

“INTELLIGENT DESIGN” ISN’T VERY INTELLIGENT WITHOUT THE NEW PHILOSOPHY*

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To see a World in a Grain of Sand
And a Heaven in a Wild Flower,
Hold Infinity in the palm of your hand
And Eternity in an hour¹

No stranger to Emanuel Swedenborg’s spiritual-natural cosmology, William Blake saw the marvelous complexity in nature arising in a holographic way from the simplicity of divine influx into a world blossoming with its infinite effects. He understood that “the whole visible universe is nothing else than a theater representative of the Lord’s kingdom, and this in turn is a theater representative of the Lord Himself” (AC 3483), and built his entire visionary system upon this principle.

But Blake was a poet, we might say, who had no experience with science or the truths that science can reveal, so his “world in a grain of sand” is just a figure of the imagination. But Swedenborg the scientific theologian who inspired this image was no poet, and the “theater” he described was as real to him as anyone’s universe. His natural world has spiritual causes, so any discussion of natural things must take this into consideration. “Theistic science,” we might call that, as we search for a defensible position for spirit-into-nature in this nihilistic age.

With just this in mind, I have put together a collection of powerful ideas that I believe can inform the current debate over the outrageous premise that nature did not create itself, but in fact is the product of a transcendent intelligence. That this premise might be outrageous to scien-

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¹Blake, William, *Auguries of Innocence*, written in 1803, published in 1863.

tists of this day is a commentary on our times. Swedenborg warned of this 250 years ago: the insanity of Naturalism (called “scientific materialism” today); but he also supplies the remedy for it. The explosion of interest in this debate presents an unprecedented opportunity for the new philosophy to demonstrate the power of its ideas in bringing a rational solution to this arena of confusion and conflicting beliefs. Swedenborg’s worst nightmare is our best opportunity to show what a rational religion can do.

The idea of divine design in nature is not new; it is an intuitive concept that has come and gone from antiquity to the present day. A few years ago I began to see this design argument resurfacing, and not surprisingly, I saw the reactive resistance to it by orthodox science. But this time around, “design” scientists are arguing from far more than intuition that some things are just too complex to have come into being by natural selection. By applying good science, statistical methods and mathematical modeling to their work, they are making the opposition nervous. I knew that this would escalate as the popular media, looking to manufacture news where there really was none, began to pitch this story as a colossal collision of faiths. In their ignorance they have distorted its principles of course, but they are nonetheless putting the controversy out there for the public to see. And this will turn out to be a good thing. There is no such thing as bad publicity.

I was classically trained in zoology—a student of a student of Theodosius Dobzhansky, patron saint of the neo-Darwinian synthesis (the marriage of Darwinian evolution with modern genetics and molecular biology), so I got my evolutionary doctrine from the horse’s mouth. But no one ever taught me that this doctrine was perfect or sacrosanct; there are holes in it, and until it became dangerous to acknowledge them, we just accepted these limitations as part of an elegant “work in progress.”

Because of these holes, I started all over on evolution a few years ago. I reviewed the history of the idea, and I worked my way through Stephen Jay Gould’s opus major, *The Structure of Evolutionary Theory*,² written just before his death in 2002. Many consider this to represent the catechism for evolutionary orthodoxy. I read *How and Why Species Multiply: The Radia-*

²Gould, Stephen Jay, *The Structure of Evolutionary Theory* (Cambridge, Mass.: Belknap Press, Harvard University, 2002).

tion of *Darwin’s Finches*³ by Peter Grant as well, as this makes the claim that natural selection can yield not only speciation (whatever that is), but divergence at the genus level as well. I will concede speciation (of a sort, which really involves only changes of continuous degrees) to Gould and Grant, but I just can’t see divergence above this level (the discrete degrees of genus, family, order, etc.) as a result of slow, steady change in gene frequency over time. Darwinism is powerful, but it just can’t produce those essential branch points in the phylogenetic tree.

Then I read *A New Kind of Science*⁴—a delightfully heretical book by Stephen Wolfram, a respected but not-so-orthodox scientist—to see if it could shed any light on the subject. It did. It approaches the problems of randomness and complexity in nature from a whole new perspective. Wolfram claims that the complex forms and processes at work in nature can arise from very simple starting conditions. He says that there may be mechanisms at work in organic evolution that are primary to all natural processes, but which remain to be described. Wolfram’s work promises to point us in an exciting new direction.

Next I went to the intelligent design scientists, to see how they stack up against the best that scientific materialism has to offer. I believe that this group offers good, objective arguments for something at work behind the purely natural mechanism of adaptive change over time. But as hard as they may try, they cannot tell us what that “something” is. And this weakens their whole program.

And finally, for many years I have studied not only Swedenborg’s theology, but his enlightened scientific paradigm as well. Within this corpus of two parts—a theistic science and a scientific theology—lies the framework for a new philosophy of spiritual-natural causation that is both intellectually defensible and metaphysically sound. Swedenborg gives us an amazingly comprehensive model for how the world above and the world below can operate as one.

Building on these sources, I have put together a bare-bones rationale for organic evolution as the culmination of 1) the continuous creation of

³ Grant, Peter R., and Grant, B. Rosemary, *How and Why Species Multiply: The Radiation of Darwin’s Finches* (Princeton, New Jersey: Princeton University Press, 2008).

⁴ Wolfram, Stephen, *A New Kind of Science* (Champaign, Ill.: Wolfram Media, Inc., 2002), p. 298.

natural forms, 2) as constrained by natural laws, but 3) generated by the influx of preexisting spiritual uses.⁵ Certain foundational principles found in Swedenborg's scientific and theological works provide this rationale that directly addresses the failure of the intelligent design movement to offer something truly new in their critique of the neo-Darwinian synthesis.

I am certain that the new philosophy holds the key to the conundrum of "form." Intelligent design brings scientists to the doorway of a new paradigm for creation, but it cannot take them through it. The neo-Darwinian synthesis, paralyzed by its refusal to think new thoughts, is powerless as well. The answer lies in a theistic science for the era of the New Jerusalem.

Here's how I see the problem: The "intelligence" in the design is not "design" at all, but divine order, manifested as the template for creation, laid down first in the origin and structure of matter itself, and then in how matter interacts with other matter under varying conditions (obeying natural laws in a changing environment). Swedenborg's *Principia*⁶ (which curiously appears as the *operibus meis*⁷ cited in *The True Christian Religion*), lays this out in detail. This template directs the development in living things by means of a *formative substance* flowing into embryos⁸ to establish the forms of all living organisms, and related forms in the mineral kingdom as well. So the intelligence in the design isn't an intelligent creator

⁵"Uses" in Swedenborg's lexicon denote spiritual realities that give rise to corresponding natural forms. Difficult to translate, the concepts of "function" or "purpose" come close. The notion of the preexisting spiritual ideals of Plato's *Forms* is helpful as well, and Swedenborg may well have had these in mind. In general, uses are functions in search of three-dimensional forms to allow the full expression of a spiritual ideal. Once ensconced in form, they are spirit's purpose revealed.

⁶Swedenborg, Emanuel, *The Principia* [1734] (London: W. Newbery, 1846). Reprinted by the Swedenborg Scientific Association, Bryn Athyn, Pennsylvania, 1976.

⁷There is a statement in *The True Christian Religion* § 33 (clearly a book of Swedenborg's theological writings) referring the reader to cosmological principles which have already been explained "in what has been set forth in my works [*operibus meis*] respecting creation." This citation refers specifically to Swedenborg's *Principia* (clearly one of his scientific works), and not his works in general. This questions the relationship of Swedenborg's science to his theology. Alfred Acton II examines this problem in "What Were They Fighting About?: A Revue of the Argument over the Nature of Spiritual Creation," in *The New Philosophy*, Vol. XCVIII, Nos. 1 & 2, January–June, 1995: 43.

⁸In Chapter III of *Dynamics of the Soul's Domain* [1740], "On the Formation of the Chick in the Egg," Swedenborg introduces the term and concept of "a certain *formative substance* or force" (emphasis added) to describe the nature of spiritual influx as that which mediates the "work of formation that does not cease . . . to the last point of life."

pulling the strings of creation, but a Creator whose very form flows into creation, "in His image," by the response of natural effects to spiritual causes. What we have here is divine order manifested within the space/time constraints of the natural world, accommodated to their necessities.⁹

Now this is where things get interesting. Given the intelligent design argument and objective evidence that some structures in nature seem too complex to have come about by natural selection alone, these scientists are very careful not to propose any mechanism in its place that might be at work in the generation of complexity. Why? They readily admit that they don't know how complexity comes about, which is another way of saying that they don't know how evolution works. I would suggest that traditional Judeo-Christian theology does not have the means to know. But whatever the reason, intelligent design theory drives scientific materialists crazy. "Creation science" as the scientific establishment insists on calling intelligent design, is a straw man that they never tire of striking down. But putting the ball in their court (challenging them to go back to the drawing board to reexamine these too-complex structures in the light of good science) makes them very defensive. Why? Isn't science, by its very nature a continuous process of reexamination in the light of new ideas?

To their credit, these scientists have been treated poorly by the creationist (fundamentalist, evangelical, religionist) establishment, who can be an audacious and impudent lot. Therefore, their reactivity understandably comes from experience. Gone are the days when evolutionary biologists could work with their imperfect model while acknowledging its flaws. To do so now is to invite attack. The other problem is the oldest impediment known to human progress. Quantum physicist Max Planck described it this way: "A new scientific truth does not triumph by convincing its opponents . . . but rather because its opponents eventually die and a new generation grows up that is familiar with it."¹⁰ or as it is usually paraphrased, "change comes to science one funeral at a time." This prob-

⁹In *The True Christian Religion* § 53 we find that God is Order Itself (*Deus sit ipse Ordo*) a foundational distinction that is not to be confused with "design" in any way. Design proceeds *according to order* as a template for form, and is not Order Itself.

¹⁰Max Planck, German physicist (1858–1947) and Nobel Prize laureate in physics in 1918, in *Scientific Autobiography and Other Papers*, trans. F. Gaynor (New York, 1949), pp. 33–34.

lem of inertia—plain old resistance to change—may turn out to be the biggest impediment of all to the development of a new philosophy of life.

Since scientific materialists seem content with their flawed theory and intelligent design scientists assiduously avoid proposing a mechanism to explain spiritual causes for natural things, this is where the principles of the new philosophy enter into the equation. It has the tools to build a basic model for the rest of the story—the “how” that the intelligent design scientists cannot supply—in an intellectually-defensible package that is compatible with the best of science.

A simple progression of doctrinal principles, explained well and applied carefully to the gaps in evolutionary theory and intelligent design, could reconcile both camps into a unified theory of creation based on a systematic and predictable correspondence between spiritual causes and natural effects. I imagine that neither group would acknowledge this reconciliation, since it would have come from a third source, and not from themselves. But if the popular scientific press were to pick up on the possibilities of a “third way,” this new paradigm of a spiritual-natural contiguum might quickly find a receptive audience.

Here is a bare-bones outline of these principles, based on rational philosophical arguments, one building on another, to provide a model for the interaction of spirit and nature, and an adaptive mechanism that allows the genetic code to meet its ever-changing environment, in a constant striving towards the human form. These ideas could jump-start the stalled intelligent design program, and provide a rational model that scientific materialists would at least be compelled to reject or respect, not on its emotional impact, but on its philosophical merits alone.

A PHILOSOPHICAL/THEOLOGICAL RATIONALE

Perfection comes from variety (*HH* 56¹¹). The word “perfection” means complete or whole, so not surprisingly, perfection in nature comes not from a single attribute, but from increasing complexity. Only God is

¹¹ See bibliography for abbreviations of Swedenborg’s theological works.

perfect, as all things are contained in the Divine. Nature, created in God’s image, strives towards this perfection, as “whatever proceeds from God partakes of the human form” (*Inv.* 48). This concept of form has nothing to do with shape; it refers to the dynamic relationship of the myriad parts of the human body with all the other parts, producing a “conjunction of all and unanimous action” (*DLW* 194). This is the “image of God” at work in the natural world of matter.

MATTER

Matter is not static. As strange as it may seem, the stuff of this world is continuously coming into being at the quantum level of atomic activity. Elusive force carriers appear when they are needed for the interaction of subatomic particles, from their source which has not been determined. But this curious phenomenon has caused more than a single particle physicist to speculate on spiritual origins for natural things, and to view the quantum state as a borderland between two worlds.

Matter’s interaction with other matter follows a familiar pattern of compounding —building up—according to natural laws of thermodynamics. As stated above, matter strives towards complexity of form, in response to the perfection of spiritual substance flowing in.

Form, then, emerges as a default setting in this world. Swedenborg’s Doctrine of Forms¹² brings this principle to life, explaining as it does how forms are compounded in a series, from finer to grosser, to meet the needs of reality at each level of the spiritual-to-natural contiguum.

What kind of form flows into the world? Human. Human form enters into nature at the quantum level of matter, embedded in the structure of the smallest things, in the necessary relationships of parts with parts, according to the laws that these relationships define.

¹²One of the foundational principles of Swedenborg’s scientific period, his Doctrine of Forms describes the compounding of forms in nature, from simple to complex, with each successive form interacting with spiritual influx in its own way. What results is a series of intermediates allowing for the gradual stepping down of spiritual substance to natural matter, across discrete degrees of order. It may be found in Chapter XVI of *The Fibre* [1740] in the *Dynamics of the Soul’s Domain* series.

This is all according to what physicists have come to call the “implicate order” of the universe¹³ which is nothing other than the Divine itself at work in the natural world (TCR 53).

FORMS

So what we have here is not cookie-cutter forms of a “special creation” sort, but the coming-into-being of an infinite number of forms, each in the image of God, and each adapted to its own unique purpose, or use.

Recall that creation is continuous (DLW 171), nature is perpetually coming-into-being (AC 3483) and is therefore dynamic, not static, and natural forms come into being according to their response to the spiritual function (use) to which they correspond. Form follows function (DLW 46, AC 4223, DSD 1:620).

In biology, these preexisting functions are called “niches.” These come first, before the forms (new species) are there to exploit them. Function calls form into being, we might say.

FORMS ARE RECEIVERS

Each aggregation of matter is a receiver of spiritual function by degrees, according to its ability to respond. Simple forms respond in simple ways, and yet even the structure of minerals is elegantly complex, and is laid down according to the same template as other forms.

The more and more complex the structure, the more and more “human” it can be in form and function. This is true for mineral forms, plant forms, animal forms, and especially for our own human form—the most perfect because it is the most complete. Natural human form comes closest to representing the infinite variety of the Creator in the world.

THE ORIGIN OF VARIETY IN NATURE

Variety is called “diversity” in biological terminology. To achieve the variety sufficient for the engine of evolution we need real, branch-point

¹³Bohm, David, *Wholeness and the Implicate Order* (London: Routledge, 1980).

diversity, and not just fine-tuning or sculpting of existing forms. Natural selection does this sculpting very well; it can improve a species, but it does not have the horsepower to make new ones.

According to Wolfram, very simple starting conditions can produce great complexity if the "program" is allowed to run for a sufficiently long time. And modern science allows for this necessity with its "deep time" concept of modern cosmology—billions of years are now at the disposal of the evolutionary machine. He claims that certain organic programs arising from simple starting conditions running in a system of external constraints (such as time and extended matter) will cause astonishingly complex forms to "come into being." (Curiously, Wolfram doesn't see the spiritual significance of this model of complexity from simplicity. In fact he sees the simplicity in starting conditions as an argument *against* the necessity for "a spiritual being" altogether!)

In Swedenborg's philosophical terminology, a "simple" is a particle that contains all things within it. The "first natural point"¹⁴ of the *Principia* (1734) is a marvelous simple indeed: in it is all of Creation—all forms, with the Human Form at the pinnacle. How can this be? No magic required: They are there in potential.

The "simple" lays down the structural requirements for all interactions that follow—all forms. This template is the "ghost in the machine," but there is nothing spooky here: this ghost obeys the natural laws governing the behavior of matter and energy in this world, generating the "order and continuity of all things of Creation" (*TCR* 60; *DLW* 29, 178).

NEW FORMS FROM VARIETY

Ironically, it is Wolfram the scientific materialist who supplies one of the keys to theistic evolution: His "new kind of science" provides for an

¹⁴In Chapter II of the *Principia* the "first natural point" is introduced as "the first simple from which the world, with its natural things, originated." Lying at the bottom of a series of compounded entities, this not-quite-yet-natural particle of one dimension and circular motion contains, in potential, all natural things. Compounding into greater and greater aggregates, it will eventually produce an "elementary particle" or first atom. Swedenborg's description of the origin of matter here is astonishingly prescient of the quantum model for the building up of subatomic particles into a first atom (hydrogen), and from there the compounding of atomic nuclei into heavier and heavier forms of atomic components, as depicted by the periodic table of elements.

endless variety of forms, and then delivers them to the mechanism of natural selection for processing into successful or unsuccessful evolutionary candidates.

The means leading to this variety are genetic, but not “the slow, steady accumulation of point mutations over time,” on which the doctrine of natural selection is based. This work requires a more robust mechanism, of DNA rearrangements on the macro-evolutionary level (chromosomal inversions, deletions, recombinations, polyploidy etc.), the importing and exporting of genes and new combinations of non-coding DNA—endless possibilities for discrete, definitive morphological change.

New forms emerge out of this marvelous form-generator that is as random as it appears, and yet is not. Theistic evolution is a cosmic popcorn popper, randomly generating new possibilities all the time, delivered fresh to the natural selection process of perfection—each new “accident” striving towards the human form. But it is here that the randomness ends. Natural selection (itself a marvelously blind and random process) decides which of these new forms will prevail, in the available niches of the biosphere. But recall that these niches are determined by the particular uses to which they correspond. They are the effects of spiritual causes, and there is nothing random about that. At the end of this series of truly random events, all of which fall within the orthodoxy of evolutionary theory, the last step follows not just natural laws, but the laws of providence as well. Heaven meets earth, the two worlds are one, and spiritual substance finds another place to bloom in the world of nature.

HERE IS A SUMMARY OF THESE IDEAS

1. Spiritual influx as human form flows into nature as formative substance.
2. Formative substance interacts at levels of matter capable of receiving it.
3. Formative substance is the set of constraining parameters for matter: It sets the rules of behavior for the interaction of matter and energy in the quantum world.
4. Behavior in the quantum world determines subsequent degrees of behavior, forming atoms, molecules and macromolecules.

5. Add energy, and matter will compound or "build up" into more and more complex forms according to these inherent rules of interaction.
6. Wolfram's scientific paradigm allows for this building up without the traditional regard for the 2nd Law of Thermodynamics. There are programs in nature that spontaneously move towards complexity, and these are likely living systems.
7. These "rules of interaction" constitute the "Human Form" in the natural world. They are the Creator, which is Order itself, manifested in the natural world, accommodated to and constrained by conditions there.
8. Matter responds to spiritual influx as it is able, coming into the human form as completely as it can, according to the resources available to it. The more complex the thing, the more "human" it will be. (Think "phylogenetic tree" here.)
9. Allow this system to run long enough, and any terrestrial planet with the right starting conditions will eventually produce human beings with brains capable of supporting minds of three degrees, making them eternal beings in "the image of God,"—the purpose of Creation fulfilled.

CONCLUSION: WHAT NOW?

This progression of ideas, assumptions, and facts constitutes a powerful rationale for an intellectually defensible model of spiritual-natural causation—a dualism that does not require magic, irrational leaps of faith, or the suspension of reason. The model can be denied, but it cannot be summarily dismissed out of hand. It might represent a "third way" to break the ideological deadlock between reductionist science and traditional religion.

So how can these ideas be introduced to a (very skeptical) scientific world? We need to introduce the affirmative principle¹⁵ to the scientific

¹⁵In contrast with the "negative attitude" of close-minded denial, people who think from the "affirmative attitude" are able to confirm themselves by whatever rational ideas and by whatever factual knowledge, indeed by any philosophical concepts, which they are able to make use of, for to them all these matters are confirmatory and enable them to have a fuller idea of the matter." (AC 2568) In modern language this is objective, non-ideological critical thinking at work—the ideal of the scientific process.

world (*D.Wis.* 76; *AC* 2568, 2588, 4760), and allow scientists to acknowledge, in the safety of rational dialogue, the holes in the theory of evolution, while leaving the door open for other, more accurate descriptions of the origin of biological diversity based on the spiritual principles from which natural principles are derived. How? By modeling it. If theistic scientists expect objectivity from their critics, their best bet is to practice objectivity themselves. The science of our day is powerful, and in most respects accurate; there is no need to throw the baby out with the bath water. Natural selection is one of the powerful natural forces of nature; it has helped shape the living world around us. There is just more to the story, that's all. Good science is always looking for more; the affirmative principle is the key to finding it, wherever it may be found.

It is good that the argument over “intelligent design” is spilling over into the consciousness of our popular culture, distortion by the media notwithstanding. For when all the shouting is done—when the scientific materialists have made their denials and the proponents of Design have stood firm in their convictions—the rest of the story will remain: If nature is by design and not from nothing, then the missing element is the “how?” Thanks to the new philosophy, a delightfully “simple” solution to this problem awaits the learned world. □

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- _____ . *Divine Love and Wisdom* [DLW]
- _____ . *Divine Wisdom* [D. Wis.]
- _____ . *Heaven and Hell* [HH]
- _____ . *Invitation to the New Church* [Inv.]
- _____ . *The True Christian Religion* [TCR]