

this system the voluntary and involuntary components of the nervous system work together as a team. This they must do, and most precisely, if we are to meet the demands of information processing placed upon us by our modern present day environment.

It would seem, according to *Arcana Coelestia* 1621 and 1623, that the crystalline lens and various media represent the first gathering of truth and its presentation to our understanding. What then do the extrinsic muscles of the eyes represent? It would seem that they represent our own efforts, as of self, to bring truth to the view of our understanding, our own as of self efforts to seek out the truth, to move and manipulate it so that we can see it from every angle, and thus see it in different perspective for the sake of regeneration and life.

A cross-eyed person, on the other hand, would seem to bear the implication of someone who is not doing his part in the regenerative process; — not doing his part in the search for truth. This condition represents faith as an intellectual conceit, hatched up by a depraved will and forced on the understanding. Outwardly such "faith" may deviate in any direction, just as crossed eyes do. It has no corresponding points on the retina as truth does, so it cannot be raised up to interior principles. "Faith in any other than the true God, and among Christians in any but the Lord God the Savior, may be compared to the disease of the eye called strabismus" (TCR 346).

As far as any individual is concerned we know that this is merely representative, and not necessarily correspondent. Nothing is reflected upon the person but upon the thing that is represented (AC 665, also AC 2010 and 4281). But it does reveal to some extent why, consciously or not, cross-eyed people have been looked upon with such uneasiness. ■

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PHILOSOPHICAL NOTES

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The Whole, IV

359 *The Soul and Body Relation: a whole?* Man is body and soul and, in general, there are two classes of theories about the body-soul relation: monistic and pluralistic. The latter is most often limited to dualistic. Descartes's theory is an example of this: There is extended substance (body) and thinking substance (mind).

When the titles of *Economy of the Animal Kingdom* and *Animal Kingdom*

are regarded as having to do with the government of the soul's kingdom and the kingdom of the soul respectively, the whole which is the subject, is man.

Pluralism is of four degrees in the *Economy*: soul, mind (*mens*), mind (*animus*), and body with its senses. Later analysis (e.g. *Rational Psychology*, chapter IX) divides mind into its intermediate steps or intellectual processes consisting of inner sensation or imagination, memory, thought, conclusion, judgment or determination, and will. As to faculties, if not as to the nature of their content, this is the whole man.

As to man's body, it is the final finite effect of the parallel, universal series of finites, actives, and atmospheres, and the three kingdoms, mineral, plant, and animal. In the concurrence of all these in man as to his body, he is enabled to exist and move within the world. Again, as above, man is a whole, a whole that is equal to that of the animals.

For man to be a whole that is larger than what is animal there must be added a higher existence that is life and a higher motion or activity that is intelligence.

To provide that man be such a whole, there are two lines of descent from God. The first is the descent of *formation*, whereby the cosmological series and earthly kingdoms concur in man, as stated. The second is the inflowing of life and intelligence descending into man.

The brain of man is so formed as to include the faculties, and these are so formed as to be affected by the second descending series. This philosophical result is a preparation for what in revelation is influx of Love and Wisdom from the Lord.

The wholeness discussed in these notes is founded upon the Doctrine of Series and Degrees, or of Order as it appears in the *Economy of the Animal Kingdom*. The purpose of this doctrine is stated by Swedenborg to be the means to a search for the soul.

360 *The Doctrine of Series and Degrees brings together the wholeness of the soul-body relation.* To consider the soul-body relation we must understand the nature of the soul and the nature of the body. Briefly, to understand the nature of the soul requires a philosophical search, whereas to understand the nature of the body requires a scientific search. As to the nature of the body, Swedenborg wrote that he would not depend upon his own researches in anatomy but upon those of others. His declaration, "I laid aside my instruments" is well known. But this is not always taken into consideration by those who

become concerned with his possible anticipations of discoveries in science as more important than his philosophical inductions. Philosophical search today is not as popular as success in science. So for some it seems more important to promote the image of Swedenborg as a scientist rather than to investigate his professed purpose to search for the soul. However, very early in his philosophical period and while nearing the end of the *Economy* series as he began his *Rational Psychology*, Swedenborg wrote,

I have pursued this anatomy solely for the purpose of searching out the soul. If I should thereby have supplied anything of use to the anatomical and medical world, it would give me pleasure, but the pleasure would be greater if I should have thrown light on the search for the soul. (RPsych. Preface)

What could be more explicit as to the relation of the two sources, science and philosophy? And what could be more explicit as to what Swedenborg's share would be? As to that share, the development of the doctrine of series and degrees as the means of the search for the soul is a principal contribution of his philosophical period. I believe its relative importance is second only to the whole case history of philosophy that may arise in the mind of one who reads Swedenborg's philosophical works under the guidance of his own stated intentions and promises.

We may paraphrase a prominent twentieth century philosopher's admonition that to study phenomenology one "must go back to the things themselves." So wrote Husserl. If one wishes to understand Swedenborg's philosophy as a part of his preparation and as well for what that preparation illustrates to the man of our day in its relation to science and religion, *one must go back to Swedenborg himself*. Many important aspects about Swedenborg have been given us by scholars. But all too often we meet those whose knowledge about Swedenborg appears to be limited to interpretations in secondary sources.

In a book written as late as 1975, the following opens the text:

In his book *Body and Mind* (ca. 1911), William McDougall (1928, p. vii) attempted to provide students of psychology and philosophy with "a critical survey of modern opinion and discussion upon the psycho-physical problem, the problem of the relation between body and mind." A few sentences later, he observed that "among the great questions debated by

philosophers in every age the psychophysical problem occupies a special position, in that it is one in which no thoughtful person can fail to be interested...." The basis for that interest may have changed somewhat over the years, especially among psychologists, but there is no doubt that it still remains a problem for debate; the methods of science are not likely to solve it, as will be evident toward the close of this discussion. [Jay N. Eacker, *Problems of Philosophy and Psychology*, Chicago, 1975, p. 13]

If this is so, how much more so is it with reference to the body and the soul?

361 *An early reference to the doctrine of series and degrees.* Although the application of series and degrees is implicit in the *Principia*, its formal description makes its appearance in the *Economy of the Animal Kingdom*. However, the principle of end, cause, and effect, as old as the philosophy of Aristotle, is a foundation principle of the doctrine of series and degrees. That principle is used in the *Infinite*. But more direct reference to the doctrine of series and degrees appears very early in the *Economy*.

When the rational mind, from the effects presented to its notice institutes an analytical inquiry into their causes, it nowhere finds them, except in a subordination of things, and a coordination of the things subordinate. We must therefore travel through the orders and degrees of things, would we from the sphere of effects reach the sphere of causes, or ascend beyond it. [I EAK 67]

The appearance here of "subordinate" and "coordinate" as well as of "cause" and "effect" contribute to the build up of the language of series, and of degrees by complementary pairs of terms (cf. below for other examples).

Many examples of "series and degrees" (called discrete degrees in the Writings) appear in the philosophical works. For example, in the same number we come upon this application to atmospheres:

Would we know therefore what is in the air and what the ether, we must distribute the auras into their several degrees; for example, into degrees, superior and inferior, or prior and posterior. Those which are superior and prior are also more universal, less compounded, and more perfect, and are as it were the analogues of such as are inferior and posterior.

Hence the air is one thing distinctly, and the ether another, in the same manner as hearing is one thing distinctly, and seeing another; nor is it possible for us to arrive from air at ether by any process of attenuation. [Ibid.]

Much other language of degrees appears in this example: superior and inferior, prior and posterior, universal, less compounded and more perfect. Finally, one cannot go from an a posterior degree to an a priori degree by "attenuation," that is, by making what is posterior finer and finer.

Often objection is brought against Swedenborg because of his use of "ether." This results from the tenuous place held in science by the "luminiferous ether" of the nineteenth century. But the predicament really is in science, not in the distinctions Swedenborg makes between sound and light, between hearing and seeing. The wave-particle duality of light, and it may be added of nuclear particles as well, is a predicament that reminds us of the ancient Heraclitus, who it seems, believed we must live with paradoxes. It may be that a paradox occurs when we try to understand effects in a superior degree in terms of effects in an inferior degree.

There are many ways that the effects of sound waves can be made visible. They can even be felt as variation in air pressure if the amplitude is high. The pain level is easily reached with an average loudspeaker, and a glass being shattered by a high pitched note has come off the stage and appears in commercial advertising.

Intense light, both visible and in the form of infra red heat, can be felt. The composition of electric and magnetic waves of light require mathematics of a very special kind for their representation. However, antenna and a circuit design for electromagnetic waves a few centimeters long can be formed in visible forms, sometimes called "plumbing," because of the pipe-like appearance of the circuitry. Electrical component parts are of actual convenient laboratory-table size, say 3 to 12 centimeters, but for visible light must be of the order of 10^{-5} centimeters. The distinctions required for series of degrees hold between sound waves and whatever it is that constitutes light or electromagnetic signals (still called "waves" for the sake of convenience).

The above is inserted only so that one who has doubts about Swedenborg's philosophy because it is based upon eighteenth century science may come to see that his distinctions based upon series and degrees are just as valid today as they were in his time. Added to this the electromagnetic spectrum provides hundreds of

phenomena discretely different than the kind phenomena available to Swedenborg. The *Economy* number concludes with the promise:

That all other things in the mundane system, and its three-fold kingdom, distinguish themselves into similar degrees and orders, the reader will see confirmed in the course of the ensuing chapters, particularly in Chapter VIII of the present Part, in which I have entered upon an explanation of the Philosophy of Degrees. [EAK 67]

The following notes are based upon that chapter.

362 *Connected-whole of the soul and body according to "An Introduction to Rational Psychology."* The Doctrine of Series and Degrees, or of Order, is described in the nine sections of "An Introduction to Rational Psychology," Chapter VIII, of the *Economy*, Part I. Each section brings forward different aspects of many things. It is a glossary of the language of degrees. It is a source not only for different aspects of the doctrine itself, but also of the beginnings of complementary philosophical doctrines, especially of substances, forms and correspondences. It contains the beginnings of the application of series and degrees as a condition to making rational psychology possible. The development of this subject is essential to the search for the soul. Beginnings also occur in this chapter on subjects to which there are returns time and again later in Swedenborg's philosophy. Two important examples are harmony, especially coestablished harmony, and the subject of freedom.

Obviously this concurrence of so many things makes it impossible to include the relevance of all these things in these notes. Consequently the notes consist only of what seem, to me, to be examples relating the soul and body as a connected whole.

363 *Subordinate and Coordinate are the same as Successive and Simultaneous.* Section I immediately reminds us of the promise early in the *Economy* (n. 67, end). The definition of the Doctrine of Series and Degrees, or of Order, begins with the language of subordination and coordination in that promise.

By the doctrine of series and degrees we mean that doctrine which teaches the mode observed by nature in the subordination and coordination of things, and which in acting she has prescribed for herself. [581. Italics used for number heading in Clissold edition.]

Then follows concerning what is successive and simultaneous.

Series are what successively and simultaneously comprise things subordinate and coordinate. [582]

Successive refers not only to time but may also refer to successive changes of state. Succession is an accumulation that leads to a whole. *Simultaneous* refers to the accumulation of such, at such and such a time, or in such and such a state. *Subordinate* and *coordinate* have similar meanings but with special emphasis on order other than time. Order according to subordination is according to government, for example. It is an order that is coordinate within successive states, in causes and in effects. End, cause, and effect is a principle leading to a whole, consisting of at least three successive or subordinate degrees.

These two pairs of terms are important in the establishment of wholes by the application of series of degrees. I include here the full number under the title just quoted.

Subordination indeed and coordination properly have respect to order in causes, of which also they are commonly predicted; but whereas there is nothing in the animal kingdom, which does not, in some way, act as a cause, it is all the same, whether we call the several things in this kingdom successive and coexisting or simultaneous, or whether we call them subordinate and coordinate. When the things themselves are subordinate and coordinate, and thereby distinct from other things, their whole complex, in such case, is called a series, which, to the end that it may coexist, must exist successively; for nothing in nature can become what it is at once, or simultaneously: since nature, without degrees and moments, whether of time, velocity, succession, or determination, and consequently without a complex and series of things, is not nature. [582]

One more heading is added on how things are brought into a whole by series of degrees according to subordination and coordination.

But degrees are distinct progressions, such as we find when one thing is subordinated under another, and when one thing is coordinated in juxtaposition with another; in this sense there are degrees of determination, and degrees of composition. [583]

Swedenborg often refers to a series of degrees as a ladder.

...the very ladder itself has its separate steps or gradations. Hence it is that degrees never exist but in things successive. In things coexisting they are conceived to exist, for which reason they may also be predicated of them; since upon reflection we perceive that they exist within them, because without succession, and thus without degrees, they could not have coexisted. [583, also ref. 582]

A ladder, although composed of distinct steps, is a whole. Every step is necessary. This natural truth is a foundation helping us to understand Jacob's ladder, which concerns the whole subject of the relation between good and truth. On the ascent it is good from truth, and on the descent it is truth from good.

364 *Of all substances there is only one from which the rest flow. "The doctrine of series and degrees" in those words only is abstract. It is made somewhat concrete in Section I of "An Introduction to Rational Psychology" by application to "things." See in the quotation from number 582 the words "the subordination and coordination of things."*

Section II may be looked upon as an essay on substance. It begins by referring to substances, not "things," that are arranged in a whole or "entire" series. An outstanding statement related to our subject of the connected whole is:

...substances are manifold; nevertheless of all that are in the universe, there is only one from which the rest flow. The reason is that there is a connection between all things in the world, and a mutual dependence on their first principles, since there is nothing which is not a series, or in a series. [590, ref. 586]

This illustrates the nature of Swedenborg's inductions as philosophical conclusions; its source is described in these words:

This transcendental truth is manifested only by contemplation of the various objects of the world; and is consequently not acknowledged except by a rational view of the facts presented by general experience. Nevertheless, that the truth is such, both reason and experience abundantly testify. [590]

And for emphasis to repeat what the "truth" is:

Each series has its first and proper substance, which substance nevertheless depends for its existence on the first substance of the world. [592]

This compels us to acknowledge the unity of the whole of

creation! This was illustrated in the theory of the *Principia* by the hypothesis of what was called "first natural point" as the origin of finites, actives and elementaries. Indeed, there are many series; but the beginnings of each originates either mediately or immediately in the first series. Hence each series has its primitive, but not as an absolute primitive. What a chaos would creation be, hence not a whole, if that were so. So it is with the spiritual, when there are many gods, and in what is preserved in Christian thought under three gods. Here, then, is a truth that is a natural truth which is a foundation for understanding the spiritual nature of connectedness: "The Lord thy God is one God...."

365 *The first substance and visible determinations of a series.* Section II of "An Introduction to Rational Psychology" focuses upon the first substance of all creation. But there are many series, each of which is itself a whole series. The first degree of each of these, through mediate degrees, is connected to the first substance. Collectively, all series make the whole of creation. Section III is devoted to a description of such lesser series; each in its own way is an entire (whole) series, together with first substance, and,

From it, and according to its nature, flow all things which have a visible determination in the entire series. [595]

The most complete example given so far in the *Economy*, based on experience or visible determinations, is the formation of the chick in the egg. In this example all successive formations are described according to day-to-day visible determinations (cf. I EAK, chapt. III). The *Principia* series of finites, actives, and atmospheres, in a sense, is more extensive, but goes far beyond visible determinations.

Although the Doctrine of Series and Degrees is a means relating wholes, there are complementary forces introduced from time to time. *Harmony* receives additional attention in this section. These notes cannot include particulars about these complementary things. Let it be sufficient therefore to observe that harmony is suggested by sound. The harmony of a musical chord is well known to all; but harmony is a much larger subject, having to do with more than chords, even in music, and it has applications in things other than sound.

366 *Causes by determination come from simple substance; otherwise causes from the world lead to concurrence or consent in higher degrees, the variety of these leads to liberty.* In Section IV it is explained that there is both descent and ascent in a series. Either is called order. Descent is called natural

order. (Ascending order when applied to man's generation is called "inverted order" in *Arcana Coelestia* 1902.)

As to descending order:

When...the determination comes from the more simple substances, it is according to natural order. [610, ref. 271-278]

As to ascending order:

...When it comes from such as are compound, vis., when causes out of the body, or when causes within the body, are those which excite, then the more simple substances either *concur* (for to the intent that a full action may exist from sufficient causes, a concourse of several things is requisite, with which the force of more simple substances, being that which gives determinations to all the rest, must concur); or else they *consent*, since without consent no action ensues. Even parts which are dissentient can enter into consent; but when the determination exists in act, the parts which had consented prevail over the rest. [Ibid.]

A free man is a whole man. The variety of options that depend on concurring and consenting leads to *freedom*.

Thus *freedom* is predicable of the will, when causes arising from the world, or the body, can be referred as exciting causes to the will of the superior faculties or powers, and when at the same time these latter concur or consent before they are determined into act: consequently to the freedom of the will, it is of no importance what has ingress, but what has egress, or not what excites but what is determined. The freedom of the superior faculties of the same series, therefore, is the less, in proportion as they are the more drawn to that side of the question to which the inferior faculties are impelled; and, on the other hand, the freedom of the superior faculties is the greater in proportion as they are able to descend to that side of the question of their own accord; especially in proportion as they are more strongly induced to descend. [Ibid.]

This philosophical conclusion is a foundation for the truth explained in the Writings, that the whole man consists of an external man and an internal man. The man himself consists of those things which in the external man agree with things in the internal man. (The particulars of this depend upon revelation, cf. e.g. the story of the separation of Lot and his herdsmen from Abram and

his herdsmen. Much of the internal sense of the patriarchal history instructs concerning particulars of the exterior and interior of man.)

367 *Universals connect one degree with another, to make a series a whole.* Section V brings forward the language of universals. A universal as commonly understood is everywhere. In a series what is universal is everywhere *within*. The first degree is the most universal. A diagram of compounding shows how the first degree is everywhere within a posterior degree (DLW 205; SS 38). A review of the language of degrees follows, some of which has appeared in these notes, some has not:

Simple substances, and those which are less and more compound, which are the determining substances of the things in their own series, are, according to their degrees of simplicity or of composition, prior and posterior; superior and inferior; interior and exterior; more remote and more proximate, and amongst each other, are as efficient causes and effects. [613]

(Further on universals cf. note 372.)

368 *Essences, attributes, accidents and qualities are in series.* A substance of any given degree is a whole when united with its adjuncts: essences, attributes, accidents, and qualities. Section VI contributes to the subject of this whole by describing how these adjuncts are also related by degrees.

Such as are the substances, such likewise are their essences, attributes, accidents, and qualities; or all their adjuncts. [619]

Of these also it may be predicated, that they are series, and are in a series. [620]

There is a connection in the whole series by harmony.

Yet such is the coestablished harmony of all things, in the same series, that they mutually correspond to each other, without any difference but that of perfection according to degrees. [625]

Series of substances is a necessary conclusion, but is not sufficient. Along with degrees of substances it is required that each degree of substance has its adjuncts: essences, attributes, etc. And each of these is in a series parallel with that of substances, that is, there is a series of essences and also of each of the other adjuncts.

Another requirement for sufficiency is that the doctrine of series and degrees requires other philosophical doctrines, as noted many

times in the philosophical works: of substances, forms, correspondence, representation, modification, use, and influx. These are added in time. In the above quotation the words that things "mutually correspond to each other," suggest the doctrine of correspondence. More will be introduced about this in Section IX (note 371).

369 *An Introduction to Unities.* In the philosophical works as in the Writings little is said about what is there called continuous degrees. This does not mean that the subject is not important; but such degrees are well understood. Yet an important statement using the words "of the same degree" occurs in Section VII.

Aggregate entities of the same degree and series have reference to their units, as to their most simple parts, with which they are homogeneous. [629]

It is important to have a distinct idea of units or parts, and of the quantities and qualities thence resulting, in order that we may have a distinct idea of degrees in the progression of things; for from these ideas flow a distinct notion of series, its form, nature, composition, change, and divisibility. For every series of things simultaneous, or in other words, every aggregate of things coordinate, admits of being divided till you arrive at its unit; beyond which you cannot proceed further, and yet leave a unit, or a part of that degree; for if this unit be resolved, there no longer remains a unit of its own degree, but of a superior degree. For a unit itself is a series of several other units, because it is itself in the series of the universe; nor can anything be conceived as not being a series, except the first substance of all. [630, ref. 586]

This notion of unit or unity becomes important in the *Animal Kingdom* in order to understand an organ as a whole. For example, the entities of the same degree which make the stomach are called little stomachs. (Called antetypes, such unities appear also in other organs, AK I, 100, 101 [p]). Other examples are:

The unities of human society are men, thus entire bodies; the unities of the muscular system are entire muscles. (AK II, 532 [r])

(This subject of unities might be given much better basis in science through ultra-high-microscopic worlds in cells in biology, and by "molecules," or "atomic," or "nuclear" particles in present day

physics. There comes a point in an aggregate of any one of these unities when by continuous attenuation or making finer, the unity ceases to exist as such, and exploration must pass over to unities of a prior degree.)

370 *The spirituous fluid as the soul or only substance in the whole series of soul and body.* Section VIII is devoted to the spirituous fluid. According to it,

The most simple and the only substance of the animal kingdom is the spirituous fluid. [634]

This is the most important application of the Doctrine of Series and Degrees as related to wholeness of man in the *Economy*. The spirituous fluid regarded as the soul is the universal of the soul's kingdom. Therefore this aspect of the spirituous fluid and the soul, regarded first as the formative substance and then as the government of the kingdom of the soul, provides a connected whole. This is the subject of the first full scale progress report on the search for the soul, three chapters later, entitled "The Human Soul" (EAK Pt. II, chapt. III). This is the subject singled out by name when later Swedenborg enters the new series called the *Animal Kingdom*. In its Prologue he refers to the publication of "The Human Soul" as "too hasty." As we read this highly informative chapter, we may come to be aware that this remark is not a criticism of the content itself, but of its incompleteness. The search for the soul is in no way finished. Wholeness as a principle subject is indicated by the final title sentence of this section:

And to have in it life, and consequently soul, which is the principle of the things existing in the whole of that series. [637]

371 *Some things complementary to the doctrine of series and degrees.* The ninth and final section of "An Introduction to Rational Psychology" has to do with some things required to complement or supplement the Doctrine of Series and Degrees. While acknowledging its necessity toward forming a doctrine of wholeness, yet, as noted, we become aware that it is not sufficient. Two other things are added: the nature of causes, and of correspondence. As to cause:

If we would explore the efficient, rational, and principal causes of the operations and effects existing in the animal body, it will be necessary first to inquire what things, in a superior degree, correspond to those which are in an inferior degree, and by what name they are to be called. [648]

The subject of different kinds of causes receives attention in many places in Swedenborg's philosophy because the principle of end, cause, and effect is a principal means by which the notion of series and degrees is approached. This is further maintained in the Writings when the doctrine of discrete degrees is described in Section III of the *Divine Love and Wisdom*. Significantly this section is preceded by an essay on ends (DLW 167-171).

Correspondence has already come forward in this chapter (note 368). But the words in the above quotation "it will be necessary to inquire what things, in a superior degree, correspond to those which are in an inferior degree," demand that if our attention is directed to wholeness, correspondence can no longer be ignored. And indeed it is not, although not yet as a formally stated doctrine.

In number 648 this demand is also made: "to ascertain and to know what that is in a superior degree which corresponds to its proper inferior, rules must be discovered to guide us in pointing it out...." An enumeration of five rules follows. Thirteen examples are then given to which the rules should be applied: the bloods, arteries, muscles, body, actions, sensual pleasure, sexual intercourse, laughter, pride, avarice, heroic action, ends. Each of these except avarice names a series beginning with its most posterior degree. Avarice "does not ascend further, because it is destitute of the representation of universal ends...." But note how in other cases the application of the rules states: To the red blood *corresponds* the purer blood; to an artery *corresponds* a vessel of the purer blood; to a muscle *corresponds* a superior degree of the motive fleshy fibre; etc. to *ends* in which case the style changes. The gradation of ends is described in sequence when an end in an inferior degree is "for the sake" of an end in a superior degree (cf. note 372). All things to which the philosophical doctrines apply from substances, to forms, to correspondences, etc., supplement and complement each other to make a whole of the philosophical doctrines themselves.

It is useful to point out that the style of this section differs from that of the other sections. The first title sentence does not occur until number 648, although the text of the section chapter begins with number 640. These other numbers are devoted to the system of the brains—a review of what is contained in more detail in the major work on the Brain. The system of the brains is itself a wholeness when united with the body. It is a wholeness less encompassing than is the soul and body. And this latter is less encompassing than the circle of creation described first in the *Infinite*. But whichever of these wholenesses is described there is

dependence upon the Doctrine of Series and Degrees.

372 *Something that may be a condition (An Introduction) to the doctrine of series and degrees.* In these notes I have made use of some of the affirmative and successful efforts of Swedenborg to define the conditions whereby the subject of rational psychology may be possible and how the search for the soul can be pursued.

We ought not ignore the fact that not all of Swedenborg's hopes expressed in this chapter are fulfilled. Consider, for example, what he called a "mathematical philosophy of universals." This philosophy never appeared, however much its need was affirmed. The need for language for higher degrees was the principal cause expressed for this need. Our language is based upon effects in space and time. Even the language of end, cause and effect, subordinate and coordinate, successive and simultaneous, prior and posterior, are all words in common use and having origins before the effort to describe and apply the doctrine of series and degrees.

In the final chapter of the *Rational Psychology*, called "Universal Mathesis," Swedenborg seems to almost abandon the hope for a mathematical philosophy of universals. Since the alternate promise he makes there is given later in what is named the *Hieroglyphic Key*, and since that work contains twenty-one examples, each of which is on correspondence, the argument has been advanced that the doctrine of correspondence takes the place of the hoped for mathematical philosophy of universals. That may be, but I believe it is only a part of what seems to be involved in Swedenborg's mind. There are a number of things that contribute to this thought.

As noted above, the example on *ends*, given in number 649, does not explicitly use the word *correspond* as it is used in the others, for example as when it says that to the red blood corresponds the purer blood (649, Section I). The opening sentence on *ends* is,

There is a gradation of *ends*, as being inferior and superior, consequently more universal and more perfect. [649, Section XIII]

Gradation of *ends* is defined according to series of degrees, and it appears that it may be said that an end of a posterior degree corresponds to an end of a prior degree. The correspondence of *ends* receives special treatment that distinguishes it somehow from the *bloods*, *arteries*, etc. It was noted above that when series and degrees are treated of in the *Divine Love and Wisdom*, it is preceded by a section

on ends.

As we look upon the title, "mathematical philosophy of universals," we may consider the possibility that the modifier "mathematical" is restrictive of a principle that is to be applied, universally. Would it not be better to speak more briefly of a "philosophy of universals?" Universals are everywhere within a series, and the first of a series is its universal. As our mind goes over to the principle of end, cause, and effect, used so often with respect to series and degrees, we note that its first term is *end*. Would the hoped for philosophy not be "philosophy of ends?"

That something like this might have been going on in Swedenborg's mind is evidenced by the fact that at times he does use the expression "philosophy of universals." In fact this was done where the subject of universals is discussed (note 367). Following this discussion he added,

Wherefore, the philosophy of universals is that which contains the principles and elements of the things which follow from them. But a universal has respect not only to substances as giving determination, but also to series as receiving determination from them: hence it is usual to arrange things into genera, as also genera into species, and indeed into genera superior and inferior, the determinations of which, as being general, enter into the species and into their particulars or individuals. Therefore, since there are degrees of universality, and there is nothing in the whole system of the world which has not respect to something more universal, a species is sometimes taken for a genus, either superior or inferior, according to its relation to the things which belong to it in order [614, ref. also 584].

There seems to be a truth about ends and universals that affected Swedenborg from the beginning, even before the doctrine of series and degrees received explicit recognition, definition, and application. Later as the truths of the Writings carry our minds beyond philosophy into what is proper to revelation, the triad of love, use, and ends seems to unite in giving to *man* an extended meaning to his wholeness. (I have tried to show the ever present importance of *ends* from the *Infinite* through the whole of the philosophical works and into the Writings in "Ends In The Philosophy of Swedenborg," *The Academy Journal*, Literary Number, 1979 - 1980.)

In the chapter just considered, the establishment of the doctrine of

series and degrees is given as a condition ("An Introduction") to rational psychology. There may be a truth in regarding *ends* as a condition ("An Introduction") to the doctrine of series and degrees. It is interesting to note that the principle of end, cause, and effect can be expressed without the words "cause" and "effect" when the principle is applied in the doctrine of series and degrees. Here are some examples from the *Economy*.

First an example of how the substitution takes place:

The first ends, as well as the middle and ultimate ends, according to which causes follow in the provisory and given order till they arrive at the ultimate effect, appear to be present to it, and inherent within it, simultaneously and instantly. [EAK 260]

Instead of describing a series by end, cause, and effect, to do so by regarding ends as in a series:

...we everywhere find a...chain of subordinations; nay, in the forms of governments, for the king is the king, for the sake of law and order in society, which are prior in right, although not always in fact. Thus *ends always ascend when nature descends. [II EAK 230]*

See how this rule applied to hearing (*Ibid.*). Another example:

All things flow from an end, through ends, to an end. [EAK 296]

End as final cause was well known because of Aristotle. The phrase was applied in this way by Swedenborg in his title *The Infinite and Final Cause of Creation*.

...the *final cause* is an end, and that sort of end which is not for the sake of something else, but for whose sake everything else is....[Aristotle, *Met.* 994b8] ■