or reject all interior origins of matter and of life, we shall become materialists. This tendency is shown in the prevailing doctrines concerning the origin of the solar system, and the origin of living organisms. In the nebular hypothesis as at present held, the system is traced to a diffused nebulous mass of gas or vapor; and in the evolution theory all organized forms of life are traced back to protoplasm, which in some unaccountable way originated from inanimate nature through mechanical or other merely natural forces. If any thought is given to God as the Creator of Nature, and some scientists devoutly believe in Him as Creator, they are utterly at sea in regard to the mode of His operation, which leaves their minds as much in the dark, as did the old theory that God made the world out of nothing by simply saying let it be, and it came to pass.

Swedenborg's system gives light on these dark problems, and it is to the elucidation of the principles bearing on these questions that "The New Philosophy" will direct its efforts. We believe that in Swedenborg's works new light will be found, to solve every difficult question that arises in modern investigations. Whilst believing in the truth of this system, we claim no infallible knowledge of it, and welcome all contributions to our columns that are written in the spirit of investigation and with a desire to attain to a knowledge of the real truth itself.

JOHN WHITEHEAD.

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## The Distinctness and Necessity of Swedenborg's Scientific System.

To show the importance of Swedenborg's scientific writings to "New Church" people, and illustrate the absolute difference between his whole system and those current at the present day, I cannot do better than compare his ideas of creation with those which were started by Laplace, Werner and Hutton.

Laplace is well known as the scientist whose name stands most prominently connected with our "nebular hypothesis," while Werner and Hutton, his contemporaries, headed respectively the neptunian and the plutonic theories of matter. Werner taught that water was the great medium in forming substance such as crystals; Hutton that it was fire. These two agencies, water and fire, have in-

deed played most important parts in philosophies and theories of nature from very ancient times, nor is the contest yet ended. Geology has accepted water as the chief agent in recent geological history. But before a certain time in the indefinite past, everything is still yielded over to the reign of Pluto. Then the earth coming from the sun in a molten condition gradually cooled off, the metallic gasses which then formed its atmospheres were precipitated upon it, and, as the superabundant heat was radiated forth, a crust slowly developed. Not till a much later time did Neptune attain the sovereignty. Thus we seem to owe the earliest chapters of our modern geological theories to Laplace, the middle ones to Hutton, and the last to Werner. Of these three men, only Werner approximates Swe-