

Atoms within atoms

A talk on Swedenborg the Scientist, by Dr Michael Stanley

We are familiar with the phenomenon of great thinkers and artists whose prophetic insights and visions are not recognised or understood by the age they lived in. They form the vanguard of civilisation, but at the time it is difficult to know whose vision is true. One such outstanding figure is Emanuel Swedenborg, the great 18th century Swede, who mastered all the sciences and philosophy of his day, and went on to draw science, philosophy and theology into a unified theme, such as religious scientists and scientific theologians are still struggling today to discover. And in the process his powerful intellect threw off a large number of scientific insights, many of which have been confirmed by science over a century later, many being confirmed in our present decade, and it would seem to follow, many that might well be confirmed in days to come. That he could 'spin off' so many prophetic scientific concepts and ideas is a confirmation of the value of the principles that he developed to guide his efforts to understand the many varied phenomena of our world, and the hidden processes that give rise to them.

The most central of the new principles enunciated by Swedenborg is the principle of discrete degrees and influx by correspondences. By this he is declaring that life manifests itself on discretely different levels of existence, the major levels being the Divine origin, the Spiritual level, the natural level and the physical level. And life on a higher level or plane flows into corresponding forms of life on the next lower plane so that, for instance, life manifests itself in mental forms and then flows into corresponding physical forms in the human body. This principle of influx from an infinite Divine origin through corresponding forms on lower levels guided Swedenborg into a substantially correct view of the origin and history of matter - an insight denied to his older contemporary, Isaac Newton, and those who followed him an insight only now being confirmed in our nuclear age and by recent developments in high energy physics.

This same principle also guided Swedenborg into an understanding of the workings of the human body, and the discovery of many new physiological facts, particularly with respect to the brain, many of which lay buried for 140 years in a long unpublished manuscript. This principle, used so successfully to understand the workings of the natural world, Swedenborg then used to guide him in understanding the mental world and even further the world of man's spirit as revealed in the Bible.

Such a progression from matter to the human body, to the human mind and to the spirit was inherent in his principle of discrete degrees, and we can stand amazed at how well it guided Swedenborg into the secrets of nature and the spirit.

I want this evening to relate briefly how Swedenborg foresaw the inner nature of matter 200 years before atomic and high energy particle physics provided the observable confirmations.

Unlike his contemporary Newton, who thought of matter as composed of hard, massy, impenetrable atoms endowed from without with motion Swedenborg felt compelled to posit atoms within atoms, or discrete orders of particles, each order built from a higher, more energetic order, and each particle being endowed from within with motion of a closed vortical nature. Each discretely smaller and higher or more fundamental order of particles had discretely higher energies than the lower, the smallest particles having virtually no dimensions, but with infinite internal motion; and the appearance of solidity of a lower order was provided by the speed at which the constituent particles of a higher order circulated or spiralled around a centre. The resemblance to the modern atom with its rapidly circulating electrons giving a sense of solidity is clear. And now the physicists have identified a higher order particle from which the proton of the atomic nucleus is constituted - the so-called quark, which moves around inside the proton at incredibly high velocities.

Swedenborg's particles exhibited axillary motion or 'spin' just as do most of the elementary particles discovered in recent years. Swedenborg's ultimate particle was of a nature that could only seem ridiculous in his day - a singular or natural point endowed with infinite energy to move in an infinitely spiral path. By the infinitely rapid motion of many of these 'points', the first or highest form of particle came into existence. So on this basis matter, according to Swedenborg, is resolvable into pure energy - and this 200 years before Einstein! Today the theory is seriously being maintained in some quarters that the mysterious black holes revealed by modern radio telescopes are the end product of a collapsed star, where all the star's matter has been crushed under the enormous force of gravity into a point-like singularity containing an enormous quantity of energy. It is thought that 'black holes' which normally suck in all surrounding matter, may suddenly explode spewing out all their infinitely condensed energy, back into space, and that the original creation of the universe might have been from a series of such 'big bangs' by exploding black holes.

Swedenborg was also the first to explain the origin of the planets as being spin off from the solar matter after it had condensed into the form of the sun. This theory, temporarily out of favour, now seems more likely than its rival theory of the planets origin from the break up of one of a pair of suns or binary star. Swedenborg was also the first to believe that the milky way is a galaxy of suns of which ours is one, and that there are probably countless other galaxies in the universe as well. Finally, I might mention the strange notion Swedenborg had that some stars might give off their energy by pulsating - like the human heart. Again, after 200 years, such stars now known as 'pulsars' have been discovered.

How relatively dead and lifeless Newton's picture of the Universe seems by comparison - a few planets set into swinging motion around the sun, held in their precarious orbits rather mysteriously by God, every atom of matter being inwardly solid and dead and moving tamely under the action of some impressed force.

Yet it was Newton's simpler, more naturalistic view, which carried the day, and enabled physical science to develop gradually on a simplistic basis. The greater, deeper, vision of Swedenborg was too far ahead of its time for experimental physics to cope with. The earth and the stars were not the limits of Swedenborg's vision - for there was the vegetable and the animal kingdom and above all, man, that highest and most mysterious of creatures who not only possesses in the human body the most complex of all machinery, or organism, the world has ever known, but can also think and judge - actually be aware of the processes going on in his own consciousness. This inevitably became the target for Swedenborg's great intellect. His hypothesis, that matter is graded in a fundamental way, became the hypothesis that the life force operates in the body in a graded way, in discrete degrees, each lower degree representing something of the form of the higher degree from which it was formed, and since the very highest degree is the Infinite Divine Itself, something of the Divine Form is revealed in every human being, in every living form, and even in matter itself. In the second talk in this series we shall see how Swedenborg was led not only to great physiological anticipations, but also to a recognition of the great importance of psychosomatic effects, the effect the spirit has on the body and vice versa, and a realm of the mind that is above and deeper than our conscious ability to see and judge our thoughts and feelings. He is being led upwards towards that domain from which all life proceeds. Swedenborg believed in God: but would he be able to discover God by the sheer force of his great intellect striving ever upwards and ever more deeply into the forms of life?

Minds Within Minds

A talk on Swedenborg the Philosopher, by Dr Michael Stanley

In my previous talk on Emanuel Swedenborg, the 18th century scientist, philosopher and theologian, I outlined some of the remarkable and amazing insights he had concerning the fundamental nature of the physical world of matter - insights confirmed only in the modern nuclear age. Briefly, he conceived of matter as atoms formed from the rapid circulatory motion of discretely smaller particles, which in turn were formed from the greatly more energetic motion of yet smaller particles, the smallest particles of all being formed from the infinitely rapid motion of infinitely small entities or singularities that he called 'natural points'. This linking of the infinitely small with the infinitely energetic he saw as the connecting link between the finite world and the Infinite creating Divine, or God. So, with this insight into the graded and energetic structure of the basic building blocks of the world, Swedenborg progressed to the study of the forms that the life force built up from them.

The form he chose to study was the highest, most developed living form, the human body. And he chose to study not only the form of the body, but also the form of the mind, and that of the soul which he believed was within the mind and the body, linking man with his Divine Creator. Just as he conceived matter to have been created on different levels of organisation such as the crystalline, the gaseous and the light carrying ether and so on, so he conceived the human body to be constructed from smaller units, and these from yet smaller units. For example, he was struck by how the nerves that form the all pervading nervous system are formed from bundles of unit nerves, which in turn are formed from bundles of single fibres. He was also struck by the way certain forms or organs in the body were subordinated to others, as for instance the main series of abdominal organs subordinate to the heart and lungs system which in turn is subordinate to the brain and nervous system

So Swedenborg conceived of the life force from the Divine flowing into the human soul and drawing matter into series of forms in the embryo, one series subordinate to another, the whole forming a harmonious unity of many uniquely different unit forms. With the help of such conceptions of how nature is organised, and his detailed knowledge of the latest anatomical researches, Swedenborg was able to determine many functions of the brain and body long before medical science was advanced enough to confirm his theories.

For example, he deduced that as the lungs expire, so the brain expands within the cranium, and vice versa, as the lungs draw in breath, so the brain shrinks back again. Over a century later this was discovered experimentally to be true. Swedenborg was the first to place the seat of consciousness in the grey cortical matter of the brain, and to deduce that lower sections of the nervous system take over automatic control of some of the conscious operations of the brain. He was the first to propose that each of the various organs and tissues of the body select their own requisite nutrients from the blood supplied by the pumping action of the heart. The odd thing was that these and the many other physiological anticipations he made were not what he was really seeking - they were only 'spin off' from his desire to understand the structure of the mind and the link between soul and body.

How could studying the human body help Swedenborg study the mind and the soul? Swedenborg believed that not only matter but all life is graded discretely and that higher level forms re-present their essential structure or organisation in corresponding lower level forms. Thus the soul represents itself in the mind, and the mind in the body in corresponding structures or organisms. The structure of the body is therefore a representation of the structure of the mind. We can illustrate this by common examples. We talk, for instance, of a person having a 'good heart', being 'warm blooded', having a 'thick skull' or a 'nervous disposition'. We use parts of the body in fact to describe states of the mind or spirit. But not only is the anatomy of the body used to describe the spirit, but states of the spirit may be observed in changes in the forms of the body. A person's feelings are frequently revealed in his face. A face is in one sense nothing but a collection of particles of matter, but when it changes, as with a smile or frown, the changes in its form represent some state of the person's outward mind, or spirit. Or take our ideas, for example: we may represent our ideas or thoughts in spoken words or in written characters on the page whose changing forms correspond to ideas or concepts they represent or symbolise. So we see how mental states - feelings and ideas - may represent themselves in changes of forms on the material plane of life. So likewise, Swedenborg argues, states of the human soul may be represented by changes of forms on the mental plane of life - that is, changes of feeling and thought.

And Swedenborg went further. States of the mind, he said, can influence states of the body for good or bad, and vice versa. But here, in all these new principles, Swedenborg is leaving behind the scientists of his day, who wished to regard the body only as an autonomous machine which should be studied only in isolation from mind and spirit. He talks about the anatomy and physiology of the mind as though it were a body, for he sees the mind receiving impressions and actions like the body, because of being structured like the body, having inner secrets to be uncovered analogous to the inner secrets of the human body he was so successfully exploring.

I mentioned earlier the three-fold graded structure that Swedenborg noticed to be so prevalent in the body. A corresponding type of three-fold structure he noticed in the mind in its capacity, firstly, to be aware of sense data, secondly, to organise these into thoughts and ideas, and, thirdly, to organise and judge its thoughts and ideas. These are the three levels of sensation, thought, and reason or judgement, each level discretely higher than the previous one and each having corresponding affections or loves, namely, sensual love, the love of knowledge, and the love of reason.

But Swedenborg did not stop at analysing these three basic levels of the mind. His introspection led him to realise that there must be yet higher levels those of the inner spirit, for something must provide the power to reason, and to judge between one set of rational thoughts and another. This is a faculty Swedenborg called the 'pure intellect', normally above our consciousness, but sensed fragmentarily in this life in states of special spiritual illumination, and more directly sensed when the soul in its mind is freed from the material body of this world.

This upper level above the mind proper fascinated Swedenborg, for although he himself was no mystic, claiming none of the usual mystical type of experiences, his own deeply introspective perception revealed to him its existence and importance, and he more and more became filled with the urge to explore it scientifically and intellectually; but he found himself continually frustrated in his efforts to find an analogous, or correspondential, language to adequately describe its forms and structure.

We are now at the threshold of Swedenborg's third and final phase, when his underlying religious belief in God and Christianity surfaced, and led him to the realisation that the highest truths of life are to be found, not in nature, though the same pattern is there in such lower forms, but in God's Word of the Scriptures, and in the operations of the world of pure spirit. But we shall see how much of what he was able to see of truth in the Bible was stimulated and guided by what he had already learned and come to see of God's truth written into the various forms of creation. Swedenborg had climbed from an understanding of the body to an understanding of mind with the aid of his principles of discrete degrees and correspondence. In his attempts to climb further to the origins of mind he was frustrated by the lack of direct awareness of the spirit that is the mind's origin or inner soul. Little did he know during his philosophical period that that deficiency was going to be overcome in a most unique and unexpected way - that a short time later he was to become directly aware of the sources of our inner desires and thoughts. These origins were to become as clear, real and objective to him as the outer, physical world we see and touch so clear, in fact, that he was enabled to describe and accurately describe countless details of the realm from which all man's best ambitions, his greatest insights and his worst lusts and delusions originate, the spiritual world itself.

Meanings Within Meanings

A talk on Swedenborg the Theologian, by Dr Michael Stanley

In this last of my three talks on Emanuel Swedenborg, the 18th century scientist, philosopher and theologian, we shall see how this extraordinary man who had conquered the fields of science, philosophy and psychology of his time, discovered that the fount of the deepest knowledge and understanding he sought was to be found not in God's book of nature, but in God's Word, in the Bible, seen as a book of Divine and spiritual psychology, mapping out in parabolic or symbolic language the path of the individual soul seeking salvation from self-centred ego, conjunction with his Maker, and the bonds of brotherly love with his fellows.

Last time we left Swedenborg struggling to reach up beyond the mind's level of reason and judgement to a supra-rational level of the soul, hoping to find there the structures of the naked soul itself at the hidden centre of all men's lower faculties of reason, thought, imagination and sensation. He had been climbing, as it were, a ladder whose rungs were discrete levels of existence, each higher one representing itself on the next lower one as in an image, and governing it, as the mind governs the body's actions. The physical body he had seen as a unified kingdom, highly structured, stratified and mutually interconnected and interdependent, every part serving the whole. He had come to conceive of the mind within the body as itself a corresponding human form, formed likewise from structured and stratified mental substance. Both the physical body and the mental body were perfect instruments for the use of the soul in its life in the world. But how could he study the soul itself where all the great intuitions occurred, and more important, where all the fundamental, far-reaching, decisions were taken? The body does what it is told by the mind; the mind works out how to do what it is told by the soul; but what is the source of the soul's inmost desires and purposes or goals which it seeks to achieve through the instrumentality of the mind and the body?

What Swedenborg was now seeking was the realm of the spirit the realm of ends, of purposes, of ultimate intent. And what he sought he eventually found; but what he found was not exactly what he had expected to find. It caused him, in the finding, not only great joy but also at times great inner spiritual suffering as well, for he had to learn to give up his purely philosophical pursuits.

To his great surprise he found that the origin of the soul's intentions and purposes was a spiritual world peopled with men and women, all of whom had once lived on earth. The good inhabitants of this spiritual dimension were called angels and it is they who inspire affections and thoughts of love for others and for God: the evil inhabitants or devils, inspire selfishness and self-destructive emotions of hatred, jealousy, self-pity, and so on. Swedenborg experienced very vividly how a man is 'strung' as it were between heaven and hell by these two influences into his soul, one good and the other evil.

But it soon became clear to Swedenborg that all his knowledge and experiences in the sciences and philosophy, and all his new knowledge and experiences of the world of spirit in which our souls exist, were simply a preparation to enable him to perceive very clearly and distinctly the spiritual psychology at the heart of God's Word. Now that he had so fully grasped the fundamental nature of the material world, of the mental world, and now the spiritual world itself, and their relation to each other by correspondence, the higher representing itself in the lower as in an image, so he could now perceive the inner drama of the soul written symbolically in natural forms in the myths, the sagas, the histories, and the prophecies of Scripture. He saw how God's Word, or message to man, in origin something infinite and Divine, had clothed itself in lower forms of existence that could be apprehended by man at different levels of finite perception, spiritual and natural. The Bible, like the atoms, the human body, and the human mind, contained within itself discrete levels, one within the other, everything on one level corresponding to something on another level by the same laws of correspondence and representation that links the mind's images, ideas and decisions with the body's sensations and actions.

For example, just as we see material things by means of physical light through the eyes of our body, and mental images and ideas by means of mental light or understanding, through the 'eye' of our mind, so we can see spiritual truths by means of spiritual light, if our spiritual eyes are open to the things of the spirit. So Jesus Christ can declare, 'I am the Light of the world; he who follows me will not walk in darkness, but will have the light of life.' Another familiar Biblical example is Jesus saying that man must be born again before he can enter the kingdom of heaven. Clearly, Jesus does not mean, as Nicodemus thought, that a man must enter a second time into his mother's womb - He means re-birth of the spirit, not of the body that corresponds to it.

So the whole of God's Word, according to Swedenborg, is a spiritual book to be understood spiritually, yet clothed in the history of a particular planet and race at a particular time. The whole of God's Word is a parable of man's spiritual creation by God, and of the spiritual journey and trials to be faced by every soul desiring to be freed from evil influences and drawn eventually into the eternal heavenly states of life promised by God to those who follow Him.

God uses the image of the creation of the physical world in six days to represent in natural terms how He builds man's spirit into a perfect form in six stages, the waters, earth, grass, trees, fish, birds and animals, all representing elements and growths in the human spirit, both in wisdom and in love. The world of the mind can be a flourishing garden or a barren wilderness, and the Word speaks parabolically of both states in many places. Every person mentioned in God's Word is a representational facet of our own spiritual make up. For example, the Lord's disciples represent facets of our spirit that look to the Lord and depend on Him for faith, instruction, leadership and love. The Pharisees, on the other hand, are the proud, self-righteous feelings and attitudes that we also experience in ourselves. Jesus Himself in the Gospels is the Lord's life moving through our minds seeking to be heard, followed, and obeyed from love: but other elements in us are troubled by His presence and strive to have this life extinguished.

In such a manner Swedenborg saw the world of spirit and the world of nature and history linked correspondentially in their pages of the Bible. Yet he would have us bear in mind his claim that he gained this perception not by the powers of his own intellect but by a spontaneous illumination from above his rational mind inflowing from the Lord Himself.

Swedenborg had to give up his scientific and philosophical pursuits in order to concentrate full time on opening up for future generations the inner spiritual levels of the Word of God, so that all who chose might learn to hear God speaking to them and of their spiritual condition in even the most ordinary or fanciful-sounding portions of the Word.

And so this remarkable man achieved what no man before or since has ever done - he linked together under the same general principles of understanding, all the physical sciences, philosophy, psychology, the spiritual world, and Divine Revelation, but this only after long, intense study of each of these great fields of human experience, and only after accepting to subordinate his mind to the will, and wisdom of God. As a scientist in his own day he was regarded very highly and received many honours. But, as his thought began to plumb ever deeper depths, he left his contemporaries behind, and was in turn neglected by them. In fact only now, after two centuries of experimental science, can his prophetic insights into the fundamental nature of matter be appreciated and marvelled at. But with the growing revival of interest in religion, the supernatural, and life after death, it may well be that his related yet distinctive contribution to our understanding of the world of spirit and the spiritual psychology of the Bible, will receive a more widespread acknowledgement and help many more to receive the spiritual understanding, conviction and guidance they need in passing through our modern, complex, and turbulent world.