

and it is in keeping with its arcane quality that no mention of the semicircular canals seems to be made in the Writings except as a mere item in the list given in AC 4653:2 (The Latin is translated "cylinders" in my edition (Swedenborg Society 1922) but "canals" in another). I can find nothing more about them and no reference to them in other indexes of the Writings that are readily available to me, nor in Potts' *Concordance*, yet their importance for normal bodily life, and especially for dancing, cannot be exaggerated. Their connections through the cerebellum and brain stem with the rest of the body are like a fantastically complex, speedy, accurate computer system whereby a dancer is able to execute marvellous, rapid, complicated evolutions with perfect bodily control. (The eyes help and the cerebrum is certainly concerned when the dance is complicated: but the routine of balance and coping with starting and stopping and changing direction must be largely the responsibility of the cerebellum and its sense organs in the semicircular canals). This, I submit, is the reason for the inclusion of such an example in a section of the Writings devoted to the correspondences of the ear. If I add that this again shows that there is much more in the Writings than we think when we first read them, I hope those who had already seen the connection will still share the joy of confirmation. ■

PHILOSOPHICAL NOTES

Edward F. Allen

Connected Whole VI

378 *The Whole.* A whole is composed of realities. A whole is not an arithmetic sum of the realities which are its parts. The human body is not a simple sum of its organs. In an earlier note on wholes, it was pointed out that the whole of the universe is not a simple sum of what the senses bring to our minds, or even what these senses aided by sophisticated instrumentation bring to the mind. Radiation in space attributed to the "big bang" gives evidence of the enormous length of time covered by the past history of the universe, when it is concluded that the event of the big bang occurred some twenty billion years ago. When one assigns such a time to radiation traveling with the speed of light, he gains some idea of the size of the universe. The universe so judged is indeed an enormous whole, much larger than any arithmetic sum that may be conceived by adding solar systems. The origin of stars

according to the present theory, which is based upon the energy-mass relation between hydrogen and helium, gives credence to the notion that all natural things in the universe trace their origin by a series of events to the common source, hydrogen. Bell's theorem in physics, that there are no local causes, suggests the notion of causes of causes. None of these conclusions is limited to what is brought to the mind through the bodily senses.

These three together — the notion of the great length of time and enormous distances in space, the notion of causes of causes, and the notion that the source of all things in the universe is a single finite effect in the world, namely hydrogen — do not confirm, but are not at variance with the following: 1. Enormous times and spaces so conceived give natural grounds for understanding that there is an eternity and an immensity which are the components of the infinite. 2. The notion of causes of causes restores to thought the possibility of a first cause. 3. A common source of all things in the universe, if it be a natural truth, gives support to the notion that every series of discrete degrees originates in a most prior degree which is universal, that is, is present within every succeeding posterior degree.

These three present-day conclusions go far beyond the limitations of positivistic science so predominant at the beginning of this century, which conditioned the minds of many teachers of science who taught past the middle of this century. The whole of natural things was not allowed by positivism, much less the whole of spiritual things. Although positivism itself may have been a possession of "the scholars," yet at least two attitudes of that time were "understood" by average educated persons.

The first was the splintering of the conception of the whole by specialized sciences, leading to specialistic attitudes. This attitude was supported by many competent persons within their respective sciences. All too often the very indoctrination of science led to *exclusive* views. One example is that science would provide the answers to moral and spiritual problems, previously assigned to philosophy, religion, and theology. This result was a reasoned one, even though it extrapolated, by hope, far beyond what is proper to science.

There was another attitude, not reasoned, yet often voiced by persons whom one might have hoped would have been able to see the unreasonableness of it. This is the theorem that seeing something "is outmoded" justifies its elimination. How often we have heard that some thought is outmoded and that this is a basis

for a new "truth." The declaration that something is outmoded is really nothing but a persuasive phrase, empty of all content. That truths are replaced or set aside, is a natural condition of history. The fall of religions, the breaking apart of societies, the denigration of words in language, are examples of failures and of destruction. The term *outmoded* scarcely describes what happens, for example, when one says that in discussing values we must not use the term *good*. When "good" becomes regarded as an outmoded concept because it means so many things, the useful notion of and the search for good ceases.

The fourth part of this series was devoted to examples of connected wholeness in each of the nine sections of "An Introduction to Rational Psychology" (EAK, Pt. I, Chapt. VIII). The main subject of that chapter is that the doctrine of series and degrees is necessary to the study called rational psychology. In this set of notes are examples of connected wholes, resulting from the application of the doctrine of series and degrees, more encompassing than is the subject of rational psychology.

379 *The Doctrine of Series and Degrees as an Encompassment of a Whole.* Creation or formation of a series that ends in the most posterior things of the finite world is a kind of a whole. Such is the subject of *The Principia*, the first major philosophical work by Emanuel Swedenborg. But such a creation is just a formation; it is the descent by degrees from the first thing in the world, called the first finite, to the most compounded things: the kingdoms of this world and the universe with its solar systems, composed of other earths as well as our own. That series of encompassment begins in the Infinite by finition resulting in the first natural point. The point is a conatus toward motion. What follows by compounded formation is a unidirectional succession. It is a descent, first by finition, then by composition. *The Principia*, one of a set of three volumes, represents the thought of Swedenborg, as an engineer in mining and metallurgy, becoming a philosopher. The other two volumes are on iron and copper. It is natural, therefore, that his introduction into philosophy was by way of the formation of physical things, things of motion and geometry: hence the development or formation of a series of finites, a series of actives, and a series of atmospheres. Both the author of *The Principia* and his likely readers could be expected to have backgrounds in Aristotelian philosophy.

Before *The Principia* was off the press, Swedenborg was working

on *The Infinite and Final Cause of Creation*. Although much smaller in size, its pages contain a description of a much larger encompassment in creation.

One may suspect that a statement on causes by Aristotle was in the author's mind while his work on *The Infinite* was under way.

...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....[*Metaphysics* 994b 8]

This is sufficient for our purpose, but for those interested in pursuing the question of what is the nature of the philosophical background which Swedenborg is addressing, the rest of the paragraph from *The Metaphysics* is added.

...so that if there is to be a last term of this sort, the process will not be infinite; but if there is no such term, there will be no final cause, but those who maintain the infinite series eliminate the good without knowing it (yet no one would try to do anything if he were not going to come to a limit; nor would there be reason in the world; the reasonable man, at least, always acts for a purpose, and this is a limit; for the end is the limit.)

The infinite referred to is not the Infinite of *The Principia* or *The Infinite*. It is the infinite of *infinite regress*, well known to Greek philosophy as a cause of skepticism. Aristotle was far from being a sceptic; but Aristotle did not have a philosophy of the Infinite as related to God — so far as I know. (The reader might check the treatment of *infinite* in Aristotle's *Physics*.)

For our purpose, the *final cause* as an end in the first part of the quotation, refers back to itself by means of the causal concept in the words "for the sake of." It is not at variance with Swedenborg's expression regarding ends: from ends, by the means of ends, back to ends. An examination of the meaning of this phrase leads to understanding it as an alternate way of expressing the principle of end, cause, and effect. Swedenborg uses this principle in explaining the doctrine of series and degrees in *The Economy* and for explaining the doctrine of discrete degrees in *The Divine Love and Wisdom*.

A teaching in the Writings is that the Lord teaches man only by knowledges man already has. One can only learn in philosophy by what one already knows. So Swedenborg often referred to what "our philosopher [Aristotle] said." Beginnings in the Writings are in the Letter of the Word. Yet expositions in the Writings depend upon

philosophical doctrines developed in the philosophical works. The teaching about beginnings in what a man already knows applies to every man. In the case of Swedenborg these beginnings appear in his philosophy, and hence are examples included in his preparation.

Although when *The Infinite* was written the doctrine of series and degrees was not yet formally defined and applied by that name, that doctrine was applied there, and indeed in *The Principia*. This can be verified by reflecting from the doctrine of degrees, as explained in *The Economy of the Animal Kingdom*, Pt. I, Chapter VIII, back upon the series of finites, actives, and atmospheres of *The Principia*.

But our subject now is to proceed to the work, *The Infinite and Final Cause of Creation*.

380 *The Circle of Creation in The Infinite.* The circle of creation has been referred to, but briefly, in previous notes. In this note the subject is given more particulars. Following the philosophical conclusions that there is an Infinite, and that there is a nexus in the Infinite that is a means of connection with the first finite effect in creation, and also of the resulting series of finites, of actives, and of atmospheres — the question arises, why did God create man? It is in the answer to this question that the circle of creation as a connected whole between the Infinite and man and all things of creation, becomes described.

In *The Infinite* the end that leads to creation is called the *first cause*. As the principle of end, cause, and effect is applied, the first three degrees of creation respectively: 1. originate as ends in the Infinite, 2. proceed by cause or means in the nexus, 3. and thence to the first thing of creation as the first effect in the natural world. The trinal series of end, cause, and effect receives a new beginning in the first thing of creation and proceeds by successive steps in descent from the Infinite. But according to the principle about the *final cause* quoted from Aristotle in the previous note, there is a return back to the final cause. That is, there is a continuous circle from final cause to final cause by intermediate ends. For clarity the statement is repeated.

...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...[*Metaphysics* 994b 8]

The circle is a continuous circle originating in the Infinite as the highest or most prior degree, descending by intermediate degrees to the final or ultimate effect in finite creation, and returning by

ascending intermediate degrees to the Infinite. "Continuous circle" does not refer to continuous degrees but to a continuity from degree to degree, wherein no intermediate degrees are missing.

The question now arises what is the final or ultimate effect in creation; that is, what is at the turning point from descending degrees from the Infinite then to ascending degrees back to the Infinite? This question assumes the same place as the question, Why did God create man?

The key to answering these questions philosophically depends on our understanding of ends. The importance of the doctrine of ends is evident in *The Infinite*, where both the author and his anticipated readers were indoctrinated in the thought of the day. That thought was without benefit of the Writings. But its importance does not stop there, because ends are important within the Writings. The doctrine of discrete degrees is described and applied in Part III of *Angelic Wisdom Concerning Divine Love and Wisdom*, but the few numbers just before Part III, that is, that conclude Part II may be given the title, "An Essay on Ends." (cf. DLW 167-172)

Let us consider the answer to the question, Why did God create man? Or alternately as it turns out, what is the ultimate effect in creation? And why does the answer to the first question happen to be the answer to the second? That is, why is man "the ultimate effect"? Let us enter into some of the particulars concerning the circle of creation. It is only a part of the whole argument, yet it is important enough for us to include this long quotation from *The Infinite* and then follow the argument on succeeding pages.

And as the final cause cannot be obtained but by ends, it follows that it cannot be obtained but by a peculiar subject which has ends; that is to say, by the finite, or by the world considered as finite. If it can be obtained only by ends and boundaries, then there must be two finite ends, a first and a last; to say nothing of middle terms, of which we shall speak at length in another place. With respect to the first natural end, we have said that it is the first created minimum, the smallest natural seed, or the simple principle of the world. We shall now leave the middle terms, and pass at once to the last natural end, through which the divine end must be obtained; which, as respects its first cause, is

He makes no pretensions here as a philosopher to be concerned with other earths. The argument continues in consideration of the intermediate effects, whether for example they be ether, air, fire, water, or other effects; none is the final effect, for

The earth with the various growths that adorn it cannot be the ultimate effect; for in the latter all the means must concur....[P. 106]

And what is that in which all intermediate ends on the descent must concur?

Now therefore let us come to man, and let us see whether all things conspire to make him the ultimate effect. [P. 106]

At least this much we know,

We know...by the senses, that nearly all things do concur in man [P. 107]

All of which argues only that man is the last in time; for

...other animals too are ultimate effects, as their composition, senses, and mechanical organs appear to be similar to our own, and all the before-mentioned series concur to produce them, just as they concur to the corresponding parts and endowments in man. [P. 108]

So to continue, as one question begets another:

How then can it be said that man is the ultimate effect through which alone the end is realized, when by the showing of our very senses, the same ultimate effect is evidently presented in other living creatures also? But let us proceed a step further. The ultimate effect we are seeking must have more in it than a mere machine. [P. 108]

And so in the ultimate mechanical or material effect of the world, there must be a power and a principle which if not active and causative, is at least admmissive or receptive, and by which the material is enabled to acknowledge and to contemplate God. There must therefore be something that can comprehend the end, that can acknowledge the end, and acknowledge also, in the fulness of faith, that the end is infinite. Without such a power and endowment, an ultimate effect embodying the divine intention is inconceivable. But animals have not this power, nor can they have any comprehension of its object.... There must be not only a body, but a soul; and not only a soul, but a conjunction between the soul and the body, and consequently a rational man. Hence rationality is given to man through the soul and body at once, that the divine end may be realized. We see therefore that man is the ultimate effect on our planet; the effect through which this grand result may be obtained... [P. 109-110]

381 *Final Cause as an End Is Present Throughout a Series.* In Aristotle the principle of end, cause, and effect, so far as I know, did not make of the series a series of degrees such as described by Swedenborg. To be such a series, the prior degree must have existence in every successive degree of the series. The circle of creation, as a series of degrees, must have something of what is Divine in it throughout. This must apply to man. We quote again from *The Infinite*.

But for this last cause in the finite to respect the first cause, there must be something in the same finite, that can, and does, partake of the divine and the infinite: were there nothing divine or infinite in the ultimate finite effect, the Infinite could have no final cause respecting it in the finite. [P. 110]

Arguments may appear against this. For example,

...how can the finite possess aught of the infinite, when there is no ratio between the two. Good Reader! have a little patience. I say that as the end of creation is purely divine and infinite, and as it is realized nowhere but in the ultimate effect, which is man, so it follows in all reason, that there must be something divine, or

receptive of the divine, in man; otherwise the end is not obtained. But hear now in what this divine or infinite predication may consist. [P. 110-111]

There is an enumeration of what that may not be: 1. not because man is an animal; 2. neither because he has a soul; 3. nor by means of his reason. Reasons are given why, and the reader indoctrinated in the Writings will sense an incompleteness here with respect to man's will and understanding that are receptive of Love and Wisdom. This must be excused in the absence of revealed doctrine. Our concern is whether what is concluded is or is not at variance with revelation. Swedenborg continues:

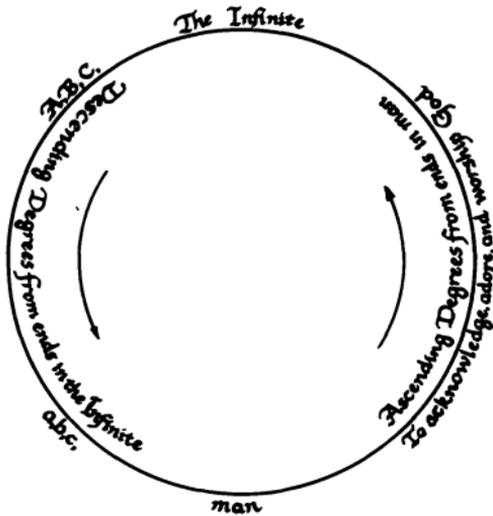
So far we find nothing divine in man. Where is that then which appears to be nowhere, and yet is present in the subject to be fairly predicated of it. We answer that in spite of any difficulties in the case, we may nevertheless learn through reason what this divine principle is; in short it lies in the circumstance, that man can acknowledge, and does acknowledge God; that he can believe, and doth believe that God is infinite; and though he is ignorant of the nature of the Deity, yet he can acknowledge, and does acknowledge, His existence; and this, without the shadow of doubt, and especially does it consist in this further privilege, that by that undoubting faith, he is sensible in love, or delight resulting from love, of a peculiar connection with the Infinite. [P. 111-112]

Of what is there no shadow of doubt? It is that man can do and does do these things. But man can also doubt.

But where he doubts he does not acknowledge, and the divine is not in him. All divine worship proceeds from this fountain of faith and love. Of worship, however, we must treat in another place, the subject being one of immense extent and difficulty; enough for the present to know that it is given in revelation. [P. 112]

Little did Swedenborg know at this time to what extent he would write on the subject of worship. Much less did he know that this would be done by a revelation in which he was to play a part. But there may be some hesitancy in a literal meaning of the presence of Divine in man. How can man have

...a power of concluding by self-contemplation, by the view of effects, and by everything in the world, that there is a God, and that He is infinite: although human reason cannot do this of itself, in such as man, with all his parts and his very soul, is finite; notwithstanding which, he may be a fit recipient, and as he is in the finite sphere, he may concur to dispose himself for reception. Thus we see that the end is obtainable through man alone, and through no other creature although other creatures may be regarded as means to the existence of the ultimate effect, and therein of the divine end. Therefore the acknowledgment of God, with faith for its ground, is the foundation of all divine worship. [P. 112]



A, B, C — Series of finites, of actives, and of atmospheres
 a, b, c — Mineral, plant, and animal kingdoms

Circle of Creation in
 THE INFINITE AND THE FINAL CAUSE OF CREATION

382 A Diagram For the Circle of Creation. Following the notes above, the diagram should be self explanatory. It is clearly an outgrowth of *The Principia* theory, with the descent beginning in

the series of finites, actives, and passives and proceeding thence to the three kingdoms of the world. All of which as to descending or intermediate degrees from the Infinite lead to and concur in man; or as leading into *The Economy* and enumerated therein (584). In a broader aspect, as indicated in the later philosophical works, and indeed in the Writings, each and every thing in creation is for a use. In one place in the Writings this is summarized as for the happiness, the uses, and the service of man. It is taught that the descent is Divine proceeding consisting of love and wisdom. How this is with respect to man appears in these words:

✦ The Divine Love can, from its own Divine nature, design no other end than the eternal happiness of man, and the Divine Wisdom can produce nothing but uses, as means to that end. From the contemplation of the world in the light of the universal idea every wise man may understand that the Creator of the universe is one, and that His Essence is Love and Wisdom. There is, therefore, nothing in the universe in which does not reside some use, more or less remote, for the service of man. [TCR 13:2]

383 *Unity, Coherence, and the Whole.* The notion of the whole is important because it has many applications in philosophical thought. The belief that God is one, as a unity, opposes the religion of the Greeks and much of what Christian religions came to be. The importance of Unity is suggested because the first section on God the Creator, the first chapter of *The True Christian Religion*, is on the Unity of God. The quotation in the previous note is from that section. In logical discourse, coherence, consistency, and continuity are three requirements when we address ourselves to a whole. In the chapter on The Unity of God, continuity is assured in the orderly arrangement of titles of the eight subjects set forth in the enumeration in TCR n. 5. The language of what is logical appears explicitly in the use of the terms *coherence* and *consistent*. With regard to *coherent*:

It is thus evident that the Sacred Scripture is the fulness of God. That it teaches not only that there is a God, but also that He is one, can be seen from the truths which, as has been said, form that mirror, for they combine in a coherent series, and render it impossible for a man to think of God but as one. [TCR 6:2,3]

But *coherence* is not merely a logical term, for it describes the relation of a whole. The very atmospheres and members of the human organic, when arranged according to Divine order, are established in an order as to particular atmospheres and the means of articulations and wave motions that enable man to communicate. Corresponding to natural atmospheres, articulations and wave motions, there are spiritual atmospheres, spiritual speech, and spiritual seeing. The nature of spiritual speech in the three heavens is according to the degree of ascendancy of man toward things Divine. So,

The angels cannot open their lips to pronounce the word for *gods*, for the heavenly atmosphere in which they live opposes it. [TCR 6:3]

It is well known that the doctrines of the Christian Churches teach that God is one. They do so because all their doctrines are derived from the Word, and they are consistent in so far as they acknowledge one God not only with their lips but also with the heart. [TCR 7]

But back to *coherent and unity*:

The unity of God may be inferred from the creation of the universe, because it is a work coherent as a unity from first to last, and dependent upon one God as the body depends upon its soul.... This great system which is called the Universe is a work cohering as a unity from first to last because God in creating it had one end in view, namely an angelic heaven from the human race; and all things of which the world consists are means to that end; for he who wills the end, wills also the means. [TCR 13:1]

The circle of creation, which is the subject of these notes, depends upon the series of end, cause, and effect — or from ends, by means of ends, back to ends. Such a series is a series of discrete degrees. It is such a circle of discrete degrees that is the connected whole of the circle of creation required in *The Infinite*. The wording in the Writings as illustrated above encompasses within God the creator, His Esse, His Infinite, and His Essence, treated of successively in the first chapter of *The True Christian Religion* following this section on Unity. So to continue the above on *unity and coherence*:

Therefore he who looks upon the world as a work comprising the means to that end can look upon the created universe as a coherent unity, and can see that the world is a complex of uses in successive order for the service of the human race, from which the angelic heaven is formed. [TCR 13:2]

The return in the circle of creation here is in the angelic heaven, where, as is taught elsewhere, there is conjunction of each angel with the Lord. And with further emphasis upon the whole:

✦ Those who view things in the world singly, and not comprehensively in a series in which are ends, mediate causes and effects, and who do not refer Creation to the Divine Love through the Divine Wisdom, cannot see that the universe is the work of one God, and that He is present in every single use, because He is present in the end. For whoever is in the end is also in the means, since the end is interiorly involved in all the means, actuating and directing them. [TCR 13:3]

That there is a circle of creation from the Infinite down to man, where all things of the natural universe concur in man, and that there are ends in man whereby he may ascend back towards the Infinite, is a truth of human philosophy that is a foundation for the spiritual truth wherein the circle of creation includes on the ascent the intermediate means proper to the spiritual degrees of the mind and the spiritual degrees of heaven.■

COMMUNICATION

To the Editor,

The two articles by Dr. Gregory L. Baker, "Toward the Beginning of Time," (*New Philosophy*, Vol. 83 No. 1, pp. 3-18, 50-64) have perhaps raised the minds even of the New Church clergy to a more refined view of Creation.

The spiritual universe is founded and lodged in the physical. If the creation of the spiritual universe, i.e. man's regeneration to heaven, is typified by the Divine pronouncement, "Let there be light," then I see no difficulty in the discovery that the physical universe pronounces this with a slight lisp, as $T^* = (hG/c^3)^{1/2} = 5.4 \times 10^{-44}$ seconds.