

The New Philosophy.

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THE NATURE OF DISCRETE DEGREES.

In the Divine Love and Wisdom, Swedenborg says :

“The knowledge of degrees is as it were the key to open the causes of things, and enter into them. Without it scarcely anything of cause can be known, for without it the objects and subjects of both worlds appear so general as to seem to have nothing in them but what is seen with the eye ; when nevertheless this, respectively to the things which lie interiorly concealed, is as one to thousands, yea to myriads. The interior things which lie hidden can by no means be discovered, unless degrees be understood ; for exterior things advance to interior things, and these to inmost, by degrees ; not by continuous degrees, but by discrete degrees. Decrements or decreasing from grosser to finer, or from denser to rarer, or rather increments and increasing from finer to grosser, or from rarer to denser, like that of light to shade, or of heat to cold, are called continuous degrees. But discrete degrees are entirely different ; they are in the relation of prior, posterior, and postreme, or of end, cause, and effect. They are called discrete degrees, because the prior is by itself, the posterior by itself, and the postreme by itself ; but still, taken together, they make a one. The atmospheres which are called ether and air, from highest to lowest, or from the sun to the earth, are discriminated into such degrees, and are as simples, the congregates of these simples, and again the congregates of these congregates, which taken together, are called a composite. These last degrees are discrete, because they exist distinctly, and they are understood by degrees of altitude ; but the former degrees are continuous, because they continually increase, and they are understood by degrees of latitude.” D. L. W., 184.

“Without a knowledge of discrete degrees,” it is here said, “scarcely anything of cause can be known.” Real causes, that is by creation, can be grasped only through a knowledge of discrete degrees. This term discrete means distinct, separate. The meaning of it can be best illustrated by the atmospheres. Let us take the air as one degree.

Air in the upper region of the atmosphere is still air ; air under pressure, however dense, before it takes the liquid form, is still air. Under the air pump, even though it be only the one millionth of an atmosphere, it is air. These various *degrees* of density of atmospheric air are illustrations of what Swedenborg terms *continuous degrees*, that is, degrees of the same substance, and real causes are not to be sought in one and the same degree. The origin of the particles of air are not to be found in air particles under less pressure or greater, but in something in a higher, that is a more perfect form. Not in a degree continuous with itself, but in a discrete degree above itself.

The ether in its relation to the air is an illustration of two degrees which are discrete from each other, but which are intimately inter-related. Air, however rarified, will never become ether. The particle of air will expand and become larger as the pressure diminishes, but it will always be air. The ether particle is something entirely distinct from an air particle. Its properties are different, its vibrations and movements are different, and they affect man differently. This difference is one of discrete degrees, not of continuous degrees. Yet the ether particle is intimately connected with the air particle. The ether particles are within and around the particles of air. They occupy the space within and around. Air is like a soap bubble, the surface consisting of the substance of the air, the inner space is occupied by ether, and the outer space is occupied by ether. The ether, by circumpressure and by inner pressure, holds the bubble of air in form and gives it its elasticity, compressibility, and mobility. Thus we see that the qualities of the air, while they are different from those of the ether, are derived from the ether. This shows to us the truth of Swedenborg's statement that causes must be sought, by an ascent through discrete degrees, not by continuous degrees.

Again, Swedenborg teaches that there is a still higher atmosphere than the ether which he calls aura. This is a discrete degree above the ether.

It bears a relation to the ether similar to that which ether bears to the air. It is both within and around the ether particle. The activity of the aura within and around holds the ether particle in form, and gives it its qualities. Thus the aura rules and governs in the ether, and the ether in the air. Yea the very substance of the higher, by conglobations and compositions or condensations, produces the lower, and thence the lowest, and finally the liquid and solid substances of the earth. The solid derives its origin and qualities from the gaseous, the gaseous from the ethereal, and the ethereal from the aural. In this way the higher is the origin of the lower. We must look to the higher for the origin of all lower forms and forces; and when we have ascended we cannot return to a lower form as the origin of the higher. From the aura we must ascend to the sun itself, and to its forms and forces. The manifestation of ethereal forces are in general light, heat, and electricity. The manifestation of the forces of the aura are magnetism and gravitation, and probably molecular forces, etc. The magnetic and other forces of the aura, by their action on the ether particles, and immediately and mediately on air and the substances of the earth, produce all the varied forces manifested on earth. The origin of all these is in the aura. All the activities of the aura are derived from the activities of the sun. This is a higher source. In the sun will be found the primary forms of all earthly substances and forces. These primary forms are still more interior than the atmospheres and earths. The origin of forces and substances therefore ascends again by a discrete degree. The substance of the aura and thence all other derivative substances must be derived from these purest, finest and most active substances found in the sun itself. This being the case, the origin of this highest cannot be derived from something below itself, or lower in degree, thence not in any diffused nebula or rarified matter. The error in the nebular theory is to make the centre and highest, the sun, derived from the diffused and the lower. The first nebular formation was produced from the central solar substance, not the reverse. Therefore, to seek the origin of the material substances of nature as they first exist in the sun, we must ascend still higher, to a degree more interior and perfect; for it may be observed that as we ascend in degree from the inert substances of the earth, we also ascend to more perfect forms and substances, and thence also to more perfect forces and powers. We thus come nearer to the infinite perfection of forces and powers in God Himself.

Men of science, in looking for the causes of sun substance and force, not having a knowledge of any degree of substance and force above nature,

look downward and outward for the origin of these things. They pass through the nebula, to fire mist, and back again to older worlds and suns, which by collisions produced the nebula; thence by traveling in a circle in the plane of nature they try to get at the origin of the vast forces, powers, and substances displayed in nature. The only rational view of this step is that sun matter and forces must come from a higher, more perfect and more adequate origin. They must be from a higher degree. Here, again, Swedenborg's philosophy gives the solution to the problem. The first origin of material substances is spiritual substance. There are two worlds, a spiritual world and a natural world. These are both composed of substances. The spiritual world of spiritual substances, the natural world of material substances. Between these two there is a discrete degree. Matter, however fine, does not become spirit. The laws governing matter are different and discrete from those governing spirit. Swedenborg, to distinguish between the nature of these two worlds, calls the spiritual world *substantial* and the natural world *material*. The spiritual world, with its organisms and forms, is substantial and real, not an empty ideal. The material world is real, not ideal and imaginary. Both are composed of external realities, but composed of different substance, and therefore they are cognized by different planes of human organisms—the one by the senses of the body, the other by the senses of the spiritual body. The spiritual substance is real. It is the origin of material substance. Matter in its first origin is also composed or formed by conglobations, aggregations and compositions of spiritual substances. The forces in matter are not resident forces, but they flow in from the higher forces and powers which are in spiritual substances. Thus we ascend in the scale of existence by a discrete degree, and it is only by a knowledge of the nature of that world, of its laws, substances and forces that we can gain any true conception of life, life forces, of the origin of living animal, vegetable and human forms on earth, of the nature of soul, spirit, mind, and of the influence of these on the body and the world. Thus, by ascending a discrete degree above matter we come to more adequate, real and substantial forms and forces.

Lastly, by a still further step of ascent we come to the Divine Being, who is Divine Substantial, real, Human, the origin of all lower forms and substances with their activities. These degrees of ascent from nature to nature's God are, as it were, steps in the ladder of causation. Like the ascent from bones through muscles and nerves to brain, there are distinct steps of elevation. One thing does not merge into another, and yet the lower de-

pend on the higher for its very form and vital energy. In minute things we see depicted images of greater things. In the microcosm we see the nature of the macrocosm.

Likewise in the degrees of ascent in nature we see, as in a mirror, a picture of those great universal degrees of ascent from nature,

through spirit, to the Divine Itself. These great universal steps of ascent are beautifully portrayed in Jacob's dream, when "He dreamed, and behold a ladder (or steps) set up on the earth, and the top of it reached to heaven; and behold the angels of God ascending and descending upon it, and Jehovah stood above it."

The Influence of Science on Theological Thought.

Delivered at the meeting of the Michigan Association, held in Detroit, October 1st, 1898, by Rev. John Whitehead, President of Urbana University, Urbana, Ohio.

Theology and science deal with two great classes of human knowledge which are separated from each other by a discrete degree; but which are intimately connected and interrelated. Theology deals with spiritual and divine things, with the soul and interior principles of life and action, which are learned through revelation. Science, on the other hand, deals with nature in its various departments, with facts that are known and acquired by or through the senses. Science is the arrangement in systematic form of the knowledge of outward nature; theology is the arrangement in systematic form of the knowledge of God, and the spiritual things from God. God, spirit and matter are a trine following in order, God, the origin and source of the other two, is the inmost, the highest, from which all other things derive their being. Spirit is the soul and essence of all finite forms, and matter is the foundation, basis and resting place on which all higher things rest. Perfect harmony exists between the Creator and creation. It cannot be otherwise. The creation responds to every governing and controlling impulse of the Divine. This is true of God in his relation to spirit and matter; but is this the case between the various departments of human knowledge that deal with these things? To this question we must certainly answer "no." Throughout human history, what men have known and taught concerning nature has frequently been in direct opposition to that which they have taught in the domain of theology. In this address it is my purpose to try and present some principles which may give some reasons why these differences have arisen, why they still exist, and finally to present those principles which will harmonize the two.

All the departments of knowledge, in theology, philosophy and science, are necessary to the understanding of the nature of the universe in which we exist. As God, the spiritual world, and the natural world are intimately connected and interrelated, so likewise, are the corresponding knowledges of these subjects. As harmony reigns between God and the universe, so likewise in reality harmony reigns between the various knowledges of them in the mind

that comprehends them all aright, which is in the divine mind. So far as men approximate to this true conception, so far will they perceive this harmony; but so far as they see things only partially, or one-sidedly, or refuse to see things as they are, so far will opposition appear where harmony really exists. We will then first of all examine the conditions which existed in the successive ages of man tending to produce opposition between science and religion.

The different ages of mankind on this earth are like the different ages of the individual. The individual passes through the ages of infancy, childhood, youth and manhood. Each age possesses its peculiar quality. The first is the foundation and preparation for the second, etc. So, the individual, like the human race as a whole, passes through similar stages of development, and human progress in general may be better comprehended by the study of the development of the individual.

In infancy two states exist, one from the internal association with angels, which is exhibited in the innocence and peace of the infant; and the other from the reception of a knowledge of the outward world through the medium of the five senses. The states of innocence and peace are the result of spiritual association and are of a spiritual origin; but the knowledges acquired through the senses are the result of contact with the world and are of a natural origin; yet the sense impressions and knowledges are the resting place of the interior states; and the delights of the senses are means by which the interior states of innocence and peace may be cherished and cultivated. There is nothing inharmonious between the two states, the one derived from heaven, and the other derived from the world, the one the basis of all future religious feelings and activities, the other the foundation and basis of all science and reasoning.

So likewise the early stages of human development in the formation of the Most Ancient Church, represented by the ancients as the Golden Age, and described in the Word by the Garden of Eden, was a period of peace and innocence, of interior association with the Lord and heaven, and of delight in the per-