

# Theistic Science Symposium

Hosted by the Swedenborg  
Scientific Association

Bryn Athyn College, October 12, 2019

*The Rev. Andrew J. Heilman*

This symposium was the culmination of about a year-and-a-half of Monday morning Skype meetings about New Church science – what it was and what it could be. We all agreed that the Heavenly Doctrine gives us a new perspective and new insights into the amazing workings of the natural world. During these Monday meetings we have been exploring what these are.

Several ideas and points of focus developed as we discussed what we called Theistic Science, science in which the Lord as God is ever present and always creating. One of the areas of focus was what part the highest of the three natural atmospheres plays in the physical world. The other area which caught our interest was how is it possible for the protein to fold into its useful form in less than a second?

For this article each of us wrote a brief summary of our presentations, highlighting the essential points of what we hoped to communicate to those who attended this symposium, and to those who read this article. We had two morning sessions and two afternoon sessions, followed by a panel discussion led by Dr. Dan Synnestvedt, a professor of philosophy at Bryn Athyn College.

*After Dr. Reuben Bell, as president of the Swedenborg Scientific Association, welcomed those attending, Ron Horvath, co-founder of the Theistic Science Group, opened the session explaining what the Theistic Science Group is. Following is his summary:*

## **Introduction to Theistic Science Group**

The Theistic Science Group was formed by Forrest Dristy and me more than two years ago, and began to grow with the addition of Reuben Bell after his

thesis on *Intelligent Default*, and theoretical physicist Ian Thompson of the Lawrence Livermore Labs, author of the book *Starting Science from God*. Those unable to attend Skyped in to the sessions. The Theistic Science Group has concerned itself with how influx into the natural world shows itself and can be observed in physics. We propose that it does, and we will be doing so, not in the language of *Genesis* but in the language of the physicists themselves, with possible solutions to natural world physics. In doing so we consider:

1. If natural things and processes are derived from spiritual causes, how can these be described in scientific terms?
2. Using the doctrines from Swedenborg's theological works, how does spirit descend into nature, creating it as it comes without becoming it?
3. Questions regarding the origin of matter, Divine order in nature, and the emergence of organic forms.
4. Can Causal Closure of the universe explain all the natural world behavior?
5. What minimum changes in physics are required to allow for Divine Influx to operate.

In these sessions we will show the correspondence of spiritual degrees with their physical counterparts. We will focus on organic forms, and more specifically the formation and folding of protein molecules, to demonstrate a scientific foundation for Divine Influx.

While we are not offering a proof for the existence of God, we are moving profoundly in that direction scientifically. We do so by studying and explaining a scientific phenomenon that leaves little or no room for natural causes and explanations, thus challenging the boundaries of a causal closure universe – one in which all causes are initiated from within that universe.

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it is enough to put forth a proposition that is so scientifically robust and rationally competitive that the result is the opening of minds to new ideas – a Theistic Science paradigm.

*After Ron's introduction, Dr. Reuben Bell discussed his new book, *Intelligent Default*, which arrived from the printer's just in time for the Symposium. Following is a summary of his presentation in his own words:*

### **Where Do We Go From Here? Theistic Science Done Right**

Emanuel Swedenborg's theistic model of nature is a powerful tool for predicting and explaining the things we observe in the world. This is

what science does, and this was precisely his intention – to explain natural phenomena according to objective scientific rules and laws, but to explain how these phenomena reflect the operation of an internal, spiritual cause. This axiom – that natural things have spiritual causes – lies at the base of theistic science.

Swedenborg believed that if his scientific principles were clear and powerful enough, and if they behaved according to Enlightenment rules for doing science, and if their underlying spiritual principles showed the same consistency of logic and reason, then he could present an intellectually defensible science for his time and for the future.

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Yet his accomplishments in science and spirituality did much to improve the lot of both: his scientific discoveries are capable of informing 21st century physics and biology, and the spiritual principles he discovered are sufficiently comprehensive to support a model inclusive of both. His method is as useful today as it was in his time.

To support this claim we apply Swedenborg's science, spirituality and method to a present-day problem in the natural sciences: the evolution of organic forms. Using Swedenborg's doctrines of Influx, Degrees, Forms, Correspondence and others, which combine to produce a comprehensive

model of spiritual causation, new light is shed on this perennial problem: natural forms are not “designed,” nor do they appear by accident.

Every organic form is a “default setting,” as it were, established according to parameters inherent in matter, in response to environmental conditions, but dependent on reciprocal, functional interaction with a spiritual cause as well.

These parameters are analogically reflective of the Divine Human form, manifesting itself in continual creation. A comprehensive treatment of Swedenborg’s doctrines of forms and correspondence reveals these principles to be complementary structural and functional mechanisms of spiritual-natural influx, respectively. Change of form is by discrete degrees of order, and spiritual-natural interaction is by corresponding function. What results is matter, receptive of and responsive to Divine influx, participating in the human form, to the limits of its organizational parameters.

These parameters, seen from our natural perspective as the physical constraints of natural laws, are this Divine Human form accommodated to and at work in the natural world, apart from, and yet interactive with it. Evolution of new forms and adaptation of existing forms to changing conditions, occur in the crucible of the “randomness” of nature, into which, at its inmost level, flows the template of the human form from the Divine.

*After a short break the Rev. Andrew Heilman and Dr. Ian Thompson shared a session focusing on the discrete degrees in the physical world, how these degrees correspond to the three spiritual degrees in heaven, and how through this idea of degrees we can see the influx of the spiritual world into the natural world as end, cause and effect. As with the others, I will give a quick summary of my presentation, highlighting the central points:*

### **Seeing the Spiritual in the Natural**

In 1987 Bishop George de Charms was in the hospital in his late 90’s, and my wife encouraged me to visit him, as it might be the last opportunity. What he said to me then had a profound effect on my thinking about what New Church science is all about. But only recently did I come to realize just how profound this was. He referred me to the conversation in the spiritual world between Hans Sloane and Martin Folkes, as recorded in *Divine Love and Wisdom* 344, which reads:

To settle the disagreement between them Hans Sloane was given a spiritual bird to examine and he saw that to the least detail it was exactly like the bird in the natural world, and he concluded that if the spiritual bird in his hand were to be infilled, in its minutest parts, with corresponding matters from the earth, and thus fixed, it would be a lasting bird, like the birds on the earth.

What this means is that a bird in the physical world is really a spiritual bird with some chemicals added to give it fixity in the natural world. All of

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the biological functions in the body of this bird, together with its habits, sought out habitat, its classification and physical appearance come not from nature and the properties of the chemicals of which it is composed, but from the spiritual bird within by influx and correspondence. No wonder one of the last articles Bishop de Charms wrote for *New Church Life* was on the importance of this teaching about Hans Sloane's bird. (See *New Church*

*Life*, October 1982, page 468: *Sir Hans Sloane's Bird*)

To understand how the spiritual can be the cause of the creation of the natural, we need to understand discrete degrees. We see the rudimentary beginning of this idea in Swedenborg's scientific works, especially in the first volume of the *Principia*, but here he is thinking from geometry and the physical world. It is not until his introduction into the spiritual world that he really understood how influx and discrete degrees worked, and how the creation of the natural world and everything in it is a continuous creation from the spiritual world.

What is worth noting is that Swedenborg in his *Principia* began with five elements or degrees within degrees, the solar vortex or gravity, magnetism, ether (or light and electricity), air and then water. In the early *Spiritual Diary* this becomes four natural atmospheres: the universal force (or gravity), magnetism, ether (or light), and air. (*Spiritual Diary* 222) But from the correspondence to the three spiritual atmospheres, this becomes universal gravitation, magnetism (ether, and light), and air. (*Last Judgment Posthumous* 320) Thus from correspondence the Heavenly Doctrine is the first place we find light and magnetism brought together, 100 years before the scientific world discovered this.

But the next teaching in this work shows just how the spiritual is in the natural, and is the cause of everything in the physical world. When we think of the nightingale, do we see the spiritual bird it really is or do we see the mechanical bird the empire of China preferred, until it broke down?

*Dr. Ian Thompson's presentation followed, continuing and expanding on the idea of discrete degrees:*

### From Triads to Enneads

We have learned that everything created receives influx for love and wisdom and use, in separate discrete degrees that make a trine. Let us apply the principle

to each of these degrees themselves. Since the “divine is the same in the thing greatest and least” (*Divine Love and Wisdom* 79), each part should have its own trine of sub-degrees and functions. Altogether this makes nine distinguishable functions, which we call an “ennead” after the Greek name for nine.

The created world is a trine where the outermost degree is physical nature, where uses are finally accomplished, so having enneads makes nature itself to have three sub-degrees inside it. *Last Judgment Posthumous* 320 describes the atmospheres in these as gravity, magnetism and air.

Divine influx enters into these degrees both directly (*Arcana Coelestia* 7270[4]) and successively (*Ibid.* 5850) via many of the higher degrees. We can identify the lowest, air, as the quantum mechanics of particles, and the middle, magnetism, as quantum fields of electromagnetic photons and other forces.

The inmost physical, however, is not yet understood or interpretable in physics. We do not know how a quantum gravity would work, nor do we understand how these inner degrees fine-tune the parameters of the lower degrees. But let us study this and discover how, realizing that this is where the ends or purpose in creation finds its corresponding degree in the physical world.

*After this dual presentation we had questions and discussion from those attending, and one question in particular caught our attention: If New Church theistic science actually makes predictions which can be substantiated by scientific experimentation, would this not take away our spiritual freedom? A good question, which we answered to some extent at the time. But perhaps the best answer is found in *Divine Providence* 3 and *Divine Love and Wisdom* 46. The Lord will never take away our freedom to close our eyes.*

*After lunch we had two more presentations followed by a panel discussion. The first presentation was by Dr. Stephen Smith, a retired osteopathic surgeon living in Upper Bucks County, Pennsylvania. Here is his summary:*

### **Protein Synthesis and “Fine Tuning” Paradigms for the Discrete Degrees of Divine Influx**

Protein synthesis was chosen as a target for inquiry by the Theistic Science Group in the fall of 2018 at the suggestion of Dr. Thompson. The focus of the group from its inception had been the nature of the nexus or interface between the natural and spiritual worlds, especially in regard to spiritual correspondences and the workings of Divine influx.

The biology of protein synthesis was believed to be uniquely suitable for study on the “natural side” of this discussion by virtue of the known science at the molecular, atomic and even quantum levels. It was anticipated that these physical states might be viewed as states sufficiently sensitive and subtle to receive immediate influx via “quantum fine tuning” at the ultimate interface of



the spiritual and natural worlds.

No less appealing was the idea that protein synthesis, considered from the perspective of spiritual correspondences, might be a window, however tiny, into the Divinely generated life force itself given the many roles of protein in cell structure and function as well as protein functions in the extracellular milieu.

And because there must be a continuous connection with the spiritual world in order that every single thing may be kept in being, or constantly come into being, it follows that the purer or more interior things within the natural order, and consequently within the human being, spring from that world, and the purer or more interior things are forms such as are able to receive influx. (*Arcana Coelestia* 4524)

In order to refine the task before us we pursued a more limited line of inquiry about protein synthesis, specifically *protein folding*. Remarkably, this is now considered by some to be a fourth branch of science, incorporating knowledge from the three other branches: biology, chemistry and physics.

The multiple atomic forces and interactions known to fold and stabilize protein each seem to have special electrochemical characteristics, making them ripe for speculation as to unique correspondential indexing, i.e. as targets well-suited for the spiritual forces of influx.

The best known intra- and extra-cellular roles of protein include: signaling, enzymatic action, structure, transport, regulation, storage and immunity. Clearly proteins are the basic building blocks and molecular engines of life at the level of the natural world.

Understanding the spiritual cascade of discrete degrees behind the physical degree of life may be a framework that is useful to better understand what is still unknown about protein structure, function and synthesis. *Ian J. Thompson, PhD*

This quotation reveals a core principle of New Church theistic science: using principles from the theological writings of Emanuel Swedenborg, in conjunction with contemporary science, enlightened inquiry can transcend the barriers currently facing science, leading to a deeper understanding of nature.

*After questions and discussion, Dr. Thompson gave a presentation about a possible explanation of the amazing process of protein folding, using principles from New Church theistic science. Here is his summary:*

### **How Influx into the Natural Shows Itself in the Physical**

We know that influx occurs from the spiritual into the natural, but how does it show itself there? How would you notice it? Let us suggest how current laws of physics need to be modified if influx occurs.

The first influx into nature must be into the inmost sub-degree of the physical mentioned above – the one that deals with gravity. As well as universal

gravity, it must deal with mediate influx coming from the organism's inner spiritual nature that Andy described. The inmost physical must be able to receive "ends" into nature, and lead to actions to achieve those ends.

My specific proposal is that influx into nature modifies only those parameters that have to be tuned (or fine-tuned) in existing quantum field theories, especially the effectiveness of electric charges. There is some astronomical evidence that this might occur over millions of years, but now we want to consider changes within very small fractions of seconds for molecular motions in cells such as the protein folding that Steve talked about.

By correspondences, the inmost physical should function in the same pattern as the inmost mental, where loves of ends enter and lead the understanding to find a way how achieve those ends, and then the love and understanding act together to generate actual uses.

If we consider reaching for a cup of coffee, we alternately think forward from where we are now, and backwards from where the target is that we want to achieve. I suggest that there are similar processes in physics: the inmost physical receives targets by influx, and then the electromagnetic fields are adjusted alternately forward and backward so that molecules are led to their target arrangement.

I presented equations for how electrostatic forces are changed by local variations of what is called the electric permittivity, which modulates electric forces, and uses forward-and-backward iterations to find exactly how the permittivity should be varied. After solving these equations on a computer, I showed videos for how a simple molecule (only 100 atoms) could be made to move left, or rotate, or bend in a required place. In this way we can predict how the permittivities would need to change, and those changes should be able to be tested in experiments.

In summary, we have presented a proposal for how "spiritual influx" could have effects in nature, and how these effects on permittivity should be measurable. In this way, "final causes" could be active in nature, and we have a way to bring the future into line without time travel and without altering the historical past.

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*After a short break, we began the last session with a panel discussion, which, besides the presenters, also included the Rev. Stephen Cole and Dr. Dan Synnestvedt, who served as moderator.*

Many questions were asked and discussed during this session. One point made by Dr. Synnestvedt, which should be highlighted, was that “theistic science” is not new; in fact,

most science was theistic up until a group of scientists, headed by Huxley in England, purposely worked to remove God out of science. And for now they seem to have succeeded, not only removing God out of science, but out of all public education in much of the world.

Ron Horvath closed the symposium with an invitation to join the Theistic Science Group, and what we hope will come of it: a new way to view the physical world with minds, rather than just our eyes.

We want to thank the Swedenborg Scientific Association for hosting this event, and especially those who attended for their participation and support of what we hope will continue with coming generations of the New Church, and future scientists of the world.

As was written in *Words for the New Church* well over 100 years ago:

May the glorious day soon come, when man will rise out of the darkness of self-derived intelligence and appeal to the Open Word of God for all that concerns his life, its moral government, its civil and political instruction, its philosophy, its science, its everything.



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