

## KNOWLEDGE AND TRUTH

"What is knowledge unless it can contain the intelligence of truth and the wisdom of good" (AC 10331).

**Introduction**

To this point we have explored the nature of the human mind and examined the nature and origin of mental processes we employ. We turn now to a consideration of knowledge itself. Again we draw mostly on Swedenborg's theological works.

At its most rudimentary level "knowledge" refers to anything known, anything that resides in the external memory. This is the meaning given in Odhner's *The Human Mind* (Odhner, 1969), and includes anything that is established in the mind via the five senses. We note here also that the Writings use the term "cognitions" (as a subset of "knowledge" as defined above) to refer to things known that have to do with the church—with the things that are derived from revelation. The term "scientifics" as employed in the Writings refers to the full set of all knowledge, whatever its source.

However, knowledge as such is devoid of life. But the moment that a man reflects upon it and weaves it into the fabric of his conscious thought by means of affections of the will, it then takes on quality and meaning, is incorporated into a man's speech and actions, and thereby becomes part of himself.

In what follows we shall be referring often to "truth" of one kind or another. It needs to be stated at the outset that the Writings make it abundantly clear that with men there is no such thing as truth in any absolute sense. God alone is Good Itself and Truth Itself, the Divine Love and Wisdom (TRC 3; DLW 28ff). And furthermore, when man "sees the truth" in the first stages of his regeneration, it is a consequence of the influx of good from the Lord into knowledges that can serve as receptacles of it—just as Abram's first son Ishmael was born of Hagar (Sarai's servant) not Sarai herself. For Sarai represents truth from the Lord, and truth entering a perverted natural (the inheritance of all men, the Writings teach) would be

Finally, recalling that our conscious thought is always in the natural and that there simply cannot be any conscious awareness of falsified.

<sup>1</sup>Part V published in 1987, 90:2:315-321.

the influx that makes all thought possible (although its influence is certainly felt and qualifies the natural state of mind), in treating of those kinds of truth that are above the natural we have nothing but the letter of Scripture upon which to ground our ideas; in particular the letter of the Old Testament dealing with the Abraham series. Indeed, our ideas are drawn mostly from those parts of *Arcana Coelestia* that give glimpses of the internal sense of that part of Scripture. And if it be asked "What is the point of exploring something which, in itself, is beyond human consciousness?" we can reply by observing that one can go through the whole of one's term of physical bodily existence on earth without knowing what is going on physiologically and biochemically in our bodies. But despite our ignorance, we could not survive a moment without the constant operation of a myriad of processes. Likewise, the growth and sustenance of our spiritual being (the essential us) would cease in a moment were it not for a myriad of unseen spiritual processes occurring in response to the immediate and mediate influx from the Lord. If we know something of the physiology and biochemistry of the human body by examining it, we can likewise know something of the spiritual counterparts of physical processes by examining the body of the Word.

One other point that is directing our treatment of the subject is this: no one's thought and life is without quality determined by his "ruling love." We read of this that "The very life of man is his love; and such as his love is, such is his life; nay, such is the whole man. But it is the ruling or reigning love, that is, the love of that which he has as an end, which makes the man." (AC 7081) And elsewhere (AC 7648) we read that "That which reigns universally with a man, makes the visible presentation of his spirit, his face being wholly in accordance with it. If evil and falsity are that which reigns, the form of his spirit is diabolical; but if good and truth are that which reigns, the form is angelic; for regarded in itself the spirit is the affection in form, and the ruling affection is its veriest form, and the rest of its affections apply themselves to it." Thus, although we are kept in a state of spiritual equilibrium, the quality of our life is never "neutral"—as to our minds we are either inviting selfless, good influences from heaven or selfish, evil influences from hell.

## Knowledge in General

Fundamental to New Church epistemology as expressed in the Writings are the ideas contained in Swedenborg's use of the Latin

words *scientifica* (tr. scientific) and *cognitiones* (tr. cognitions). In general, scientifics refer to anything whatever that enters the senses, sense impressions, as well as knowledge pertaining to the material world, to civil and moral life, and to spiritual life; while cognitions refer only to matters of the life of faith derived from any part of the threefold Word. And with the latter a further distinction is made between knowledges that are "spiritual," having to do with matters of the understanding that constitute one's faith, and those that are "celestial" that pertain to matters of the will—of love to God and the neighbor (AC 61).

Another important distinction is made between scientifics of faith and those of "natural things" (AC 1198). These are said to have "scarcely anything in common" (*ibid.*). The significance of this distinction will be elaborated on later. But we note that this is not to deny that *everything* of thought has a transcendental origin (AC 3219: "all things of thought inflow from within, and not from without, although it appears so").

The distinctions between scientifics and cognitions are drawn in an important statement on the matter by C. T. Odhner (1905), wherein key passages are brought together, and some of which are as follows:

Cognitions regarded in themselves, are nothing but scientifics.

"By Vessels' in the Word, are signified cognitions, which in so far as they are of the natural [Odhner erroneously has internal here] man, stored up in the memory, *are scientifics*" (AE 1146; added emphasis).

"The cognitions of truth and good which are with man, are stored up in his memory and are referred there as scientifics; for *whatever* is insinuated into the memory of the external man *remains there as a scientific*" (AC 27).

*Cognitions are interior scientifics, the scientifics of the Church, thus the knowledges of spiritual and celestial things, in a word, of doctrinal things.*

"The cognitions of good and truth are the scientifics of the Church..." (AC 9755).

"The scientifics which are from the Word, or from the Doctrine of the Church, *are called cognitions* of truth and good" (AC 9723).

"By *scientifics* from the Word are meant all the things of the sense of the letter, in which there does not appear what is

doctrinal; but by *cognitions* of truth and good are meant all things of the sense of the letter, in which and from which there is what is *doctrinal*" (AE 545).

I take this series to mean that a scientific is something known from the letter of the Word but something of the memory only; but if, upon reflection, the essential truth contained within the letter is understood, then the scientific becomes a cognition; and when this is applied to life and the essential good of it is truly known, then it is a doctrinal. Continuing with Odhner's selections:

"... scientifics and cognitions are of the *external memory*" (NJHD 52).

" 'Vessels,' in general signify the things of the *exterior memory*, and, in respect to holy things, the cognitions of good and truth" (AC 9724).

And finally, to emphasize the distinction between scientifics, cognitions, and truths [and we could substitute "doctrinals" for "truths"] we select the following, again from Odhner:

"Cognitions *are not in* the man but are in the entrance to him, which is his memory, until they are in his will..." (AE 242).

"So long as the truths of the Church go no further than the memory and the understanding, they are only cognitions and scientifics, and, relatively to goods, are *outside of the man himself*. .." (AC 9230).

"The things inscribed on the *interior memory* are not called scientifics, but are called truths of faith and goods of love..." (AC 9222, 5212).

"The cognitions of good and truth from the Word, when there is in them what is spiritual from the Lord, are not called cognitions, but *truths*" (AR 900).

## Some Difficulties

In this attempt to gain some glimpses of the origin and nature of knowledge, we have found that the work that addresses the topic most is *Arcana Coelestia*. In this a problem at once arises because the work treats of all the various internal senses—that treating of the Lord's incarnation and glorification, and those which address the spiritual history of mankind and the regeneration of man. In this treatise we are concerned only with the last of these, recognizing, however, that the higher senses illuminate the lower and give them life. We note, too, that circumstances with men prior to the "fall"

when the will and understanding were conjoined and when knowledge was actually gained by an internal way, differed from those that have prevailed since, with the separation of the will and understanding, and with the changed circumstances for the acquisition of knowledge. It is this last that is now our focus of attention.

At the outset we remind ourselves that man can be viewed as having an internal, the recipient of the influx of good and truth from the Lord and the organ that makes man human; a rational that prior to regeneration exists only potentially, the realm that serves as the conjoining medium of the internal and external man; and an external, the realm of conscious operation in the world of nature. These are represented by Abraham, Ishmael and Isaac, and Jacob respectively with the regenerating man. The natural man before regeneration is represented by Lot.

## TRUTH

The pursuit of knowledge and its preservation is something that has preoccupied man throughout historic time. And the knowledge sought has ever been "the truth," not often stated as such, but implied. It seems logical, therefore, to begin our enquiry into knowledge by exploring what the Writings have to say about truth of various kinds.

In the Standard Edition of the Writings truth is described by various terms. It is our view that there are three primary categories of truth corresponding to the three levels in man. (1) "Intellectual" truth which relates to the internal man. (2) "Spiritual" or "rational" truth belonging to that intermediate level called the rational. And (3) "truth in the memory" (*verum scientificum*), "scientific," "natural," and "sensuous" truth which relates to the natural (external) degree of the mind. Other kinds of truth are spoken of also, such as "doctrinals" which we equate with rational truth, and civil and moral truths, which clearly would be classed with natural truth.

### Natural Truth

For a "scientific" to qualify as truth it must meet one essential requisite, that of being able to serve as a vessel to receive the influx of the light of heaven (AC 1462, in reference to Egypt). When it does so, it serves as a foundation for interior things. So we read:

[Natural truths] are most general truths, which appear in the natural light which is from the light of the world; but in

order that they may appear (that is, as being truth), there must be a general influx from the internal. . . . This is enlightenment from the light of heaven (AC 5670).

This can be illustrated by the circumstance that no physical object is "seen" unless light is shed upon it. And again:

... That there is stability in the natural sphere, is because everything spiritual comes to a close in what is called natural truth, and everything celestial in what is called natural good, and there they subsist. From this it is that the natural is a foundation, and consequently a support to them (AC 9538).

This can also be illustrated by an analogy with light. Certain kinds of light (parts of the electro-magnetic spectrum) are received by some substances, but not others. As a consequence special sensors are needed to receive particular kinds of light. Thus "natural truths" are sensors to receive (can serve as foundations for) truths of a higher degree originating in God, while other things known cannot; and herein lies the criterion for discriminating between natural truth, falsity, and any other knowledge residing in the external memory.

Natural truths are said to consist of two kinds: sensuous "in which children are" (AC 3309), and "truths in the form of scientifics ... in which the same children are as they grow up" (*ibid.*). This same distinction is made in *Arcana Coelestia* 3294: "... the interior [natural] truth is called natural truth, but the exterior truth is called sensuous. But how the case is with these kinds of truths, will of the Lord's Divine mercy appear from what follows, where Jacob is treated of; for by Jacob is represented this truth as to both kinds."

What is meant here may be illustrated by the story of the good Samaritan. The literal story itself constitutes sensuous truth, while the recognition of the charitable act and mercy shown by the Samaritan constitutes interior natural truth.

Some statements in the Writings may be read to suggest that anything whatever that is in the external memory is "natural truth," as for example: "... The truths of the natural man are truths in the form of scientifics, that is, whatever things are in his external memory; these are what are signified by 'straw,' when camels... are treated of" (AC 3114). But when the context is considered, as well as other statements (such as those adduced above), it is clear that *only* the Word or what is derived therefrom can qualify as natural truth.

## Intellectual Truth

Having considered the nature of truth as it applies to the natural man, we turn now to the truth that belongs to the internal man, called "intellectual" truth.

Recall that the internal man is beyond the touch of consciousness, and that it is said to be the Lord's with man (AC 1904:3). It is also called man's "soul," meaning something that is prior to and the causative force behind what is in a discrete degree lower.

Represented by Sarai, the wife of Abram (the internal man), this truth "is the spiritual itself which flows in through heaven, and this by an internal way [as distinct from what enters man through the external senses], and this with every man; and it continually meets the knowledges [mere sensations with infants, natural truth from the Word with older children and adults] that are learned, and are implanted in the memory by means of affections. Man is not aware of this intellectual truth because it is too pure to be perceived by a general idea [meaning idea in the external, lowest degree]. It is like a kind of light that illuminates the mind, *and confers the faculty of knowing, thinking, and understanding*' (AC 1901; added emphasis).

Something should be said here about Abram too. Just as the heavens consist of two kingdoms, the spiritual and celestial (DLW 232), likewise the internal man consists of a spiritual part, pertaining to truth, and a celestial to good. These are what are represented by Sarai and Abram respectively. In the consideration of "rational" truth which is to follow we are necessarily concerned with not only these, but also with Hagar, Sarai's maidservant. The significance of this will become evident shortly.

## Rational Truth

We have noted that the "rational" degree of the mind is intermediate between the external and internal degrees, and that it serves as a conjoining medium, for only as the external is brought into order by the internal can the man be said to be regenerated, or born anew.

The circumstance that the "first" rational, represented by Ishmael, was born of Hagar and not Sarai is because it is the conjunction of good from the internal with truth in the external (Hagar) that brings the rational to life. The circumstances with men now (as distinct those from prior to the "fall") is described in *Arcana Coelestia* 2557, as follows:

[2] For it is known that a man is born into no knowledge and into nothing of reason, but only into the faculty of receiving them;... [T]here is something constantly flowing in from within that receives the things which thus enter and are insinuated from without [natural truths], and disposes them in order. That which flows in. . . . is Divine celestial good [Abram], which is from the Lord. Thence comes the life of these things, . . . [3] As regards the other arcanum, namely, that the rational is not conceived of spiritual truth [Sarai] as a mother . . . If spiritual truth were to flow in [to the external] from within, as good does, man would then be born into everything of reason, and at the same time into everything of knowledge, so that he would have no need to learn anything [as is the case with animals in their state of life]. But as man is such that he is hereditarily in all evil, and thence in all falsity, and therefore if truths themselves were to flow in would adulterate and falsify them,... it has been provided by the Lord that nothing of truth flows in through man's internal, but only through his external.

However, the existence of the first rational makes possible birth of the second, represented by Isaac, born of the conjunction of spiritual truth (Sarai) and celestial good (Abram). The states of mind that these two rationals confer are distinctly different, reflecting the character of the one who bore them—truth in the external (Hagar) and the internal (Sarai) respectively.

The distinction between the two is described in detail in *Arcana Coelestia* 2657, as follows.

[2] With every man who is being regenerated there are two rationals, one before regeneration, and the other after. The first. . . is procured through the experience of the senses, by reflection upon things of civil and moral life, and by means of the sciences [in the medieval sense—knowledge of any discipline] and reasonings derived from them and by means of them, also by means of the knowledges of spiritual things from the doctrine of faith or from the Word. But these go no further at that time than a little above the ideas of the corporeal memory, which comparatively are quite material. . . . [3] But the rational after regeneration is formed by the Lord through the affections of spiritual truth and good, which affections are implanted by the Lord. . . in the truths of the

former rational; and those things in it which are in agreement and which favor, are thus vivified; but the rest are separated from it as of no use; . . .

It is clear from this that with the first rational alone operative, the truth with a person is what has been described above as natural truth. The conversion of this to "rational" truth comes about following the birth of the second or "true" rational, a conversion that takes place when truth is a matter of the will and life, not merely of the thought and speech. This state is described in *Arcana Coelestia* 5951:

With those who are learning them [truths of faith from the Word; natural truths] for the first time, they are only scientifics. Afterwards if these persons devoutly reverence them... [they] become truths of the church; and when they are affected with them and live according to them, they then become spiritual truths; for the good of love and charity, which is solely from the spiritual world, then fills them and causes them to live; for to be affected with them and to live according to them is from good.

The internal sense of the stories of Jacob and of his sons, and of the uniting of Joseph with his father Jacob and his brothers, via the mediation of Benjamin, describes in great detail the processes that we have merely sketched here. The first miracle performed by the Lord while on earth, that of converting the water into wine, represents the same process of the conversion of natural into rational truth.

We observe, however, that in places, as in *Arcana Coelestia* 1949:1, the term "rational truth" is associated with men with whom the first rational alone is operative, which is logical enough, though perhaps confusing. The key idea is perhaps given in the account of the reuniting of Joseph with his brethren, when recognition is brought about by the presence of the silver cup in the bag. This cup represents rational truth.

Perhaps, too, *Arcana Coelestia* 4038 throws light on the question. Herein, man is said to consist of three parts: (1) the outermost corporeal that communicates with (2) the intermediate natural, the things belonging to which are stored in the external memory, and (3) the interior rational, which has for its storehouse the internal memory. This last serves as the medium of conjunction of the natural with the internal, that part of man said to be "the Lord's with man" as noted above.

The study of the correspondence of man with a tree<sup>2</sup> may help illustrate the role of rational truth in serving as a medium between the external and internal of man, as suggested in the footnote.

The term "spiritual truth" is used variously also, and care must be taken to discriminate the meaning applied to it in various contexts. In the quotation above (from AC 5951) we have indicated that it is used as synonymous with rational truth. Elsewhere, we have equated it with the spiritual of the internal, represented by Sarai, and it is also used in reference to "truths of the church" (AC 3581). What is consistent here is that the truths of the church in the natural can be recipient of rational truth, which in turn receives truth from the internal; all therefore representing spiritual truth on three discretely different planes of life.

### Scientifics that are not "natural truth"

Most of the time our conscious thought and activity involves the use of scientifics that cannot be classed as truth in any of the senses discussed above. Here is a listing of the kinds of things we know that are of this class: today's price of gasoline; our weight; the year of the battle of Jutland; how to make an omelet; how to solve an equation; and so on. However, if one were asked the year of the battle of Jutland, and replied "1924," you could reply that that is not true—it is not "the truth" that the battle took place in that year. Plainly, this use of the term "truth" does not meet the criterion of truth that it

<sup>2</sup> See "The Correspondence of Photosynthesis," (Brock 1986). In that article the author suggests that, because the tree draws water from the earth and carbon dioxide from the air, and because the atmosphere serves the same correspondential roles for man's external body as does the spiritual world for his mind, then the atmosphere corresponds to the spiritual world. Leaves serve as the medium whereby plants draw in carbon dioxide from the air to combine with water from the earth for the production of food as carbohydrate. And in like manner, rational truths serve as the medium for the conjunction of man's external and internal, this constituting his regeneration. So we read in Apocalypse Revealed 936:

That rational truths are signified by "leaves," is because by "a tree" is signified man (n. 83, 400); and then by all the parts of a tree are signified corresponding things in man; . . . By "the branches" man's sensual and natural truths are signified; by "the leaves" his rational truths; by "the flowers" the first spiritual truths in the rational; by "the fruits" the goods of love and charity; and by "the seeds" are signified the last and the first things in man.

shall be able to serve as a containing vessel, or foundation, for the influx of truth of a higher order. If, however, one's conduct is ruled by the truth that one should not bear false witness, then there is not the predisposition to go around telling lies.

But how about the knowledge one uses in the business of daily life? Some of the examples given above are in this category; if I work as a short-order cook, then knowing how to make an omelet is important; but it still does not qualify as "natural truth." But what about a physical, biological or social scientist using his knowledge of how the world works in his daily life? Does not this kind of knowledge qualify more as "truth" than that used by the short-order cook? It may or may not. But surely knowledges based on the "laws of nature" as elucidated by the natural sciences have claim to the status of "truth" as others don't. The questions that arise here are fundamental to our appreciation of the nature and origin of knowledge, and need careful exploration. This is the subject of our next section.

## Foundations of Truth

It must be clear that to this point the stance we have taken in regard to truth is (1) that there is but one source of truth, namely, the Lord; and (2) that one kind of receptacle of that truth is natural truth from the Word in the minds of men. We have also used the expression "foundation of truth" to mean the same thing as "receptacle of truth." Is there another foundation?

*Spiritual Diary* 5709 and 5710 address this question. These numbers have been the basis for much discussion, and I believe, confusion. The most recent treatment of them that I am aware of is that presented in the Annual Address to the Swedenborg Scientific Association in 1966.

The address, by the Reverend Ormond deC. Odnher (1966) and titled "Two Sources of Truth—or Two Foundations?" explores the passages, and examines ideas in them in the light of other ideas presented in Swedenborg's *Principia*, *The Economy of the Animal Kingdom*, *The Infinite*, and other works that belong to Swedenborg's theological period. The address is well worth reading closely.

Odnher opened with Pilate's question: "What is truth?" and he responds thus: "Perhaps the most universally applicable definition of truth given in the Writings is the following: Truth is the form or quality of good" (HD 24). And he speaks also of truth in terms of what renders good or love intellectually perceptible.

He also notes that the passages, written between March 1757 and May 1758 after the publication of the *Arcana*, are written in the "usual rather obscure and unfinished style of the Diary." In addition, and perhaps for this reason, the passage is open to misinterpretation. Odhner considers that this has led to the common belief "in our church [The General Church of the New Jerusalem] that there are two sources of truth, nature and the Word— The conclusion, which is not the actual teaching, apparently came about from the common practice of forgetting the exact wording of the Writings and then rewording their teachings in our memories."

I want now to quote Odhner's conclusions in full, then comment on them:

There is, then, only one source of truth, only one source of a sight of the Lord, and that source is the Word of God. There are, however, two foundations of truth, nature, or the truths of nature, and the Word. For those who believe the Word, truth may be founded or based on its literal teachings. But for those who doubt or deny the Word as it is in its letter, natural truth—the genuine truths of philosophy, science, and experience—must be the foundation, and by those truths such persons can be led to see the genuine truth that is in the internal sense of the Word, with which genuine natural truth can never disagree.

The aspect of this I want to comment on is the idea that the second foundation of truth spoken of is meant for people who don't accept the Word; and for them "natural truth—the genuine truths of philosophy, science, and experience—must be the foundation . . . "I can only suppose that what Odhner had in mind here is that if, in the external memory of a person of that character, there happened to be some genuine truth not gained directly by him from the Word, then that could serve as the foundation of truth from the one and only Source; otherwise, how is anyone to discern what are "the genuine truths of philosophy, science, and experience" without the Word?

There is another aspect of the passages in question that Odhner does not comment on, but which provides, for me at least, a sense of logic in the idea of there being two foundations of truth. In Diary 5709 Swedenborg says: "And it was also proved that all things of heaven constantly have their foundation in the laws of the order of nature [N.B. this does not mean man's formulations of those laws as expressed in science, but the laws of order as they actually exist

outside of man], in the world and in man [in nature outside of man, and in man's body itself which is part of nature] so that the foundation remains permanently fixed; . . . "

The same idea is expressed in Swedenborg's letter to Oetinger dated November 11, 1766. In it Swedenborg addresses several questions put to him. The third question and reply is as follows:

III. Query. Why from being a philosopher I have been chosen?  
 Answer: The cause of this has been, that the spiritual things that are being revealed at the present day may be taught and understood naturally and rationally: for spiritual truths have a correspondence with natural truths, because in these they terminate, and upon these they rest. That there is a correspondence of all spiritual things with all things of man, as well as with all things of the earth, may be seen in the work on "Heaven and Hell," nos. 87 to 102, and nos. 103 to 115. For this reason I was introduced by the Lord first into the natural sciences, and thus prepared; and, indeed, from the year 1710 to 1744, when heaven was opened to me (Tafel 1877, 256-257).

Just how we are to understand the use of the expression "natural truth" in the above is not clear. Swedenborg is unequivocal in his expression of the idea that all things of earth and man correspond with spiritual things; and the cited passages from *Heaven and Hell* elaborate on this. The key question is: what constitutes natural truth regarding nature? The scientific description of it, or a description of it that draws its perspective from the Word? Perhaps this idea finds support from *Heaven and Hell* 102.

Angels are amazed when they hear that there are men who attribute all things to nature and nothing to the Divine, and who also believe that their body, into which so many wonders of heaven are gathered, is a product of nature. Still more are they amazed that the rational part of man is believed to be from nature, when, if men will but lift their minds a little, they can see that such effects are not from nature but from the Divine; and that nature has been created simply for clothing the spiritual and for presenting it in correspondent form in the outermost of order.

When this is taken together with the many other passages in the Writings that affirm that nature images the Creator and is the ultimate in which influx from Him is closed; and with the many

passages, some of which have been adduced above in this treatise, that affirm that the natural truths only of the literal sense of the Word serve as the containing vessels for the influx of good and truth from the Lord; then the idea of there being two foundations of truth, Revelation in all its forms and nature as it is in itself, makes sense.

However, returning to the question "Can the laws of nature' as elucidated by scientific enquiry serve as a foundation for truth?" To this we reply "maybe." Surely, it can be argued, a measure of the closeness of a formulated law to the actual existing law in nature is gained by the success or failure of the law in application. This, of course, is part of the scientific procedure—theories are tested experimentally. And successful experience in applied science, such as putting satellites in orbit using Newtonian laws, must surely be testimony to the close correspondence between the existing reality and the scientific description of it.

My own view is that this success does indeed amount to such testimony despite logical arguments against it, as for example: that no finite number of experimental tests can establish the universality and eternity of the laws they are supposed to verify; what is believed today is rejected tomorrow; the coincidence in a time sequence of two events does not establish causal connection. And furthermore, the Writings themselves refer us to the examination of the material world to provide a basis for the understanding of interior truths.

But again, there may be a valid distinction to be made between the description of how the world works in terms of the visual demonstration of its processes through direct or indirect observation, and the theories concocted to provide explanation. For example, it is one thing to describe the processes that rivers engage in on the basis of field work and laboratory experiments; it is another to provide theoretical explanation for those processes. The former, I submit, can serve as a foundation for truth by correspondence; but whether or not the latter can serve the same function, I do not know. But since the causal connection of correspondence between the prior world of causes and the material world of effects is a fixed, though dynamic, thing, I fail to see how theoretical explanation that is, by its very nature, in a constant state of flux can serve as a foundation of truth that stems ultimately from the only Source, namely God.

This does not detract from the value of theory in providing predictability, nor from the expectation that theories improve in the course of time and thereby come closer to "the truth"—the actuality of the governing laws impressed on nature by the Creator.

## A Perspective on the Natural Sciences

The term "sciences" is employed in the medieval sense in *Heaven and Hell* 353: "By the sciences the various kinds of experimental knowledge are meant, such as physics, astronomy, chemistry, mechanics, geometry, anatomy, psychology, philosophy, the history of kingdoms and of the literary world, criticism, and languages." Within this listing we see branches of learning that belong to what we now call the sciences and humanities. And while some terms may not carry the same connotations now, nonetheless they do represent the kind of categories that the disciplines as we know them can fall into. Attention is drawn to it simply to emphasize the fact that Swedenborg's world of learning was in essence of the same character as ours, and what his works have to offer in regard to that world has ready application to our own. This viewpoint is implicit in what follows.

## Encompassment of Knowledge

The theory of the nature of man and of truth presented above provides a unified theory of knowledge. In this and in earlier parts of this series we have seen (1) that influx through the internal mind extends to the external, making sensation, imagination and thought possible, and is therefore the mainspring of human creativity; (2) that the letter of the Word serves as a foundation for the reception of truth; and (3) that all knowledge viewed in the light of that truth thereby becomes one. This oneness is examined in this section.

The term "encompassment" is borrowed from Prof. Edward F. Allen's use of it in describing the development of Swedenborg's philosophy which progressively expands its field of focus, beginning with the material in *Principia*, expanding to the biological in *The Economy of the Animal Kingdom*, then to the spirit of man in his construction of a rational psychology. In going beyond what human reason alone could accomplish, Swedenborg's theological works provide the widest encompassment of all.

An illustration of the idea in natural science may further clarify the idea. Geology's concern is the explanatory description of the earth. This activity is based on the observation of rocks on various scales (hand specimen to continental and global) with respect to their physical characteristics and development through time. However, any explanatory description of rock in the geological framework must conform with chemical theory—no theory of the origin

of, say, the iron ore deposits of the Mesabi Range near Lake Superior can be accepted if it violates the currently accepted chemical view of things. Chemistry is thus considered to have wider encompassment than geology, because it applies to *every* occurrence of rock, whereas the explanation of the iron ore in the Mesabi Range applies only to that occurrence. Extrapolation can be made to other iron ore deposits, but not to the occurrence of, say, granite in the Rockies.

Likewise, chemical theory cannot be of such a nature as to violate accepted principles of physics. The theory of ionization, for example—illustrated by the view of common salt that it consists of positively charged sodium ions and negatively charged chlorine ions, the attraction between which holds the ions together to produce the salt crystal—depends upon electrostatic theory of physics. Physics, therefore, can be said to be more encompassing than chemistry. In Kantian terms, physics operates on the level of the "categories," those *a priori* concepts of space, time, causality, relation etc. which are universal. But as with other sciences, any physical theory must withstand experimental testing that has the possibility of falsifying it, just as geological theory must stand or fall on the basis of the realities of geological phenomena.

The recognition of the greater universality of chemistry and physics than geology is embodied in standard practice in college education in science: studies in geology require knowledge of chemistry and physics, but not vice versa. But this is not to suggest that scientists other than chemists and physicists operate in some kind of straight-jacket of physical theory to which they must constantly refer. While contemporary physical theory does impose restrictions, it also has restrictions of its own imposed by the need for its theory to find correspondence in the real, experiential, world. And in any case, what most scientists do is much alike, although they differ as to goals set by their particular interests and the questions to which they seek answers. For a discussion of this, see Kitts (1974).

Returning to the idea of encompassment and to that realm of knowledge called by Swedenborg "experimental science"—all science derived on the basis of experience in this world—the view of them we present here is one drawn from what has gone before respecting the concept of man and the world as derived from the Writings. It involves successively larger encompassment that progress in series from the realm of ultimate physical and biological reality to that of natural human existence, thence to that of the spiritual world from which man draws his spiritual quality, closing in the all-encompassing sphere of God the Creator.

In the above discussion of knowledge attention appears to be directed only at the understanding (in the Swedenborgian sense), that part of man having to do with the cognitive, intellectual, thinking aspect of mental activity. But, in the phraseology of *Divine Love and Wisdom*, "Love or the will is mans very life" (DLW 399). Mans "will" as distinct from his understanding is the receptacle of loves and their subordinate affections as noted earlier; and if these loves are from heaven they are called "goods," and if from hell, "evils." It was also noted above that truth can be defined as what gives form to good loves. But loves *are* very discernable things: any pleasure, delight, sense of joy, feeling of delight in revenge, feeling of spite, the warmth of friendship, the terror of fear, all are consciously experienced loves of one quality or another. And take away all sense of these, and a man is as if dead, as is repeatedly stated in the Writings.

In reference to this account of knowledge, the kinds of loves that are specific to it are as follows: the love of acquisition of knowledge itself that is the driving force in learning; the interests that we as individuals find we have, whether it be in mechanical devices, music, gardening, or a myriad of other interests that collective mankind displays; the interest we have in our own betterment, in the acquisition of honors, in monetary gain; the desire for the approbation of our peers; or concern for the well-being of others, and so on. These loves are the driving forces of human activity; they are the originators of our every thought; and knowledges only have significance because they serve as the means for the realization of loves.

### **What the Writings have to say about the Sciences**

Many New Church authors from early in the 19th century to this day have written commentaries having to do with what the Writings have to say about the sciences—about the development of a new scientific outlook; about the uses of the sciences; and about the relationship of science and religion. Others have applied the doctrine of correspondences to what science has made known about nature. We do not intend reviewing this literature here but simply refer the reader to the bibliography at the end of this treatise, prepared by reviewing all New Church collateral literature in the collections of the Academy of the New Church Library, now the Swedenborg Library.

We note, however, that in the Writings there are not many explicit statements about the sciences per se, although there are a

multitude of ideas that have application to them. We have referred to one passage in the *Diary* (5709-5710) that speaks to the sciences explicitly, and we have attempted to include the sciences in the theory of knowledge constructed above. We draw attention now to a few passages in *Heaven and Hell* that do make specific reference to the sciences; that define them, state their value, and make general commentary that relates them to human life. The subject of the numbers is the nature of true and false intelligence and wisdom. We quote them in full, with commentary along the way. First from number 351.

True intelligence and wisdom is seeing and perceiving what is true and good, and thereby what is false and evil, and clearly distinguishing between them, and this from an interior intuition and perception. With every man there are interior and exterior faculties; interior faculties belonging to the internal or spiritual man, and exterior faculties belonging to the exterior or natural man. According as man's interiors are formed and make one with his exteriors, man sees and perceives.

Note here the use of pairs of terms: intelligence and wisdom; seeing and perceiving; interior intuition and perception. The first in each of these pairs refers to the understanding, and the second to the will part of man. Continuing:

His interiors can be formed only in heaven [while yet a man on earth], his exteriors are formed in the world. When his interiors have been formed in heaven the heavenly things they contain flow into his exteriors which are from the world, and so form them that they correspond with, that is, act as one with, his interiors; and when this is done man sees and perceives from what is interior. The interiors can be formed only in one way, namely, by man's looking to the Divine and to heaven [done by means of the Word] ...; and man looks to the Divine when he believes in the Divine, and believes that all truth and good and consequently all intelligence and wisdom are from the Divine; and man believes in the Divine when he is willing to be led by the Divine. In this way and no other are the interiors of man opened.

In the next paragraph a clear distinction is made between "things pertaining to heaven, and things pertaining to the world," and the use of both is spoken of. Thus:

The man who is in that belief and in a life that is in harmony with his belief has the ability and the capacity to understand and be wise; but to become intelligent and wise he must learn many things, both things pertaining to heaven and things pertaining to the world—things pertaining to heaven from the Word and from the church, and things pertaining to the world from the sciences. To the extent that man learns and applies to life he becomes intelligent and wise, for to that extent the interior sight belonging to his understanding and interior affection belonging to his will are perfected.

Now from number 352, which elaborates on the nature of false intelligence and wisdom:

Spurious intelligence and wisdom are a failing to see and perceive from within what is true and good, and thereby what is false and what is evil, and merely believing that to be true and good and that to be false and evil which is said by others to be so, and then confirming it. Because such see truth from someone else, and not from the truth itself, they can seize upon and believe what is false as readily as what is true, and can confirm it until it appears true; for whatever is confirmed puts on the appearance of truth; *and there is nothing that cannot be confirmed* (added emphasis).

This passage may sound a little removed from the everyday realities of living. But a little reflection reminds us that we are in fact constantly receiving input from others—through books, radio, TV, and conversation in which we are either actively weighing what is said against principles of truth and good gleaned from the Word, or simply accepting whatever comes along without reflection. The passage must apply only to adults, for children have little alternative to accepting what comes along; although with a right education founded on the Word we are hopeful that principles of truth and good are being learned, making possible sound judgment in adult, responsible life.

We emphasized that "there is nothing that cannot be confirmed" because (1) this is presented as a general principle, and it is worth noting its inclusion in the Word; and (2) because we all know only too well how true it is from common experience. And without the guidance of the Word, the fundamental questions, riddles, and paradoxes of life will remain matters of debate without resolution

because "there is nothing that cannot be confirmed." Passing now to number 353, still on the topic of false intelligence and wisdom.

False intelligence and wisdom is all intelligence and wisdom that is separated from the acknowledgement of the Divine; for [these] acknowledge nature in the place of the Divine, think from the bodily-sensual, and are merely sensual, however highly they may be esteemed in the world for their accomplishments and learning. For their learning does not ascend beyond such things as appear before their eyes in the world; these they hold in the memory and look at in an essentially material way, *although the same knowledges serve the truly intelligent in forming their*

*understanding.* By sciences the various kinds of experimental knowledge are meant, such as physics, astronomy, chemistry, mechanics, geometry, anatomy, psychology, philosophy, the history of kingdoms and of the literary world, criticism, and languages (added emphasis).

We have already quoted the part of this number that tells what the "sciences" refer to. The part we have emphasized is the idea that is most commonly expressed in treating of the value of the sciences in education.

In the next part of this treatise titled "Comparative Epistemology," we shall present brief accounts of the contributions of selected philosophers to epistemological thought, and compare and contrast them with ideas we have presented above.

(To be continued)

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